TASMANIA

PREMIER OF TASMANIA

21 APR 2022

Hon. Ruth Forrest MLC
Chair
Public Accounts Committee
Email: pac@parliament.tas.gov.au

Dear Ms Forrest

Thank you for your letter dated 23 February 2022 inviting the Government to make a submission into the ongoing inquiry into the Tasmanian Government's response to the COVID-19 pandemic. I welcome the opportunity to provide information relating to the proactive steps we have taken to transition Tasmania to the next stage of the pandemic response.

My Government's submission to this inquiry is attached for the Committee's consideration. This submission has been guided by the questionnaire provided by the Committee. This Submission sets out the steps taken by Government to:

- Prepare for the staged reopening of Tasmania's borders on 15 December 2021;
- Plan for the return of schools in 2022;
- Support the rollout of COVID-19 vaccination;
- Support Tasmanian businesses and
- Ongoing use and costs associated with Check in Tas App.

Thank you again for the opportunity to make a submission to this inquiry. As previously stated, I welcome the opportunity to regularly engage with this process.

Yours sincerely

Jeremy Rockliff MP
Premier
Minister for Health

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Tasmanian Government Submission

INQUIRY INTO THE TASMANIAN GOVERNMENT'S CONTINUING RESPONSE TO THE COVID-19 PANDEMIC

MARCH 2022

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Tasmanian Government

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1 INTRODUCTION

The Tasmanian Government welcomes the opportunity to provide further information about the Government's response to the COVID-19 pandemic (COVID-19) to the Public Accounts Committee's Inquiry. This submission builds on the Government submission to the Committee in 2020 and further hearings in relation to the Tasmanian Government's COVID-19 response.

Throughout the pandemic, the Government has adjusted restrictions and support mechanisms to reflect changing public health advice. This has been informed by Tasmanian specific modelling that underpinned the *Reconnecting Tasmania Plan* (Attachment A), publicly released on 22 October 2021.

As we transition to living with COVID-19, the Tasmanian Government has continued to balance the interests of public health advice with the social and economic needs of the Tasmanian community. The Government has supported a range of initiatives and measures that have ensured that Tasmania has reached very high vaccination rates and outperformed many other states in economic growth. Given the social demographic challenges faced by the State such as a dispersed population including many rural and remote communities, and an ageing population, the work performed by government and supported by Tasmanians has ensured that we continue to manage this transition to a new COVID-19 normal effectively.

This submission addresses the Inquiry's Terms of Reference (TOR) by outlining measures taken by the Tasmanian Government (including relevant Public Health advice) to:

- Prepare for the State border reopening on 15 December 2021;
- return to school;
- rollout the COVID-19 vaccination program statewide;
- support businesses in their management of the impacts of COVID-19; and
- manage the COVID-19 Tasmanian Check-in app.

To prepare this submission the Department of Premier and Cabinet (DPAC) has worked closely with all relevant agencies including the Department of Health (DoH), Department of Fire and Emergency Management (DPFEM), Department of State Growth (DSG), Department of Education (DoE) and Department of Communities Tasmania (DCT) to ensure that accurate information is provided that will address the Inquiry's TOR. This submission is structured around the questionnaire provided by the Committee.

2 STATE BORDER REOPENING

The Tasmanian Government took a deliberately cautious and sensible approach to reopening.

On 6 August 2021, National Cabinet agreed to the *National Plan to Transition Australia's National COVID-19 Response* (Attachment B), which centred around changing measures and easing of restrictions with increasing levels of vaccination coverage. The latter two phases of this plan (at >80 per cent vaccination coverage) include easing of domestic travel restrictions, and in the final phase, the opening of international borders.

Consistent with the national focus on the importance of high vaccination coverage to support easing of restrictions, achieving high COVID-19 vaccination coverage was also a key feature of our *Reconnecting Tasmania Plan*, released by the Premier on 22 October 2021. Under this plan,

the Government set an ambitious goal of having 90 per cent of Tasmanians aged 12+ fully vaccinated by the reopening of Tasmania's border on 15 December 2021. This ambitious goal was almost reached by this date, with over 90 per cent of Tasmanians aged 16+ fully vaccinated, and just under 90 per cent of Tasmanians aged 12+ being fully vaccinated ahead of reopening. Tasmania's vaccination rate for its 12+ eligible population as at the date of reopening was 95.38% first dose and 89.62% second dose (noting that the 12-15 year old population only became eligible for vaccination commencing mid September 2021).

Our plan for reopening relied on comprehensive Public Health advice to inform preparation and planning. It was supported by a suite of economic and public health measures that ensured any potential impacts of the plan were well managed.

2.1 Financial and Public Health Measures in Preparation

Financial Measures

The COVID-19 pandemic has impacted Tasmania socially and economically. The Tasmanian Government has been committed to supporting Tasmania from the very outset of the COVID-19 pandemic. Details of the Tasmanian Government's significant social and economic support packages, totalling approximately $1 billion, were provided in the previous Tasmanian Government Submission to the Committee.

A further range of measures were developed by Tasmanian Government agencies specifically in preparation for the reopening of Tasmania's borders to travellers from 15 December 2021, to ensure that Tasmanian community was well supported during the transition to living with COVID-19. Financial measures included:

- Small business support detailed in 5.1 of this document.
- Support for the hire and drive sector totalling approximately $3 million.
- Support for the events industry totalling approximately $3.85 million.
- $3.5 million for the arts sector in addition to $12 million made available since March 2020.
- $8 million in grants and a new $50 million loan scheme to support the tourism industry.

Throughout the COVID-19 response DCT has administered a range of initiatives that have also supported individuals and communities since the borders re-opened. These initiatives include:

- An additional $100,000 funding to the Salvation Army in January 2022 to enable the provision of groceries and essential items to venerable Tasmanians in isolation due to COVID-19. $817,174 had previously been provided to the Salvation Army and Red Cross to support this work.
- $280,000 to Tasmanian Council of Social Services (TasCOSS) in January 2022 to develop and administer the COVID-19 Service Continuity Supplies Fund which helps provide Rapid Antigen Tests (RATs) and Personal Protective Equipment (PPE) to community service organisation workers.
- $752,000 to various Non-Government Organisations (NGOs) who have provided financial and other support to Temporary Visa Card Holders.
- 6,192 loans for over 7,600 essential products and services totalling $6.8 million distributed as part of the No Interest Loans scheme.
- $500,000 investment in the Agricultural Show Grants Program which will run for an additional two years.

- $10 million in funding available through the Improving the Field, an initiative that offers financial assistance to upgrade sporting facilities and amenities.
    - In December 2021, 43 allocations totalling $1.5 million were made under the small grants stream (>$50,000)
    - In March 2022, 41 allocations totalling $8.4 million were made under the large grants stream (<$500,000).

The following grants are available to support eligible Tasmanian workers and self-employed people who lose income or earnings due to the impacts of COVID-19 and who do not have access to relevant leave entitlements:

- The Australian Government's Pandemic Leave Disaster Payment is a scaled payment based on the number of hours lost ($450 if at least one day up to 19 hours is lost; or $750 for hours or more) due to having, being a close contact, or caring for someone with, COVID-19.
- The Tasmanian Government's Pandemic Isolation Assistance Grant (PIAG) provides assistance under a number of categories:
    - $750 for 7-days isolation or quarantine (for those who cannot access the Australian Government payment)
    - $250 for those attending, or impacted by, a COVID-19 vaccination
    - $250 for those attending a PCR test

Since 15 December 2021, 54 applicants for the PIAG have been paid grants totalling $22,500.

These measures do not include the additional funding and resourcing provided for the planning and preparation of Tasmania's health system and schools. Later sections of this submission provide more detail on specific measures in the lead up to, and since, the reopening of Tasmania's Borders.

Public Health Measures

The measures taken in Tasmania's COVID-19 response, including in the lead up to the border reopening, have been guided by public health and health system advice at both a state and national level.

As a member of the Australian Health Protection Principal Committee (AHPPC), Tasmania's Director of Public Health has participated in multiple AHPPC meetings per week (at times daily) and out-of-session consideration of issues throughout the COVID-19 pandemic. This has included providing input into the development of national advice on best practice application of public health and social measures (PHSM) to help minimise community transmission of COVID-19, and to protect those most vulnerable. This advice has included, for example, AHPPC statements on measures such as mask use, physical distancing and density restrictions, and measures to minimise the risk of COVID-19 transmission in schools and aged care settings. This national advice has then been used to guide PHSM at the state level.

In preparation for the reopening of Tasmania's borders, and prior to that as part of the ongoing COVID-19 response, the Director of Public Health has made a broad range of directions under the *Public Health Act 1997* (Tas) (Public Health Directions), to mandate key measures. This has included a number of Public Health Directions regarding PHSM, and testing, tracing, isolation and quarantine (TTIQ) requirements relating to both the general public and to specific workers and/or settings. TTIQ measures are discussed further in the following sub-section.

A range of PHSM were already in place in Tasmania at the time of reopening that had been implemented throughout 2020 and 2021, as part of broader COVID-19 preparedness and response planning, including:

- Advice and guidance on:
  - Hand hygiene.
  - Respiratory hygiene.
  - Maintaining a physical distance of 1.5m from other people.
  - Staying home if unwell.
  - Getting tested if symptomatic.
  - Being aware of, and follow, current gathering, business and travel restrictions.
- Mandatory requirements / restrictions regarding:
  - Caps on gatherings in residential premises, and most other premises.
  - In most premises, physical distancing requirements of 1.5m where practicable.
  - A range of regulations under the COVID-19 Safe Events and Activities in Tasmania Framework for indoor gatherings above 250 people and outdoor gatherings above 500 people (including capacity limits, density limits, different requirements for seated and standing events, and registration or approval requirements depending on the size of the event). Additional conditions could be imposed by the Director of Public Health during the approval process.
  - Mask requirements at:
    - events over 1000 persons (indoor and outdoor)
    - residential aged care facilities and hospitals (other than for residents and patients) and
    - airports and aircraft, and on parts of the Spirit of Tasmania and its terminals
  - Requirement to use Check in TAS QR codes at a wide range of locations, businesses and events.
  - Screening requirements at residential aged care facilities (by way of Public Health Direction) and hospitals (by way of internal policy).
  - Mandatory vaccination requirements for workers in quarantine facilities, aged care, health settings, and disability care.
  - Requirement for all workplaces to have, maintain, and implement, a Workplace COVID Plan setting out measures that the workplace will take to eliminate the risk posed by the disease or, if elimination of the risk is not possible, mitigate the risk so far as is reasonably practicable.

In preparation for the reopening of Tasmania's border on 15 December 2021, and in response to the rapid rise in case numbers following the reopening, the following additional PHSM were implemented:

- Vaccinated entry requirements at certain licensed venues and events (including pubs and clubs, festivals and events where people move and mingle freely) from 6 December 2021, under the Public Health Direction Additional requirements for certain venues – No. 1.
- Mask-wearing requirements for all indoor public locations from 21 December 2021, under the Public Health Direction Mask wearing requirements No. 1.
- Mandatory vaccination for workers in early childhood education and care settings, from 8 January 2022, under the Public Health Direction Vaccination requirements in relation to Early Childhood Facilities - No. 1 signed on 23 December 2021.

PHSM have been adjusted at various stages throughout the pandemic in line with national advice and guidance (whilst also considering the local context) as Australia moves from the early virus suppression stage of the national COVID-19 response, through to the post-vaccination 'living with COVID-19' stage, where the focus is on protecting vulnerable populations and preventing serious illness, hospitalisation and fatalities.

2.2 Public Health Advice in Support of Reopening

The constantly evolving information on the epidemiology of the COVID-19 virus, including new and emerging strains of the virus, has presented a significant challenge worldwide in planning, management and response efforts. Throughout the pandemic response, the DoH COVID-19 preparedness planning and strategies have focused on protecting Tasmanians and ensuring that the health system is as prepared as possible to meet any challenges posed by the virus. This approach has remained the key focus of Tasmania's ongoing COVID-19 response including in the lead up to and following the reopening of Tasmania's borders on 15 December 2021.

In developing a reopening plan for Tasmania public health advice was carefully considered and balanced against economic considerations for the State. In developing this plan, a date of 15 December 2021 was set to allow the opportunity for all Tasmanians eligible to be vaccinated prior to the border reopening.

Within the Tasmanian Government there were several forums to discuss and review advice and information relating to COVID-19. A Heads of Agency COVID-19 Co-ordination Group met weekly to facilitate a whole of government approach to implementing the *Reconnecting Tasmania Plan* and the Ministerial Committee for Emergency Management also met weekly to consider information relating to COVID-19 at the Ministerial level. Public Health Services attended each of these meetings to provide specialist advice.

The Kirby Institute prepared Tasmania-specific modelling in support of the *Reconnecting Tasmania Plan* that was announced on 22 October 2021. A copy of this modelling is attached (Attachment C). The *Reconnecting Tasmania Plan* was developed in alignment with National Cabinet processes and leveraging of the experiences of other jurisdictions. Doherty Institute modelling which supported the National Plan is attached to this Submission (Attachment D).

Planning and measures undertaken by DoH ahead of the reopening have been guided by public health advice and decision making at both the state and national levels. Throughout the pandemic DoH has engaged closely with the chief executives and clinical and public health leads of the Australian Government Department of Health and all state and territory (state) health departments. In addition to officer and senior departmental official level engagement, Tasmania's Minister for Health has participated in regular meetings with other state health ministers and the Australian Government Minister for Health, as well as the Australian Government Chief Medical Officer. DoH has also provided advice to DPAC to support first ministers' consideration and decision-making regarding health aspects of the national COVID-19 response by National Cabinet. This engagement has ensured Tasmania's health system response has aligned (where possible and appropriate) with current agreed national approaches and guidance.

Modelling has been undertaken at both the state and national levels to help inform decision making regarding the ongoing COVID-19 response, including to help inform arrangements for reopening of state and national borders. At the national level, the Doherty Institute was commissioned by the Australian Government to undertake modelling to help inform the

National Plan to Transition Australia's National COVID Response. Tasmania contributed to this process through the National Cabinet framework and associated committees.

In preparation for the initial easing of border restrictions in Tasmania on 15 December 2021, the Tasmanian Government, through DPAC, commissioned modelling from the Kirby Institute at the University of New South Wales which took into account Tasmania's unique demographic features (the Kirby modelling).This modelling, which was based on the Delta variant (as the dominant variant at the time), projected a rise in rates of hospitalisation after reopening, with the peak in hospitalisations occurring from March 2022.

The peak demand modelling on hospital bed and ICU bed occupancy, based on Tasmania's vaccination rates and public health and social measures, formed the basis for the hospital escalation level and capacity planning in advance of the border opening. Further information on hospital escalation management planning is outlined in Attachment F. This modelling also informed the planning for the COVID@home service.

The first case of community transmission of the Omicron variant occurred in NSW in early December 2021. Following the reopening of Tasmania's borders on 15 December 2021, Omicron became the dominant COVID-19 variant in Australia. The different epidemiology of Omicron (highly transmissible but usually causing less severe illness) resulted in a much faster increase in case numbers than projected by the modelling, but lower rates of severe illness requiring hospitalisation.

The preparedness of the Tasmanian health system, and its ability to rapidly adapt, has been tested by the highly transmissible Omicron variant. The extensive planning and investment in our Emergency Coordination Centre and dedicated Emergency Operations Centres, in building our hospital and virtual care capacity, along with the extraordinary dedication and resilience of health staff, has ensured that the health system was able to cope with the surge in COVID-19 cases in Tasmania when the borders reopened.

In addition to the public health measures detailed in Section 2.1 above, the information below outlines further key measures undertaken by the Government in its preparedness and planning, which helped ensure the Tasmanian health system was well prepared and equipped to quickly adapt and respond effectively to increasing COVID-19 case numbers.

High Vaccination Coverage

A key factor in supporting Tasmania's border reopening was achieving high levels of COVID-19 vaccination coverage rates across the Tasmanian community.

Since the national COVID-19 vaccine roll-out commenced in early 2021, Tasmania has consistently outperformed other Australian states, with Tasmanian state clinics delivering a large proportion of the COVID-19 vaccinations both prior to, and following, the reopening. The COVID-19 vaccination roll-out in Tasmania is discussed in further detail under Section 4.

Effective Testing, Tracing, Isolation and Quarantine (TTIQ) measures

TTIQ measures in Tasmania have been guided by national advice and recommendations, including those provided in the Coronavirus Disease 2019 Communicable Diseases Network Australia (CDNA) Series of National Guidelines (SoNG), and via AHPPC.

The SoNG, which is developed and updated by CDNA, outlines Australia's national minimum standard for surveillance, laboratory testing, case management and contact management for

COVID-19. The national guidance contained in the various iterations of the SoNG has evolved in response to new information on the epidemiological characteristics of the virus (including the prevalence and potential for spread), clinical case definition, and testing capacity. Guidance in the SoNG is also updated where required in response to relevant decisions of National Cabinet and progress through the National Plan to Transition Australia's National COVID Response. Tasmania's COVID-19 policies, processes, and measures have in turn evolved throughout the pandemic response in line with the national guidance.

As with PHSM, TTIQ measures have been adjusted throughout the pandemic in line with national advice and guidance, and consideration of local context. With the emergence of Omicron as the dominant COVID-19 variant, AHPPC released advice regarding public health implications of Omicron in December 2021 which acknowledged that:

> *"While TTIQ has been very effective in controlling transmission, its effectiveness is limited by operational factors and the community's willingness to test and comply with public health recommendations. Therefore, the overall contribution of TTIQ to limiting transmission is likely to decrease with higher case numbers".*

The relevant AHPPC statement is attached (Attachment E).

The information below sets out key TTIQ measures implemented ahead of the reopening of Tasmania's borders (and prior to that as part of the broader COVID-19 response). In addition to the measures outlined below, there were a range of other existing TTIQ requirements in place under Public Health Directions (and directions made under the *Emergency Management Act 2006* (Tas)) that continued to apply at the time of reopening. These include (but are not limited to) requirements regarding testing, isolation and quarantine that have been implemented and updated as required throughout Tasmania's pandemic response, in line with the national guidance in the SoNG.

Testing

Detecting cases of COVID-19 remains critical to controlling the spread of the disease and thus helping to keep Tasmanians safe. A key message throughout the COVID-19 pandemic response, both at the state and national level (including pre-and post-reopening), has been, and continues to be, "if you have symptoms, get tested."

The Tasmanian COVID-19 Testing Strategy (the Testing Strategy) is designed to detect cases of COVID-19 rapidly for the benefit of:

- the individual, in order to receive early and appropriate clinical care and
- the community, in order to enable early identification of cases to reduce time spent infectious in the community and to identify and control chains of transmission promptly.

The Testing Strategy has evolved throughout the pandemic response, guided by the SoNG, the Public Health Laboratory Network, and AHPPC advice. The Testing Strategy will continue to evolve in the ongoing COVID-19 response, to reflect ongoing advances in both knowledge of COVID 19 and testing technologies and local epidemiology.

Throughout the pandemic response (including before and after the reopening of the state border), community awareness of testing has been, and continues to be, promoted and maintained through increased messaging utilising a variety of media channels (including website, print, television, radio, and social media). DoH also works with organisations such as Primary

Health Tasmania to increase testing and/or referral through general practices and supports workplaces to encourage testing of symptomatic workers (and workers' symptomatic family members) as part of workplace COVID Safety Plans.

Testing Capacity

Prior to the reopening, as part of the Tasmanian Government's Delta Shield Program (announced on 11 August 2021), significant work was undertaken to strengthen Tasmania's COVID-19 testing and laboratory capacity. This included measures such as:

- introduction of an on-line request system for bookings;
- development of an alternative workforce model to enable the COVID-19 testing clinics to respond to surges in demand;
- increased laboratory staffing levels; and
- procurement of additional laboratory equipment.

Primary laboratory capacity to process COVID-19 tests is provided through the Royal Hobart Hospital (RHH). Tasmania's testing capacity has been expanded significantly over the last 18 months. This has included a tripling of processing capacity at the RHH from 1 000 tests per day to between 3 000 and 5 000 tests per day ahead of the reopening (as part of the broader COVID-19 response planning). In addition, there is further surge capacity supported by the Launceston General Hospital (LGH) and private providers.

Ahead of the reopening (and prior as part of broader COVID-19 preparation and response planning), testing clinics were (and continue to be) located in Hobart, Launceston, East Devonport, and Burnie. DoH also has four buses fitted out to provide the administrative base for mobile testing clinics to support surge testing and/or to target testing capacity in rural and regional areas as required.

As part of preparedness planning, in mid to late 2021, DoH developed and implemented a revised staffing approach for COVID-19 testing clinics. This introduced an alternative workforce to undertake COVID-19 expanded specimen collection, under the supervision of clinical staff. This revised model enabled both expanded testing capacity and supported clinical workforce capacity in other areas of the health system by enabling distribution of nursing staff into areas of clinical need (including the COVID-19 vaccination program, hospitals and other health services).

DoH also developed arrangements (including contracting) with private providers to facilitate the delivery of testing in DoH established pop-up clinics, at the DoH fixed clinic in Burnie, and on Flinders and King Islands. Under the contracting arrangements, the private providers were funded to deliver testing at their sites that was precluded from funding under Medicare (e.g., travel related tests and testing for asymptomatic people such as close contacts).

Following the reopening of Tasmania's borders on 15 December 2021, and the rapid emergence of the Omicron variant, DoH acknowledges the extreme pressure that PCR testing clinics and booking lines were placed under in the last week of December and early January. This sudden peak in testing demand also occurred during Christmas/New Year which is very challenging staffing period, despite the increased capacity and plans in place for reopening. This pressure was experienced across all Australian states and territories with open borders (excluding Western Australia, which remained closed at that time). Following an emergency meeting of National Cabinet on 5 January 2022, as numbers of cases in the community

continued to increase, Tasmania introduced the use of RATs to enable easy access to testing and rapid turnaround times to results. This was in-line with AHPPC advice and a national move towards increasing use of RATs as a diagnostic test, reducing pressure on PCR testing capacity resulting from the rapid increase in case numbers due to the spread of Omicron.

In order to ensure that eligible people throughout Tasmania had timely access to RATs, particularly when there was a national and international shortage of these tests, a supply and distribution strategy was introduced. The Tasmanian Government supply of RATs is supplied free of charge to:

- people who are symptomatic;
- close contacts;
- those directed by Public Health Services (PHS) to test;
- those in high-risk settings approved by the Deputy State Health Commander on advice from PHS; and
- exempt critical workers.

In early January 2022, RAT collection sites were stood up at the following locations:

- In the south at MyState Bank Arena, Glenorchy, and the Tasmania Police Academy at Rokeby;
- In the north at the Launceston Silverdome; and
- In the north west at the Ulverstone Sports and Leisure Centre, and the Dial Sports Complex in Penguin.

Following the initial peak, the RAT distribution activity was relocated to the existing testing clinics located at Hobart, Launceston, East Devonport and South Burnie.

Australia Post was engaged to implement home RAT delivery to residents of more regional and remote areas. Home RAT delivery is also available to all eligible Tasmanians who are unable to collect their RAT kit from a testing clinic, or do not have someone who can collect it on their behalf, including people with disability.

Testing requirements to support safe reopening

Under the reopening arrangements, travellers coming to Tasmania from high-risk areas were required to return a negative COVID-19 PCR test within 72 hours before departure to Tasmania This requirement did not apply to children aged under five years or people recently recovered from COVID. The requirement was mandated under Public Health Direction Arrival requirements for certain travellers into Tasmania – No. 12, made by the Director of Public Health on 14 December 2021. Vaccinated travellers from low-risk areas were not required to undertake pre-departure testing.

Other additional and/or amended testing requirements implemented in preparation for the reopening of Tasmania's borders through Public Health Directions included:

- a modified testing regime for transport, freight and logistics workers and international aircrew arriving in Tasmania after recently spending time in high-risk areas and for non-vaccinated workers (including a requirement to provide evidence of a negative COVID-19 test undertaken in the 7 days prior to arrival in Tasmania); and

- requirement for full COVID-19 vaccination, and pre-embarkment testing for passengers and regular testing for crew, of cruise ships.

As noted in the previous section, shortly following the reopening Tasmania moved (on 6 January 2022) to using RAT tests as a primary diagnostic tool. This move followed confirmation by National Cabinet on 5 January 2022 that PCR testing was not required following a positive RAT.

On 19 January 2022 requirements for pre-departure testing for vaccinated travellers to Tasmania were removed (while testing requirements for unvaccinated travellers remained in place until 26 February 2022). This was also in line with a national move away from requiring testing for interstate travel.

Tracing

As part of Tasmania's broader COVID-19 response, a number of measures have been implemented to support and enhance Tasmania's contact tracing capability and capacity. Such measures have included:

- working with the University of Tasmania to develop an online contact tracing training package, designed to support the rapid upskilling of health professionals in contact tracing
- configuration of a scalable and flexible workforce to support surge capacity (including members from PHS, Ambulance Tasmania, the Aged Care Emergency Operations Centre, Disability Emergency Operations Centre and the Tasmanian Health Service (THS))
- move from paper to electronic forms for use in case and contact management
- introduction of Check in TAS QR codes and app to facilitate the collection of contact tracing information in settings defined in the Contact Tracing Public Health Direction
- use of an SMS system to provide advice and rapidly survey potential cases to inform risk assessments and
- implementation of the new Tasmanian Notifiable Diseases Surveillance System.

As part of Tasmania's reopening planning, it was recognised that as community transmission increased, modified contact tracing processes in line with the CDNA SoNG would need to be employed. As such, with the rapid increase in case numbers due to the spread of Omicron following the border reopening, PHS adapted its processes in line with national recommendations for a more automated process.

Under these more automated processes, case surveys and information are sent electronically, advising cases to identify their own close contacts and inform workplaces or schools they may have attended while infectious. The more automated process of contact tracing is similar across Australian jurisdictions.

PHS is focused on managing and undertaking contact tracing in areas of high priority and where outbreaks are occurring. Clinical nurse consultants work with priority settings to manage outbreaks where there is risk of rapid transmission of COVID-19 and the consequences of cases may be severe. Information on the role of the COVID-19 Check-in App (Check in Tas) in supporting contract tracing is outlined in the Check in Tas section of this submission.

Isolation and Quarantine

As outlined previously, ahead of the reopening there were a range of mandatory TTIQ requirements in place under both the *Public Health Act 1997* and the *Emergency Management Act 2006*.

Key requirements in place (or amended) at the time of or just after the reopening under Public Health Directions included:

- 10 days isolation for positive cases
- a change from 14 day to seven-day quarantine for close contacts (followed by a seven day period of mask wearing when outside of primary residence; and a requirement not to enter high risk settings except in certain circumstances) and
- risk assessments for businesses and high-risk settings to assist in identification of contacts.

An adjustment to quarantine requirements was implemented from 14 January 2022, permitting certain critical workers in critical industries, who would otherwise be in quarantine as close contacts, to attend the workplace subject to certain strict conditions. This adjustment was in line with a decision by National Cabinet on 13 January 2022 regarding implementing changes to furlough arrangements for essential workers. This measure was targeted at addressing supply chain and workforce shortages in critical industries caused by close contact quarantine requirements.

Triaged models of care for positive cases

The triaged models of care for COVID-19 cases in Tasmania were developed to ensure people have access to the most appropriate level of care in the most appropriate setting based on risk assessment. These models included:

- COVID@home, for those with mild to moderate illness who have a suitable place to isolate and recover and are able to cope well at home.
- Community Case Management Facilities (CCMF), for those with moderate illness requiring a higher level of monitoring than that available in COVID@home, or those with mild to moderate illness with no suitable place to isolate and recover, or no social support available (for example elderly living at home alone without family or social supports, a traveller without suitable accommodation to isolate in, or a person without a home).
- Hospital treatment for those with severe/critical illness and very unwell.

People with COVID-19 who have few or no symptoms may isolate in a suitable premises, with or without support from their own GP. Some people with COVID-19 who have few or no symptoms but do not have a suitable premises to isolate, may isolate at one of the designated Tasmanian Government COVID-19 hotels, with or without support from their own General Practitioner, or COVID@home. The Tasmanian Government COVID-19 quarantine hotels have to date been managed by the Department of Communities, however DoH will take over the responsibility of these from 1 April 2022.

COVID@home

The COVID@home service was established in the lead up to the reopening of Tasmania's borders as a hospital avoidance strategy. It commenced operation on 15 December 2021 – the day of the reopening.

COVID@home is targeted at providing care safely for people who test positive to COVID-19 and are suitable for receiving care within their home. Caring for individuals with COVID-19 in their homes allows for the provision of appropriate care, minimises the impact on the healthcare system and frees up hospital beds for patients with moderate or severe illness.

COVID@home is a virtual service that enables COVID-19 positive individuals enrolled in the program to access safe and supportive remote healthcare in the home 24 hours a day, seven days a week. Care is provided by a team of qualified DoH staff including doctors, nurses and allied health professionals. The service utilises health monitoring devices to check on people's health daily while they are at home.

The COVID@home service is available statewide, including in regional and rural areas of Tasmania. It is an 'opt in' service, with COVID-19 positive individuals able to opt in and out of the program at any time. Patients can self-refer into the service if they wish, or they can be referred by their healthcare provider. Healthcare professionals such as GPs are also able to access the service if they have concerns about any of their own patients diagnosed with COVID-19.

Planning for COVID@home was informed by the Kirby modelling, which was based upon the Delta variant. With the emergence of Omicron as the dominant strain in late 2021 however, Tasmania experienced higher than anticipated case numbers following the reopening due to the increased transmissibility of this strain, which in turn placed significant pressure on the COVID@home service. Due to the higher than anticipated case numbers, in the first three days of January 2022, call-back times were longer than intended (exceeding three hours). In response, DoH undertook rapid staffing adjustments to cope with the demand, including the employment of an additional 4.5 full time equivalent (FTE) staff. As a result, the average call back times have reduced to within 30 minutes (noting there was some fluctuation in this average with a further spike in demand in later January 2021). The nursing staffing level for the COVID@home program is currently sitting at approximately 30 FTE.

In the three-month period since the reopening of Tasmania's borders on 15 December 2021 to 15 March 2022, 6 023 people have chosen to participate in the COVID@home program and to safely recover at home, with the regional breakdown of participants as follows:

- 1 221 (20.3 per cent) in the north;
- 1 372 (22.8 per cent) in the north west; and
- 3 430 (56.9 per cent) in the south.

Community Case Management Facilities

As outlined previously, CCMFs are used to accommodate COVID-19 positive patients, who are unable to be managed at home but do not require hospital-level care. The CCMFs are managed by the THS. Services provided through CCMFs include:

- daily health screening;
- social and mental health supports;

- processes to support escalation and proactive management of any clinical, mental health or social concerns; and
- written and verbal information on the processes to escalate health needs.

Ahead of the reopening, Tasmania had two operational CCMFs; Fountainside in Hobart with 50 beds and the Coach House in Launceston with 25 beds.

Over the three-month period following the reopening from 15 December 2021 to 15 March 2022:

- 214 patients were admitted to the Fountainside; and
- 168 patients were admitted to the Coach House.

Planning for a third CCMF at Wellers Inn in Burnie with 25 beds was also underway prior to the reopening, with this facility intended to commence operation shortly after the reopening. However, a rain event in January 2022 caused water damage resulting in significant delays to works to prepare this facility. As a result, an alternate suitable venue for a north west CCMF has since been identified at the Sunrise Motel in Devonport, which has a minimum of 12 beds.

As a further preparedness measure in November 2021, DoH entered into an arrangement with the Hobart City Council to establish a pop-up clinic at the Hobart City Hall if required. This arrangement was put in place so the clinic could be stood up if required to enable people who have tested positive for COVID-19 to have face-to-face appointments in the facility without having to attend the RHH.

Hospital Capacity

Comprehensive escalation and surge planning has been put in place by DoH as part of the broader COVID-19 response to ensure the Tasmania health system can continue to safely and effectively care for both COVID-19 positive and non-COVID-19 patients. The preparedness of the Tasmanian health system, and its ability to rapidly adapt, has been tested by the highly transmissible Omicron variant. The extensive planning and investment in hospital capacity, along with the extraordinary dedication and resilience of health staff, has ensured the health system was able to cope with the surge in COVID-19 cases in Tasmania when the borders reopened. As at 24 March 2022 Tasmania has the equal lowest rate per capita of COVID hospitalisations.

Key measures taken by DoH to help prepare the health system for COVID-19 have included increasing Tasmania's public bed capacity by 152 new beds since July 2021. These additional beds include 35 beds that DoH has negotiated with private hospitals as part of the $20 million Tasmanian Government commitment to help ease the load on Tasmania's public hospitals. Hospital escalation plans (discussed in more detailed below), at their highest level, provide for a surge capacity of 211 non-ICU COVID beds across the state and up to114 ICU surge beds.

Comprehensive escalation and surge plans were put in place for the health system to ensure safe and effective care could continue to be provided for those with COVID-19.

Tasmania has also actively engaged with monitoring of hospital capacity (including ICU capacity) at the national level. This has included provision of data for publication in the COVID-19 Common Operating Picture (a weekly infographic published by the Australian Government to provide a traffic light report of the COVID-19 situation in Australia).

Attachment F provides further detailed information on the extensive planning work undertaken, including escalation Management Planning across all regions, specific health screening measures, elective surgery arrangements, ICU capacity planning and workforce planning measures.

Personal Protective Equipment (PPE) Supply

Personal protective equipment (PPE), including masks, gowns, goggles, and gloves is essential for health care workers to protect themselves, their patients, and prevent disease transmission in healthcare settings. In Tasmania, recommendations for the use of PPE are in accordance with the CDNA SoNG. As the SoNG is updated and/or the risk profile changes, local protocols for the use of PPE and contact tracing are reviewed and adjusted accordingly. It should be noted that, in addition to undertaking a range of other activities, (including activities to support correct use of PPE), infection control teams within Tasmania's health services also play a key role in managing contract tracing related to those services.

All THS medical, nursing and allied health professionals are required to participate in mandatory infection prevention and control training held annually, which includes PPE use. Further measures implemented across the THS to support correct use of PPE during the pandemic include (but are not limited to):

- COVID-19 specific guidance on which types of PPE are required in different settings and circumstances;
- information and refresher training on correct donning and doffing of PPE;
- PPE fit testing for staff working in high-risk areas; and
- allocation of nursing staff to watch donning and doffing in high-risk areas and assess for breaches.

PPE supply for Tasmanian public hospitals is managed by DoH, through the THS. In addition to public hospitals, other public healthcare services provided with PPE through the THS include Ambulance Tasmania, Oral Health Services Tasmania, and Child Health and Parenting Services. The THS uses warehouses in the three regions to store and rotate PPE using normal stock access and inventory management processes.

PPE usage is closely monitored and statewide stock levels are reported weekly. DoH remains in regular contact with suppliers and continues to monitor PPE supply nationally and internationally.

With global demand for PPE remaining at an all-time high, the Tasmanian Government has also established a strategic reserve of PPE, to ensure sufficient supply of PPE to public healthcare services are maintained statewide. The State Emergency Medical Stockpile contains over six-months supply of PPE based on peak pandemic usage.

Ahead of the reopening of the borders, DoH held the following PPE in stockpile and as stock-on-hand as part of hospital preparedness planning:

- N95/P2masks - 3.7 million
- Surgical masks - 6.3 million
- Hand sanitizer - 54 000 litres
- Gowns – 2 million
- Gloves – 20 million
- Face shields - 82 000

Since the start of the pandemic response to 31 December 2021, DoH has spent $69.46 million on COVID-related PPE. The total forecast expenditure on PPE since the start of the pandemic response to 30 June 2022 is $77.58 million. Under the National Partnership on COVID-19 Response the Australian Government will fund 50 per cent of the PPE costs incurred by DoH in responding to the COVID-19 pandemic.

DoH through its Aged Care Emergency Operations Centre has also pre-supplied PPE and Rapid Antigen Tests to Residential Aged Care Facilities in Tasmania, to quickly respond to the management of outbreaks, to support the Commonwealth.

Ambulance Tasmania Preparedness

Since the commencement of the COVID-19 pandemic, Ambulance Tasmania (AT) has increased its paramedic workforce and other resourcing to meet potential increased demand due to COVID-19 and to better service rural and remote areas of the state.

AT has developed strategic emergency plans to strengthen organisational preparedness in direct response to the COVID-19 pandemic. AT also has in place excellent infection control processes and procedures, which have successfully prevented transmission of COVID-19 from patient to paramedic. This preparedness helped ensure AT was able to response effectively to increasing COVID cases numbers following the reopening of the borders.

Due to the lower severity of the Omicron variant there were fewer COVID-19 cases requiring hospitalisation for COVID-19 related illness than expected (based on the modelling on the Delta variant). However, the increased transmissibility of Omicron meant AT responded to and transported a number of COVID-19 positive patients, requiring emergency care for unrelated conditions.

Workforce

Since the commencement of the COVID-19 pandemic there has been significant growth in the AT operational workforce (as outlined below). This has included staffing measures to support the triage of COVID-19 patients and management of regional COVID-19 impacts

The growth in the AT workforce includes::

- an additional 12 Intensive Care Paramedics forming a Critical Response Unit in the north west region;
- 24 paramedic positions increasing 24-hour crew coverage in Burnie and Devonport;
- a more scalable workforce capacity with the employment of casual paramedic and Non-Emergency Patient Transport officers;
- 12 additional paramedics employed in both Launceston and Hobart in 2021-22;
- 24 paramedic positions established in rural and remote areas across the state;
- development of a Community Paramedic role with an increased primary health focus, to direct lower acuity patient to alternate service providers, to meet their medical needs;
- establishment of a Secondary Triage service in February 2021, which has been able to meet the medical care needs of many lower acuity patients with COVID-19 symptoms by directing them to primary health care providers; and

- increased operational support for regional operations with the introduction of Operational Support Officer positions, focusing on regional COVID-19 impacts.

AT has also increased its Aero-Medical Retrieval capability with the inclusion of the Bell 412 Helicopter, providing for longer range missions, to better service the emergency medical and patient transfer requirements of the north west region and the Bass Strait Islands.

AT has developed and implemented return to work procedures for staff identified as cases or close contacts.

Infection control

AT rapidly incorporates current national COVID-19 infection prevention and control advice into all operational areas within AT. The AT Emergency Operation Centre lead a continual review of AT PPE to ensure suitability and appropriateness. Operational exercises are also conducted to test and improve COVID-19 procedures and policies at state and regional levels.

Due to the infection control procedures in place throughout AT, there have been no confirmed patient to paramedic transmission of COVID-19 throughout the pandemic response.

Public and key stakeholder communications

Clear, transparent and timely communication has been a key component of Tasmania's ongoing response to the COVID-19 pandemic. Through open and transparent communication with the wider community, DoH has provided (and supported provision of) clear advice throughout the pandemic. This has included (but is not limited to) advice on issues such as case numbers, high risk locations, restrictions and measures to prevent further transmission of COVID-19. Effective internal communication mechanisms, and engagement with key stakeholders has also been a vital element of the COVID-19 response, helping to ensure timely distribution of key messages and supporting informed decision making.

Examples of some of the key mechanisms used to communicate effectively with the public and key stakeholders in the lead up to, and following, the reopening of the State's borders include:

- The Public Health Hotline - with a call centre of operators educated in the state's response to COVID-19 established early in the pandemic. The Public Health Hotline gives the public the option to speak with someone over the phone to get advice and information or organise testing, vaccination or reporting.
- The Tasmanian Government's COVID-19 website - www.coronavirus.tas.gov.au – which provides a central online depository for all current public information regarding the state's COVID-19 response. The website also allows people to request bookings for tests and to report test results.
- Regular key health stakeholder forums - used as a mechanism for provision of COVID-19 information to relevant areas, and for consultation on strategies which relevant sectors (for example, this has included consultation with the aged care and disability sectors).
- Regular employee representative meetings - used as a mechanism for provision of COVID-19 information and/or for consultation on strategies with staff and/or representative bodies (this has included, for example, the Australian Medical Association,

the Australian Nursing and Midwifery Federation, the Health and Community Services Union, and the Community and Public Sector Union).

- Primary Health Tasmania/General Practitioner (GP) Liaison via GP Fax stream communications – a regular update delivered directly to the primary health sector via email and/or fax providing an update on any information applicable for practitioners or patients.
- Key, broad messages were relayed by government spokespeople each week via a range of media (including television, newspaper, social media, radio interviews, advertising and editorial).
- DoH social media - the DoH Facebook profile has 80,000 followers and is a key channel for distributing public facing, broad messaging that DoH wants people to know and share.
- DoH internal "Reach" platform – through which regular updates are provided to the DoH workforce including advice and reminders for staff regarding COVID-19 related measures and restrictions in place under relevant policies and/or Public Health Directions.

2.3 Financial and Social Impacts

Tasmania's economy has performed exceptionally well during the pandemic, outperforming most other jurisdictions. In its January State of the States Report, CommSec ranked Tasmania's economy as the best performing in Australia for the eighth quarter in a row. Tasmania's unemployment rate is at 3.8 per cent - the lowest it has ever been in our history.

The 2021-22 Revised Estimates Report released in February 2022 further confirmed that Tasmania's economic and financial position remains strong and is strengthening as we emerge from the impact of COVID-19. As a result of better economic and financial outcomes, the Net Operating Balance has improved by nearly half a billion dollars over the Budget and Forward Estimates period, and the Budget remains on track for a return to surplus next year.

These performance indicators demonstrate that the Tasmanian Government's decision to open our borders when we did was the right one. The measures put in place, as detailed above, ensured our community was protected and supported during the border reopening and beyond.

The suite of measures outlined were designed to ensure Tasmania's health system has been able to support patients, health professionals and the broader Tasmanian community throughout the pandemic. This has included a range of measures aimed at protecting the public and ensuring appropriate access to health services to support positive patient outcomes throughout the pandemic, including in the lead up to, and following, the reopening of the State's borders.

Some key examples of how these measures have helped support and protect patients, health professionals and the broader community include (but are not limited to):

- ensuring high vaccination coverage ahead of the reopening by ensuring access to vaccinations across the state, with Tasmania delivering a larger portion of vaccinations via state clinics than most other states and territories in the months prior to the reopening to help minimise the rate and severity of infections;

- ensuring hospitals had in place comprehensive escalation and surge plans, to enable Tasmania's health system to continue to care for COVID-19 positive, and non-COVID-19 patients safely and effectively, whilst also ensuring appropriate support and protections for staff;
- establishing triaged models of care, including implementation of the COVID@home program and Community Case Management Facilities to ensure that people have access to the most appropriate level of care, in the most appropriate setting based on risk assessment;
- developing and implementing flexible workforce models to ensure Tasmanians have access to testing, vaccination, and appropriate hospital and health services to meet their needs (for example through upskilling and expansion of workforces to enable clinical workforces to be allocated to areas with the highest need);
- regular and ongoing public, staff and key stakeholder communications and advice to ensure Tasmanians have access to up-to-date information on issues such as:
    - case numbers,
    - current Public Health and Social Measures and testing, tracing, isolation and quarantine advice and requirements,
    - availability and locations of testing and vaccination clinics,
    - high risk exposure sites, and
    - a range of other issues to support Tasmanians to make informed decision to help protect themselves their families and the broader community
- ensuring DoH staff have ongoing access to a broad range of information, supports resources (e.g. access to appropriate PPE, regular whole of staff communications on key issues; access to wellbeing programs and support; COVID Safety Plans; and flexible working arrangements - including arrangements to protect vulnerable staff).

Our thorough planning and preparation has meant that our health system has been able to rapidly adapt and respond effectively to increasing case numbers following the re-opening of the State's border (and throughout the COVID-19 response more broadly. The current impact on our hospitals is currently significantly less than what we prepared for. Our strong effort on vaccinations, with one of the highest vaccination rates in the country, has helped to reduce the impact of COVID-19 in Tasmania.

Removing and reducing restrictions in Tasmania was not a decision that was made lightly. The Government was aware that that once they were eased, it was inevitable that COVID-19 would enter the Tasmanian community. Such was the case for other Australian jurisdictions when they opened their borders.

There has inevitably been an impact on Tasmanians as a result of the decision to open our borders. The Tasmanian Government remains committed to supporting our community to help mitigate and minimise these impacts as we learn to live with COVID-19.

The Omicron variant has resulted in significant numbers of positive cases and close contacts needing to isolate. A number of supports are available to assist Tasmanians, including income supports from the Federal and State governments for those who have lost work due to the requirement to isolate.

Delivery of COVID Care Packages has provided assistance to vulnerable Tasmanians and community service organisations. These packages provide groceries, medicines and other essential items to people who are required to isolate or quarantine.

Tasmania's strong economic position enabled the Tasmanian Government to pivot and respond to the impacts on Tasmanian businesses through providing further business support funding available through the COVID-19 Business Impact Support Program. More details of this Program are provided in section 5.1 below. Other business supports continue to be available, including grants to access financial or business guidance services.

Another successful example of the Tasmanian Government's ability to respond flexibly to impacts felt within the community as more people were required to isolate was the introduction of temporary exemptions to quarantine requirements for close contacts who are identified as critical workers. This contingency framework was put in place to enable workplaces, identified as essential for the supply of critical goods and services to the community, to register for essential staff to be exempt from the quarantine requirement for close contacts if they are identified as a critical worker. This move ensured that Tasmanians could continue to access essential goods and services and enabled critical businesses and supply chains to continue operating.

3 RETURN TO SCHOOL

The Tasmanian Government committed to returning to face-to-face learning and starting schools as planned in early February as a priority. This commitment required extensive planning for the opening of schools in the months prior to Term 1 2022, informed by Public Health advice and ensuring that the wellbeing of the State's children and education staff were at the centre of this planning.

The transition to Tasmania's State borders reopening on 15 December 2021 has seen school communities adjusting to significant change; from attending school with zero cases of COVID-19 in Term 4 2021, to returning to school in Term 1 2022 with community transmission occurring. This shift was also significant for libraries and Child and Family Learning Centres (CFLCs) which were impacted immediately following the opening of borders.

To support this transition, DoE undertook significant planning from late 2021 to support the return to school in 2022, in close consultation with Public Health.

3.1 Measures Taken by Government

Engagement in National Work

Important national work related to schools and the return to school undertaken through forums such as National Cabinet has informed Tasmania's approach. Acknowledging the importance of planning and certainty for the safe return to schools in 2022 while accounting for the broad easing of public health and social measures and other restrictions, on 5 January 2022 National Cabinet tasked the First Secretaries Group (FSG) to develop a national schools reopening framework. This national framework was designed to enable students to return to school on day one of Term 1, and for schools to stay open with consistent requirements across all jurisdictions to be in place prior to the first day of the first term of school.

DPAC led the Tasmanian input to the national schools reopening framework as Tasmania's FSG representative, with DoE and DoH providing education and health advice into its development. Development of the national schools reopening framework was informed by the most recent AHPPC statement on COVID-19, schools and early education. AHPPC was also provided with

the opportunity to provide input to FSG's drafting. DoH's input and advice to the national schools reopening framework was largely through its involvement in AHPPC. A key aspect of Tasmania's input to the development of the national schools reopening framework was to ensure it allowed states to implement the approaches best suited to their local requirements. This input was reflected in the final published version.

On 13 January 2022 National Cabinet agreed and published the National Framework for Managing COVID-19 in Schools and Early Childhood Education and Care (Attachment G). It provides an outline for a nationally consistent approach to the ongoing delivery of education through COVID-19 and outlines six national guiding principles for managing COVID-19 in schools and early childhood education and care (ECEC), which include:

1. ECEC services and schools are essential and should be the first to open and last to close wherever possible in outbreak situations, with face-to-face learning prioritised
2. Baseline public health measures continue to apply
3. No vulnerable child or child of an essential worker is turned away
4. Responses to be proportionate and health risk-based
5. Equip ECEC services and schools to respond on the basis of public health advice and with support from public health authorities where required
6. Wellbeing of children and education staff to be supported.

On 20 January 2022 National Cabinet noted jurisdictions would release their operational plans for schools that would be developed in line with the National Framework and its key principles. The *Tasmanian Department of Education Return to School Plan* (Attachment H) was released this same day, with confirmation school would commence face-to-face as scheduled in February 2022. The *Return to School Plan* included a high-level overview as well as a detailed Schools Operational Plan. At the same time, a detailed Operational Plan was also released for managing COVID-19 in ECEC.

Governance and stakeholder engagement to support return to school planning

Along with engagement at a national level, from Term 4 2021 preparation for the return to school included a focus on engaging with key stakeholders and establishing governance to support the return to school planning. Preparing families for returning to school with COVID-19 active in our community was also a priority during this time.

Establishing these governance arrangements and ongoing engagement with stakeholders provided a strong foundation to support planning for the return to school. A range of internal governance arrangements were established within DoE, including:

- regular briefings with Principals and CFLC leaders led by the Deputy Secretary, Learning
- a COVID Working Group organised around key portfolios of work including staffing, data, outbreak management, enquiries management, communication, disability, facilities, the Virtual Learning Centre and curriculum, and stakeholder engagement.
- COVID Executive Committee to engage the Executive Group and senior leaders to make timely decisions.

DoE also engaged in governance arrangements with key government agencies, including:

- regular briefings with the COVID-19 Coordination Centre
- regular liaison with the Department of Premier and Cabinet
- regular briefings and meetings with Public Health.

Engaging regularly with key stakeholders was also central to development and implementation of the return to school plan, including:

- regular engagement with DoE statutory bodies
- a working group and ongoing engagement with Independent Schools Tasmania and Catholic Education Tasmania
- regular liaison with the Tasmanian Principals' Association
- bi-weekly meetings with unions including the Australian Education Union, United Workers and the Community and Public Sector Union
- liaison with representatives from the disability sector
- ongoing engagement with the Tasmanian Association of State School Organisations.

Cooperation between DoH and DoE has been an important component of planning for, and responding, to COVID-19 in school settings throughout the pandemic. This positive collaboration has continued in the development of Tasmania's own plan for the return to school in 2022 and following the commencement of Term 1 in February 2022. There has been strong engagement and collaboration across all levels of DoE and DoH, including between heads of agency, senior officers and at the operational level. Attachment I provides an overview of activity to support the return to school, including key elements of the Schools Operational Plan, supporting governance arrangements and stakeholder engagement.

Work between DoH and DoE is ongoing in relation to communications materials that are provided on both websites. This ensures there is consistent advice for teachers, parents and students whether they seek information via DoE or DoH.

Following the commencement of the school year in February 2022, DoH is continuing to provide support, guidance and advice to schools and DoE to help manage COVID-19 within these settings.

This includes providing guidance and advice on case and outbreak management in schools, including infection prevention and control, testing, information collection, monitoring and communication; supporting schools and DoE to meet notification requirements; and supporting supply and access to rapid antigen tests for schools and maintaining broader community access to COVID-19 laboratory testing. DoH is also maintaining outbreak response specialists for the education settings.

DoH will continue to work closely with DoE throughout the 2022 school year to support timely information sharing and provide ongoing advice and support.

Tasmania's Operational Plan for Managing COVID-19 in Schools

The primary objective of the Schools Operational Plan for Weeks 1 to 5 of Term 1 2022 was to safely maintain face-to-face learning as a priority, while supporting learners who need to learn at home due to COVID-19. The plan aligned with the six principles in the National Framework and has been regularly reviewed to ensure it remains contemporary, complies with Public

Health advice, and continues to provide the best protection and outcomes for children. An updated Return to School Operational Plan (Attachment J) has been published and covers the remaining weeks of Term 1.

The Schools Operational Plan was also consistent with DoE's Risk Management Plan, which was approved in December 2021 following consultation with all DoE staff. DoE's Risk Management Plan saw the establishment of a COVID-19 Vaccination Policy as the most effective control to protect employees against harm as a result of being exposed to COVID-19 at work. This included a requirement for all education workers to be fully vaccinated prior to school commencing.

The Schools Operational Plan broadly applies to both the government and non-government sector, however, while the non-government sector aligned their approaches with the Plan, it is important to note that some elements differ between Catholic, Independent and government schools (e.g. vaccination), although remain consistent with the six principles.

Public health measures to prepare for the return to school

To keep learners and staff as safe as possible, COVID Safe measures were put in place to support schools in line with public health advice. These measures built on what schools were already doing:

- Vaccination: All DoE staff were required to be vaccinated, including volunteers and contractors. Vaccination is encouraged but not mandatory for students.
- Rapid Antigen Tests (RATs): All students and staff have ongoing access to RATs to use when they have symptoms or are directed to use them. Schools have stocks of RATs to ensure families and staff can replenish their stocks as their allocated tests are used.
- Face masks: All schools are well stocked with face masks in both junior and adult sizes. All adults, secondary students and visitors over 12 years must wear face masks. Primary school students do not need to wear face masks but can if they choose.
- Hygiene practices: COVID safe behaviours continue to be actively promoted. Schools are well supplied with hand soap and sanitiser.
- Cleaning: Frequent cleaning is continuing, particularly on high-touch surfaces.
- Ventilation: Natural air flow is maximised. Air purifiers have been provided to all schools for use in learning spaces with lower natural ventilation. Each site has been provided a CO_2 monitor with supporting guidelines developed by an Occupational Physician. A window assessment and repair program commenced in 2021 with the majority of identified windows repaired prior to the commencement of Term 1 2022.
- Outdoor learning: Schools are encouraged to take advantage of outdoor learning opportunities.
- Physical distancing: All adults keep a physical distance of 1.5 metres from each other.
- Safe site management: Schools regularly review their COVID safety plans.
- Groups: Mixing of students and staff from different groups is being limited where possible.

- **Outbreak Management:** schools across the government and non-government sector are supported in the management of cases and outbreaks of COVID-19 to support them to continue to deliver face-to-face, high quality education to students in a safe environment with minimal disruption. Each government school is supported by a DoE COVID Outbreak Support officer who assists the school and DoH in the identification and management of group and school outbreaks.

The Tasmanian Government has committed to $12 million of funding for Government Schools preparation costs and $5 million for the non-government sector. A further $3.45 million of DOE budget has been allocated to purchase additional air purifiers as we proceed towards winter. Additional cleaning costs of approximately $4 million per year within school relating to Covid are also being met from within that national Partnership by the Department of Health.

The above does not include the costs of masks or RATs which are being met through a combination of DOH funding and the COVID-19 National Partnership on COVID-19 Response (NPA) between states, territories and the Commonwealth which provides for 50% funding of COVID-related costs.

Additional cleaning costs of approximately $4 million per year within Government schools relating to COVID-19 are also being met by the Department of Health, using the 50% funding through the NPA.

3.2 Supporting Public Health Advice

Throughout the COVID-19 pandemic, the AHPPC has released a number of statements relating to COVID-19, schools and early education, with the aim of supporting decision making to limit the transmission of infection in schools while balancing the risk of impacts to educational, social, health and wellbeing outcomes of school closures.

The Tasmanian Government has been involved in these national discussions and contributed to the preparation of statements and advice through its representation on AHPPC. This national work has been key to informing DoH's advice on local measures in Tasmania related to schools and planning for the 2022 school year.

AHPPC published an updated statement on COVID-19, schools and early education on 15 November 2021. This statement included AHPPC's overarching position that schools are an essential service and should remain open whenever possible. The statement outlines the broad goal of reducing transmission for the entire school community, to protect the unimmunised population of students at school, and maintain the ability of schools to remain open. It also specifies three principles to minimise disease in schools:

1. reducing opportunities for introduction of the virus to schools
2. reducing transmission of the virus if it is introduced
3. early use of containment measures if spread occurs.

The statement outlines actions under each of the above principles that should be taken into account when planning reopening of schools noting these will need to be tailored to individual schools. These principles guided work on local planning activities, with DoH providing extensive advice and working closely with DoE to support COVID-19 planning, preparedness and management activities within Government schools throughout the pandemic.

Between mid-December 2021 and early February 2022, ahead of the commencement of the school year in Tasmania, DoH and DoE met regularly regarding Tasmania's plan for the return to school. As the National Framework does not include a national definition of outbreaks for schools, a key purpose of these meetings was to develop and finalise school case and outbreak guidance and processes that best suited the Tasmanian context in line with the provisions of the National Plan. Along with agreeing roles and responsibilities, these meetings were also used to agree reporting and data requirements.

A significant part of the planning work was the development of the process for the notification of cases. This was a new process for this specific context, and the process required considerable background work with IT infrastructure being coordinated across DoH and DoE. There was also considerable effort put towards agreement about how schools would be guided and supported through case notifications, outbreaks and site outbreaks.

In working with DoE to develop the Return to School Plan, Operational Plan and supporting documentation, DoH provided advice on issues such as definitions of cases, contacts and outbreaks, as well as guidance on factors such as testing, quarantine requirements and release from isolation. As part of the Schools Operational Plan, DoH also provided advice on general COVID-safe measures for all school environments, such as face mask requirements, physical distancing, recommended hygiene practices, and strongly encouraging vaccination for everyone aged five years and older.

3.3 Financial, Social and Educational impacts

To achieve the best possible education, health and wellbeing outcomes, every day that students are at school learning with their teachers and friends counts. The Tasmanian Government's principles-based approach Schools Operational Plan provides measures that keep learners and staff as safe as possible whilst supporting learning. This plan for Weeks 1 to 5 of Term 1, has delivered on its key objective of safely maintaining face-to-face learning as a priority, while supporting learners who need to learn at home due to COVID-19.

There has been an increase in COVID-19 cases in schools as a result of the virus circulating in the community, however, this was anticipated and has been managed with support from DOH when needed.

The long term financial, social and educational impacts of specific educational measures are still being assessed. There are a number of touchpoints that will track how students have been impacted more generally by the pandemic including NAPLAN, Progressive Achievement Tests, Student Wellbeing and Engagement Survey, and the Kindergarten Development Check.

While it is too early to identify specific impacts, two data trends have emerged in the first five weeks of Term 1:

- an increase in home education applications and registrations with the Office of the Education Registrar
- an impact on attendance rates in Government schools.

Through placing the learner at the centre, the main goal of the Schools Operational Plan is to protect children from both direct and indirect impacts from the COVID-19 pandemic.

- Direct impacts refer to COVID-19 illness among children and their families. Direct impacts were mitigated by supporting COVID-19 safe sites and vaccination of staff.
- Indirect impacts include educational impacts and wellbeing. The key mitigation strategies have been to prioritise wellbeing, and maintaining face-to-face learning as a priority, while supporting learners who need to learn at home due to COVID 19.

The measures to support schools to remain open and provide face-to-face learning were identified and taken to mitigate expected impacts from the return to school in the current COVID-19 context.

Vaccination

Vaccination has been a key measure to keep learners and staff as safe as possible whilst supporting learning. Following a period of staff consultation, DoE's Risk Management Plan was approved and communicated. This saw the establishment of a COVID-19 Vaccination Policy as the most effective control to protect employees against harm as a result of being exposed to COVID-19 at work.

All DoE workers were required to be fully vaccinated by:

- 20 November 2021 for all Teacher Assistants and Education Support Specialists
- 21 January 2022 for workers in non-school business units
- 8 February 2022 for school-based workers.

As at 29 March 2022, the vast majority of permanent and fixed term staff at DoE (98.5 percent) have been fully vaccinated (or have a booster scheduled) or approved for exemption under medical or exceptional circumstances. 87.3 percent of casual and relief staff so far have also been vaccinated or exempted.

DoH and DoE have also been working together to provide children's vaccination clinics across a range of community locations including in schools. The COVID-19 Schools Vaccination Program commenced in August 2021 for Years 11 and 12 students (16 years and over) in senior secondary locations across the state. This was part of the Tasmanian Government's "Super Six" week vaccination effort to vaccinate students with the aim of minimising disruption to the study and examination schedules.

In November and December 2021 many schools across the state opened up for vaccinations for students aged 12 and above. Over the summer holiday period this then continued at further school sites around the state for children aged 5 to 11 years of age. This partnership between DoE and DoH has been an excellent collaboration as we continue to follow expert medical advice that tells us that young people are not immune from COVID-19 and its impacts, and the best way to protect them is to get them vaccinated.

Supporting Learning

Curriculum/Virtual Learning Centre

Where possible schools support learners to access their learning program on site under the supervision of their classroom teacher. When this was not possible, consistent with the Schools Operational Plan, students have access to learning from home, including through the DoE Virtual Learning Centre (VLC).

The VLC provides students in Kindergarten to Year 12, who are learning from home for short periods, with access to quality learning modules and online support from a registered teacher. The VLC is not compulsory, schools may choose to support learning from home in other ways, however it supports teachers not having to manage both classroom and learning from home concurrently.

The VLC is not intended to replace normal, planned classroom learning. However, schools can use it to augment face-to-face learning as part of their COVID Site Plan where there is limited staff capacity

Resources were developed to support learning from home, including a central pool of computers and internet dongles prepared for deployment to students who require access when learning from home, and printable resources for students who do not have access to the internet (e.g. blackspot).

Curriculum planning resources (Term Overviews across the focus areas) were developed to support continuity of learning. The overviews and year level plans provide detail of the learning in the VLC for those students learning at home. They are a reference point for schools outlining what students will be learning through the VLC. These resources have been well received by schools and were also provided to the non-government sector at the start of Term 1 to support their planning.

VLC content is differentiated to support students with diverse learning needs. Additional lessons are written specifically for the VLC Literacy and Numeracy Canvas Course to ensure equitable access with age-appropriate content.

For Years 11 and 12, access to VLC was expanded to include short term enrolments in up to 100 per cent of their study load at Virtual Learning Tasmania (VLT) for Term 1. This included live tutorials in the areas of English, Maths and English as an additional language or dialect (EALD) as well as stand-alone online Vocational Education and Training (VET) units of competency.

Schools were provided with VLC Student Activity snapshots since 9 March 2022 to alert schools if follow up with student/family is needed to support learning in the VLC.

School Support and Wellbeing Teams monitor student attendance (and participation in VLC), with a particular focus on vulnerable students. Vulnerable students are centrally monitored and contact made as required.

The Interagency Student Support Team works closely with Child Safety Services, Tasmania Police and the Advice and Referral Line to monitor the safety and wellbeing of vulnerable children and young people, delivering supports where needed. This has included more regular interagency case management meetings, using the vulnerable student list to identify level of need.

Another related change was made to the home education process in Term 1. Schools were advised not to 'un-enrol' students until confirmation of full registration of home education has been received from the Office of the Education Registrar. This was a change in process for Term 1, where students were previously un-enrolled based on provisional home education registration. This enables students to remain the responsibility of the school, which includes keeping VLC as option to support learning for the short-term, if appropriate.

The VLC has been instrumental in reducing the impacts on students who have not been able to physically attend school due to COVID-19.

Staffing Strategies

DoE has proactively reviewed its workforce to identify pressure points and put in place strategies to cover expected absences due to COVID-19. DoE has developed staffing strategies to ensure staff are supported and that face-to-face learning is able to continue. Staffing strategies include:

- contacting recently retired school staff and asking them to indicate if they would be willing to return to a school if called upon
- deploying staff from non-school areas, including both registered teachers and general staff
- using relief staff, including identifying available people from relief registers, promoting the registers, and actively contacting people on the relief register
- revisiting long leave requests.

An escalation matrix supports school staffing levels by providing triggers for staffing and options for management of schools at a local level to a system level approach. This approach enables all schools to remain open even in the face of community and school outbreaks. Where solutions cannot be managed at a school level, the issue is escalated through to Learning Services and supported at a regional level, accessing broader staffing options. When a regional approach still does not identify staffing options, the issue is raised with the Director Operations who works with other Department leads to identify staffing strategies and implement solutions.

The number of school staff furloughed due to being COVID positive or a close contact is generally around 2 per cent to 3 per cent of the workforce at any one time.

Attendance

Student attendance and engagement is a priority for DoE and there is significant work occurring to support and engage all learners to succeed. We know consistent attendance at school is critical to achieving positive educational outcomes and keeping students engaged in their learning.

The vast majority of students continue to attend school as normal, however attendance rates in Government schools during the first five weeks of Term 1 has been impacted by COVID-19. Safety measures, together with the provision of learning at home for impacted students, has helped to mitigate potentially larger affects.

Schools are being supported to monitor attendance rates daily and are supported to engage with learners and families.

Online Launching into Learning (LiL)

Twice weekly LiL sessions have been provided to families with an opportunity to sing songs, listen to stories and explore fun activities to do at home.

Sessions were filmed at schools and Child and Family Learning Centres (CFLCs) across the state and broadcast on DoE's update Great Start website.

Supporting Safe Sites

As outlined above, a range of Public Health measures have been implemented across all DoE school sites to ensure the safety of students and staff in maintaining face-to-face learning. COVID safe plans exist on each site and are regularly updated. Case numbers to date suggest that these measures have assisted in keeping the number of COVID cases less than projected.

Supporting staff, parents/carers and students

DoE pivoted considerable efforts and resources to contact stakeholders and support clear and consistent engagement with learners, staff and school communities.

Key measures include:

- The COVID hotline was created and staffed for the beginning of Term 1, 2022 to ensure consistent and fit for purpose advice was provided to schools and school communities.
- Back to school COVID Care packages provided information to support parents and included two RATs to use if their child/student developed symptoms, as well as face masks.
- Additional support for administration staff in government schools who were undertaking extra hours to support COVID-19 response activities were paid for centrally. This included extra hours and overtime claims for existing staff assisting or payments for relief for additional assistance with administration duties.
- Regular and ongoing engagement with Tasmanian Government bodies and agencies, non-government schools, and unions.
- The COVID Outbreak Support Team was established for the beginning of Term 1 2022. The purpose is to support school leaders manage COVID-19 outbreaks and reduce administration requirements placed on schools.
- Development of internet and intranet pages with key information and searchable FAQs.
- Movement of non-essential reporting, testing or programs to later in the term or year. The purpose of this was to assist DoE schools to maintain a singular focus on keeping learners and staff as safe as possible whilst supporting learning. An example is the Progressive Achievement Tests (PAT) Early Years, which has been moved from early in Term 1 to Weeks 8, 9 and 10 in Term 1.
- One of the key COVID-19 safety measures is for schools to take advantage of outdoor learning opportunities where appropriate. Resources and best practice approaches were shared with schools to celebrate outdoor learning opportunities at schools.
- School Support and Wellbeing Teams monitor the wellbeing of all students, with a particular focus on those students with diverse and complex needs requiring coordinated support.
- A range of staff wellbeing webinars were available to all DoE staff.

DoE also undertook a range of measures to support vulnerable students. An example of this was the return to school for students with medical vulnerability and/or disability.

Case study – Measures to support vulnerable students

Families of students with medical vulnerability or disability were contacted by phone call or letter to discuss their needs or concerns prior to the return to school. Support teachers used the information gained from parent feedback to update Learning Plans with specific adjustments to support a safe return to school for students with medical vulnerability/disability as needed.

- From a list of 2,248 families identified on DoE systems:
  - There were 1,651 successful contacts made, where families shared information with the School Health Nurse.
  - There were 462 families where calls were attempted on three separate occasions and no response was received.
  - There were 16 schools which asked to undertake the process themselves – this related to 83 students.
  - In addition to this process a letter was sent to all students included in the Nationally Consistent Collection of Data (students with disability), with 7,119 letters distributed via email, hard copy postage and for 38 students through Child Safety Service's case managers.

Further support provided to vulnerable students:

- Vaccination clinics commenced operation in the third week of school for enrolled students aged 5-11.
- Students with individualised learning plans continued to be supported. Parents and carers were encouraged to contact schools to discuss their child's individual learning plan and medical action plan. The priority was for schools to support learners to come to school and learn under the supervision of their classroom teacher.
- When students with disability needed to learn from home, they were be provided with a Learning Pack to complement online learning options.
- School Support and Wellbeing teams support the wellbeing of all students, with a particular focus on those students with diverse and complex needs requiring coordinated support.
- Advice from Public Health was sought and provided to all schools regarding management of students with medical issues or disability including consistent COVID-19 symptomology, allowing these students to participate safely on school sites.

While there have been unavoidable impacts on Tasmanian schools as a result of COVID-19, the successful implementation of our Return to School Operational Plan has ensured that the Tasmanian Government was well prepared and able to respond swiftly and appropriately to manage these impacts.

4 VACCINATION UPTAKE AND ROLLOUT

Encouraging the Tasmanian community to get vaccinated has been one of the most crucial measures to help reduce the impacts of COVID-19 on our population, particularly in the context of Tasmania's border reopening and transitioning to a living with COVID environment. This submission outlines the financial measures undertaken by the Department of Health (DoH) to support and encourage vaccination uptake in Tasmania.

A key priority for DoH has been to ensure the most vulnerable and at-risk members of our population were vaccinated first, while ensuring equitable access to vaccines. In line with the phasing and prioritisation arrangements specified by the Commonwealth Government,

Tasmania's vaccination rollout has been underpinned by a number of key public health measures detailed below.

4.1 Financial and Public Health Measures to Support Uptake

Commonwealth, State and Territory Government Responsibilities in the Vaccination Rollout

The rollout of safe and effective COVID-19 vaccines in Tasmania has required close cooperation and coordination between the Commonwealth and Tasmanian Governments.

Under the NPA the Commonwealth, state and territory governments recognise that they have a joint responsibility for ensuring the health system can respond effectively to the outbreak of COVID-19 and minimising risk to the community. The NPA also provides funding to states and territories to help manage the COVID-19 response.

The NPA commenced in March 2020 and, in accordance with National Cabinet's decision of 11 March 2022, has been extended to 30 September 2022.

Under the NPA, the Commonwealth, state and territory governments (including the Tasmanian Government) contribute an equal cost share basis for activities including for example, testing clinics, additional paramedic and ambulance costs, hospital costs for COVID-positive or suspected COVID positive patients, minor capital upgrades, Medicare ineligible patients, non-clinical costs (such as security and cleaning), and vaccine costs.

Under these arrangements, the Commonwealth Government is responsible for key activities including:

- selecting and purchasing vaccines and establishing overarching principles,
- specifying priority populations for vaccinations, drawing advice from the Australian Technical Advisory Group on Immunisation (ATAGI), and
- vaccinating aged care residents, and residents and staff in disability residential facilities.

Responsibilities and Funding Arrangements for delivering COVID-19 vaccines

Schedule C of the NPA outlines key Commonwealth and state and territory government responsibilities to coordinate and deliver a safe and effective COVID-19 vaccine. The Schedule is guided by the key principles of facilitating free-of-charge vaccination for all people living in Australia and rolling out vaccination on the basis of Commonwealth-specified priority populations, with scope to flexibly respond to outbreaks.

The Tasmanian Government (along with all other state and territory governments) has responsibility for developing and implementing jurisdictional implementation plans, ensuring workforce is appropriately trained and authorised to administer COVID-19 vaccines and ensuring vaccination sites and immunisation providers are compliant with requirements.

Under the NPA, all parties have joint responsibility to work together to ensure COVID-19 vaccines are distributed where they are most needed and to ensure the needs of priority populations (such as Aboriginal and Torres Strait Islander people, residential aged care and disability settings, culturally and linguistically diverse communities and other hard to reach or at-risk groups) are met in consultation with relevant stakeholders.

Schedule C also sets out respective funding responsibilities of the Commonwealth Government and the states and territories. Under the Schedule, the Commonwealth Government provided an Upfront Payment and continues to provide a Vaccination Dose Delivery Payment.

The Upfront Payment comprised $100 million to support the establishment of state-run vaccination clinics. Each state and territory received a share based on population. Tasmania received $2 million.

Under the Vaccination Dose Delivery Payment, the Commonwealth provides a 50 per cent contribution to the agreed price per vaccination dose delivered for all persons living in Tasmania (under Modified Monash 2 -7), the agreed price per vaccination is $32.45.

Over time, these payment arrangements have evolved. Schedule C was updated in March 2022 to include a Vaccine Rollout Support Payment. This new payment is in addition to the Upfront Payment and the Vaccination Dose Delivery Payment. Under the new Vaccine Rollout Support Payment, the Commonwealth will contribute 50 per cent of the genuine net additional costs incurred by states to set up additional COVID-19 clinics after 21 April 2021. Given the recency of the amended schedule, Tasmania has not yet submitted any claims under the Vaccine Rollout Support Payment.

Since the commencement of national vaccine arrangements in 2020, the Tasmanian Government has invested significantly to deliver COVID-19 vaccination program in Tasmania. Over 2020-21, vaccination program costs were approximately $4.6 million. As the vaccination rollout has progressed, Tasmania's investment in the program has grown significantly. Over 2021 to 2022, Tasmania's vaccination program is expected to total $27.8 million, comprising $10.9 million in Commonwealth Government funding, with state funding to cover the remaining $16.9 million. This is further detailed in Section 3 of this submission.

COVID-19 Vaccination Rollout

The COVID-19 pandemic has been a unique and fast-moving public health emergency for all levels of governments to manage.

At all times, Tasmania's operationalisation of its vaccination rollout has been underpinned by the national principles set by the Commonwealth Government, the processes and requirements as agreed by the National Cabinet, and medical and public health advice.

Under the NPA, the Commonwealth Government has responsibility for procuring vaccines and led decision making on vaccine distribution to respective states and territories, including prioritisation of vaccine access. Through the Australian COVID-19 Vaccination Policy and Australia's COVID-19 Vaccine National Roll-out Strategy, the Commonwealth Government articulated a phased approach for vaccinating Australians against COVID-19, as doses became available per vaccine delivery schedules.

Based on public health advice, the phasing arrangements were initially aimed at ensuring the most vulnerable and at-risk members of the community were vaccinated first, including people in areas of work where there was a high likelihood of exposure to COVID-19. The phases in which vaccines would be provided in Australia were as follows:

- Phase 1a: quarantine and border workers, frontline health care workers, aged care and disability care staff and residents.

- Phase 1b: elderly adults aged 80 years and older, elderly adults aged 70-79 years, Aboriginal and Torres Strait Islander people aged over 55 years, younger adults with underlying medical conditions (including with disability) and critical and high-risk workers including defence, police, fire and emergency services and meat processing.
- Phase 2a: Adults aged 60 – 69 years, Adults aged 50 – 59 years, Aboriginal and Torres Strait Islander people 18 – 54 years, other critical and high-risk workers.
- Phase 2b: balance of adult population (including catch up for any unvaccinated persons from previous phases)
- Phase 3: balance of population as described above and people under 18, if recommended.

Australia's national COVID-19 vaccination rollout commenced on 22 February 2021, with initial limited supply of vaccinations provided to populations and workforce groups most at risk, as identified above. The Commonwealth Government retained responsibility for vaccinating residents and workers in aged care and disability facilities via in-reach vaccination clinics.

In addition to undertaking a phased approach to vaccinating the Australian population, the types of COVID-19 vaccines approved for use in Australia has expanded throughout the rollout, requiring governments to adapt planning and distribution approaches.

Per the Therapeutic Goods Administration's (TGA) provisional approval, two COVID-19 vaccines were initially approved for use in Australia; the Pfizer/BioNTech COVID-19 vaccine (Pfizer) for people aged 16 years and older, and the AstraZeneca (Vaxzervria) COVID-19 vaccine (AstraZeneca) for people aged 18 years and older. Further vaccines were provisionally approved by the TGA as follows:

- Moderna (Spikevax) COVID-19 vaccine (Moderna) in adults 18 years and older, with further age cohorts receiving provisional approval over 2021 and 2022 (provisionally approved 9 August 2021).
- Nuvaxovid (Novavax) for use in people aged 18 years and over (provisionally approved 20 January 2022).

Tasmania's Vaccination Rollout

The fast pace and ever-changing nature of the COVID-19 pandemic has meant that delivery mechanisms for Tasmania's vaccinations have needed to evolve throughout the rollout. DoH has rapidly responded to support key community and health sector stakeholders to deliver vaccines and facilitate vaccination uptake. Similarly, reporting processes have also evolved to enable the identification of vaccination uptake in regions and particular populations and compare Tasmania's progress to the rest of the country.

Tasmania's vaccination rollout has mirrored the phased approach outlined by the Commonwealth Government and has been operationalised through the Tasmania COVID-19 Vaccination Program Implementation Plan. This Implementation Plan outlined the indicative timelines for each phase of the rollout, along with vaccination locations and workforce and training requirements, while noting the need for flexible approaches in delivery and prioritisation. DoH's approach to rolling out COVID- 19 vaccinations has built on existing immunisation arrangements and its experience in delivering vaccinations.

Tasmania's vaccination rollout commenced on 23 February 2021. In accordance with national rollout arrangements for Phase 1a, an initial limited supply of Pfizer was prioritised for vulnerable Tasmanians and key frontline staff considered to be at highest risk of exposure, including:

- hotel quarantine staff;
- frontline at-risk healthcare workers (including key ambulance staff);
- hospital emergency department and ICU staff; and
- COVID-19 testing staff.

In the initial phase of the rollout, Tasmania's COVID- 19 vaccine allocation was split 50 – 50 between Tasmania's priority populations (delivered by the Tasmanian Government) and residential aged care and disability care residents and workers (delivered by the Commonwealth Government), with allocation arrangements evolving as the rollout progressed and vaccination cohorts broadened.

A vaccination hub providing the Pfizer vaccine was initially established at the RHH, with other vaccination hospital hubs activated shortly after at the Launceston General Hospital and the North West Regional Hospital (from 15 March 2021), and at the Mersey Community Hospital (from 19 March 2021). To encourage vaccination uptake in workforce cohorts specified for prioritisation by the Commonwealth Government, eligible staff in Tasmania were contacted directly (via their respective Tasmanian Government agencies) to make an appointment to receive the vaccine and supported with paid time to attend their appointment (if scheduled during working hours).

As the rollout progressed and vaccination cohorts were expanded to include more priority workforce and vulnerable groups, DoH established State-run Community Clinics (State Community Clinics) across Tasmania to provide Pfizer to eligible Tasmanians. Initial State Community Clinic locations included Kingston, Mowbray, Brighton and New Norfolk, with additional pop-up clinics established in identified priority areas. The establishment and operation of Tasmania's State Community Clinics is outlined further in Section 1.6 of this submission.

Similarly, throughout the rollout, authorised general practitioner (GP) clinics and community pharmacies were progressively activated to provide COVID-19 vaccinations to eligible people. Currently in Tasmania Pfizer (for children aged 5 to 11 years) is available through State Community Clinics and authorised GPs. Pfizer (for 12 years and over) is available through State Community Clinics, authorised GPs and pharmacies. Moderna is available through authorised pharmacies and AstraZeneca and Novavax is available through nominated GPs and pharmacies.

Bookings with State Community Clinics can be made through coronavirus.tas.gov.au or the Public Health Hotline. Vaccinations can also be booked directly with participating GPs and pharmacies.

Since the commencement of the Tasmanian vaccine rollout, Tasmania has achieved consistently high vaccination rates and has, at particular times, led the nation in vaccinations administered per capita. Tasmania has also consistently tracked on, or ahead of, schedule against planned rollout timelines. Throughout the rollout, DoH has also responded flexibly to maximise the uptake of vaccinations. Some key examples of this include:

- quickly standing up additional AstraZeneca clinics at the RHH and in residential settings (such as the Roy Fagan Centre) to administer an additional delivery of AstraZeneca to Tasmania in the initial phase of the rollout,
- identifying additional operational capacity to support the vaccination of staff in aged care and disability service facilities (for which the Commonwealth Government was responsible) via our State Community Clinics,
- responsive partnership arrangements between DoH and key stakeholders, such as Tasmanian Colleges (for encouraging vaccine uptake in 16 – 18 year old students) and the Rural Flying Doctor Service delivering regional and rural mobile vaccinations, and
- public and targeted communications campaigns to encourage vaccination uptake at particular periods of time (for example, prior to the summer season commencing and prior to the 2022 primary school term commencing).

The provision of booster doses commenced in Tasmania on 8 November 2021, available through State Community Clinics, GPs and pharmacies. On 1 March 2022, ATAGI issued recommendations on the use of a booster dose of COVID-19 vaccine outlining that people aged 16 years and over should have a booster three months after their second dose; or those who are immunocompromised, should have a booster three months after their third dose. Tasmania, along with all other states and territories has accepted this advice and the new definition will commence from the end of March 2022.

As at 23 March 2022, 97.48 per cent of Tasmanians aged 12 years and older have received their second vaccination dose. Booster uptake in Tasmania continues to increase with 80.20 per cent of Tasmanians aged 50 years and older and 63.91 per cent of Tasmanians 16 years and older having received their booster.

Noting vaccinations for children aged 5 to 11 years were approved later in the rollout, 62.84 per cent have received their first dose and 30.59 per cent are fully vaccinated (with a second dose).

The Tasmanian Vaccination Emergency Operations Centre (TVEOC)

A number of bodies have been established to coordinate operational arrangements for a seamless health response to COVID-19 in Tasmania.

The DOH Emergency Co-ordination Centre (ECC) co-ordinates and supports the overall health response, focusing on strategic co-ordination and oversight of operational response structures and activities. Under the ECC, a number of Emergency Operations Centres (EOCs) have been established as dedicated resources to lead and coordinate operational responses across the health services, one of which is the Tasmanian Vaccination Emergency Operations Centre (TVEOC). The TVEOC commenced operations in March 2021 to deliver the safe and effective rollout of COVID-19 vaccines to Tasmanians, working closely with the Commonwealth Government and the other states and territories.

At a state-level, TVEOC works closely with the Public Health Emergency Operations Centre (PHEOC) and the Disability Emergency Operations Centre (DEOC) to deliver COVID-19 vaccinations to individuals and groups as identified within the National Roll-out Strategy within a Tasmanian context.

In order to promote messaging around the importance of vaccination and the availability of vaccination clinics across the state, the TVEOC also undertakes stakeholder engagement at all levels, including from governmental, departmental to grassroots. This occurs through the distribution of a regular newsletter to key stakeholder organisations and individuals. Direct engagement is undertaken pertinent clinics, age groups and priority demographics (including aged care, disability, culturally and linguistically diverse (CALD) communities, and Aboriginal and Torres Strait Islander peoples). The stakeholder engagement undertaken by the TVEOC complements the paid advertising and media campaigns, extensive social media and earned media as well as on-site promotion activities undertaken by DoH and the Tasmanian Government to boost vaccination uptake.

In an effort to continue to maximise Tasmania's uptake of vaccinations, the TVEOC continues to work closely with the Public Health Hotline to follow up with individuals who had booked an appointment but did not attend to re-book their vaccination appointment.

State Community Clinics

A key national principle of the vaccine rollout was to facilitate free access to COVID-19 vaccines. To support equitable access to COVID-19 vaccinations in Tasmania, and encourage uptake across the community, DoH rapidly established State Community Clinic sites to deliver a high volume of vaccinations across the state, including access to vaccinations in regional and rural areas. State Community Clinics may be in place for a limited time or continue to operate in more permanent locations.

Specialised clinics were also stood up to facilitate the vaccination of particular cohorts, including Tasmanians aged 5 to 11 years and via mobile and other on-site methods to encourage vaccination uptake in older students and Tasmanians living in regional and rural areas.

In line with initial roll-out arrangements as specified by the Commonwealth Government, Tasmania's State Community Clinics initially provided the Pfizer vaccine, with capacity later temporally expanded to administer the AstraZeneca (Vaxzervria) vaccine to eligible workforces and older Tasmanians.

To date, State Community Clinics have been established in Kingston, Huonville, Rosny, Hobart, Moonah, Brighton, New Norfolk, Smithton, Wynyard, Burnie, Ulverstone, Devonport, Latrobe, Deloraine, Launceston, Scottsdale, Triabunna, Flinders Island, Cape Barren Island, and King Island. At various times, these clinics offer walk-in appointments to maximise opportunity for Tasmanians to receive a vaccination. Using national and local epidemiological data, the TVEOC continues to work closely with local communities to support priority access for areas with low numbers of participating GPs and significant vulnerable populations.

In line with national phasing arrangements, Tasmania's State Community Clinics administered the bulk of COVID-19 vaccines to Tasmanians in the initial stages of the rollout. For example, as at 17 September 2021, State Community Clinics had provided more than 50 per cent of doses to eligible Tasmanians.

However, throughout the later stages of the rollout and as vaccine delivery modes have expanded in Tasmania, there has been an evening out of vaccine distribution between State Community Clinics, GP clinics and pharmacies. Over the seven days to 20 March 2022, approximately 7,800 vaccines were administered through State Community Clinics and approximately 8,300 vaccines were administered through primary care.

Tasmania's State Community Clinics are regularly promoted through social media, press (daily and community newspaper advertising) printed materials (such as posters and postcards) and live reads through local radio stations. To encourage further uptake of vaccinations, all State Community Clinics have extended opening hours with some State Community Clinics also opening for extra days.

Tasmania's vaccination workforce

DoH has responded quickly to the evolving nature of the phased approach of the national vaccine rollout by flexibly utilising its available immuniser workforce. While workforce numbers have fluctuated over time in response to the differing phases of the rollout, DoH's vaccination workforce currently comprises almost 800 staff (including Registered Nurse Immunisers, Enrolled Nurse immunisers, Pharmacists, post-vaccination staff and administration staff).

To quickly expand its immuniser workforce DoH has implemented a number of strategies while continuing to maintain essential services, including recruiting authorised pharmacist immunisers to work in State Community Clinics and adding paramedics and enrolled nurses (working under supervision) to our immuniser workforce. At the peak of the vaccine rollout, over 620 DoH nursing staff were deployed to deliver vaccinations.

To address specific considerations and requirements for vaccinating younger children, 29 full time equivalent Child Health and Parenting Service (CHaPS) nurses were temporarily reassigned to assist with rolling out COVID-19 vaccinations to eligible children aged 5 to 11 years between January and early February 2022. During this period, CHaPS core services were maintained, with appointments prioritised for 0- 8 week old babies, and vulnerable breastfeeding and perinatal mental health clients. A stepped approach was implemented to return to full-service offerings from 7 February 2022, with the implementation of new triage and Telehealth approaches to ensure CHaPS can meet new demand and schedule missed or overdue appointments.

Encouraging vaccination uptake in Tasmania's priority populations

Protecting Tasmania's most vulnerable communities has been a key priority for DoH throughout the vaccination rollout. DoH has undertaken a number of activities to encourage vaccination uptake in priority groups including Aboriginal and Torres Strait Islander people living in Tasmania, people with disability and their carers, culturally and linguistically diverse communities, people living in regional and remote areas, and other vulnerable groups (including forensic cohorts and people experiencing homelessness). These activities are outlined in further detail below.

Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people have been identified as a priority group for vaccination and were among some of the earliest groups able to access COVD-19 vaccines in the rollout arrangements. Vaccinations for Aboriginal people living in Tasmania have been primarily coordinated and delivered through Tasmanian Aboriginal Community Controlled Health Services (ACCHS), State Community Clinics and primary healthcare providers. DoH has also delivered clinics on Flinders and Cape Barren Islands to facilitate vaccination uptake in these areas.

The Tasmanian Vaccination Emergency Operations Centre (TVEOC) has worked closely with Tasmanian ACCHS across regions to support processes to deliver vaccinations and to develop strategies to boost the number of Aboriginal people getting vaccinated in Tasmania.

As at 23 March 2022, approximately 85 per cent of Aboriginal people in Tasmania are fully vaccinated (based on available information from the Commonwealth Government via the Australian Immunisation Register).

People with disability and the people who support them

Under the phased arrangements of the vaccine rollout, the Commonwealth Government is responsible for vaccinating residents and staff in disability residential care facilities and the Tasmanian Government is responsible for making vaccination available to all other Tasmanians with disability and their carers who do not live in a residential facility. However, Tasmania has supported the Commonwealth Government's vaccination rollout by providing additional access to vaccinations for staff in disability residential settings through its State Community Clinics.

To plan the implementation of vaccine delivery for Tasmanian people with disability, the TVEOC works closely with Tasmania's Disability Emergency Operations Centre (DEOC). The DEOC liaises directly with Tasmania's disability sector to inform TVEOC's planning and implementation activities to deliver vaccinations to Tasmanians with disability and the people who support them.

In the initial stages of Tasmania's vaccine rollout, TVEOC worked with Tasmania's peak disability bodies (such as National Disability Services) and offered tailored information sessions to people with disability and those who support them.

In rolling out vaccines to people with disability who are not living in a residential facility and their support workers or carers, the TVEOC partners with the Commonwealth Government and Aspen Medical to run dedicated Additional Support Clinics and Quiet Clinics. These clinics offer low-sensory or private spaces away from general vaccination areas, longer appointment times and immuniser staff who have received training by Autism Tasmania or are familiar with how to care for people with a disability.

Throughout Tasmania's vaccine rollout, DoH immuniser teams have also provided in-reach opportunities across the state for National Disability Insurance Scheme (NDIS) participants who may need additional support in receiving a vaccination. Similarly, NDIS participants in Tasmania living in supported living accommodation have been offered in-reach and at-home vaccination opportunities.

Tasmania will establish an active vaccination assistance program where NDIS participants are contacted by clinical staff to further understand individual needs to inform vaccination clinic planning. Consultation and planning for this multi-stage program is underway between TVEOC and DEOC. Under this program, clinic staff will also provide information and/or vaccination opportunities based on individual requirements (such as advice on their nearest clinic and assistance to clinics).

Additionally, information on planning and preparing to receive an immunisation is available via the coronavirus.tas.gov.au website, including suggestions on wearing accessible clothes and bringing items (such as headphones or sunglasses) for additional comfort, if needed.

Culturally and Linguistically Diverse (CALD) communities

DoH, via the TVEOC has engaged with Tasmanian community networks, CALD support services and cultural community hubs to provide information on vaccination, including how to access a vaccination.

Key stakeholders have included Tasmania's Migrant Resource Centres, the Multicultural Council of Tasmania and the Adult Migrant English Program. The TVEOC also partnered with multicultural organisations in Tasmania (such as the Greek Orthodox Church) to provide information sessions for community members and have their questions on vaccinations answered.

In broad communications and updates, DoH also provides links to the Commonwealth Government COVID-19 website, which contains a large number of translated materials.

People living in regional and rural areas

Using national and local epidemiological data (by postcode and local government area), DoH continues to operate pop-up State Community Clinics in regional areas and prioritised locations where there is low vaccination uptake or limited vaccine delivery via primary health.

Throughout the rollout, the TVEOC has worked closely with community groups and key stakeholders in regional and rural Tasmania, including for example, the Local Government Association of Tasmania (reaching all municipal councils in Tasmania), the Country Women's Association, Neighbourhood Houses of Tasmania, Rural Aid Ltd, Rural Health Tasmania and the Tasmanian Farmers and Graziers Association.

In addition to direct stakeholder engagement and expanding regional and rural clinic offerings, a mobile vaccination service was established in October 2021 to provide vaccinations to Tasmania's regional and rural communities. DoH partnered with the Royal Flying Doctor Service to run two buses to provide two doses of Pfizer vaccinations for people aged 12 years and above living in townships across Tasmania's north, north-east, north-west, west, Southern Midlands and Central Highlands.

Other vulnerable groups

Via the TVEOC, DoH works with Tasmania's prison and mental health facilities to vaccinate prison staff and inmates, and residents and staff at specialist mental health facilities. The DoH also engages with Moreton Medical Group, who provide existing services to the Specialist Homeless Service (including shelters), as the provider for vaccine administration for those services across Tasmania.

Vaccination Communications and Campaigns

Throughout the vaccination rollout, DoH, via the TVEOC has communicated directly and regularly with health sector stakeholders, local councils and community organisations by telephone and/or email to plan the implementation of the vaccination rollout in Tasmania, provide information aimed at encouraging vaccination uptake in Tasmanian communities.

Communications on vaccination to the broader Tasmanian community include public messaging (including website updates, TV, radio and social media), daily vaccination reporting and regular press conferences by the Tasmanian Government.

Tasmania's State Community Clinics are regularly promoted through social media, press (including community and daily newspaper advertising), printed materials (posters and postcards) as well as live radio reads on local stations.

In the lead up to, and throughout, the national vaccination rollout, the Commonwealth Government undertook a number of federal communications campaigns to broadly inform Australian communities on the safety and development of COVID-19 vaccines, with messages outlining the reasons to receive a vaccination. Commonwealth campaigns have featured prominent health professionals and have also provided specific communications and information for Aboriginal and Torres Strait Islander people and CALD communities across Australia.

As the vaccine rollout progressed, Tasmania's communications and campaign approaches evolved to include specific guidance on eligibility and clinic locations and included the establishment of periodic pop-up booths in populous areas manned by DoH staff to answer questions about vaccinations and provide support to Tasmanians to book an appointment at State Community Clinics.

DoH has worked closely with relevant Tasmanian Government agencies, including the Premier's Information Unit, to deliver a number of campaigns to encourage uptake of vaccinations across age cohorts and providing educational and factual information about the COVID-19 vaccines. Further information on these campaigns is attached (Attachment K).

4.2 Public Health Advice

DoH has closely monitored and adjusted its vaccination rollout in accordance with expert medical advice and decisions from the Therapeutic Goods Administration (TGA), Australian Technical Advisory Group on Immunisation (ATAGI) and the Australian Health Protection Principal Committee (AHPPC) to ensure safe and responsive vaccination measures.

Tasmania is actively involved in national COVID-19 vaccine planning and oversight and has representatives on key national committees including AHPPC, ATAGI, the Communicable Diseases Network of Australia, TGA and the Jurisdictional Immunisation Committee.

DoH has also reviewed advice alongside available clinical evidence and has closely coordinated with the Commonwealth Government to ensure key logistics including priority planning and vaccine supply were understood and incorporated into planning.

Throughout all stages of the vaccine rollout, DoH has responded rapidly to changes informed by medical and public health advice. Key examples of this include Tasmania's ability to quickly recalibrate its vaccination program following ATAGI's advice on recommended age groups to receive the Pfizer COVID-19 vaccine over time.

Recalibration of Tasmania's vaccination program in line with ATAGI advice

On 8 April 2021, ATAGI issued advice on the preferred use of Pfizer in adults aged under 50 years and the continued recommendation of AstraZeneca for people over 50 years of age. Immediately following the provision of this advice, DoH briefed immunisers working in vaccination clinics and directly contacted and rescheduled appointments of individuals in the relevant age group who were booked in for an AstraZeneca vaccination.

Direct communications were also provided to Tasmanian GP clinics to ensure ATAGI's advice was shared at the provider level, with the advice also uploaded to the coronavirus.tas.gov.au website. Throughout this period, DoH also contacted those in the affected age group who had already received a vaccine, providing advice to watch for specific symptoms.

On 17 June 2021, revised medical advice was issued by ATAGI in relation to Pfizer being the preferred vaccine for people aged 50 to 59 years, with those who had already received their first dose of AstraZeneca (without contraindications) advised to receive a second dose of the vaccine.

Following the provision of this medical advice, state-based communications complemented those provided through the Commonwealth Government and included updates to the coronavirus.tas.gov.au website, direct communications to State Community Clinic staff and primary health providers.

Monitoring and Evaluation

Throughout the vaccine rollout, public health advice informed the development and interpretation of the weekly COVID-19 vaccine coverage report for Tasmania, which enabled the vaccine program to respond to population groups and areas of low coverage.

DoH also established an Adverse Event Following Immunisation (AEFI) surveillance system that enables close oversight of adverse events, including vaccine administration errors occurring in Tasmania. This work enables providers and members of the public to be linked into appropriate clinical care pathways following AEFI, supporting confidence in the safety profile of the Tasmanian vaccine roll-out and maintaining close liaison with the TGA.

Local clinical guidance and support

Public health advice has heavily informed the development of local clinical guidance to support vaccination activities in Tasmania. This has included DoH overseeing community pharmacy provision of COVID-19 vaccines, through authorisation of its program approvals as the roll-out progressed. This included developing clinical resources to support the provision of COVID-19 vaccine in community pharmacies.

DoH also oversaw the authorisation of the authorised immuniser workforce, as well as a new initiative of authorising registered nurses, enrolled nurses and paramedics to vaccinate under supervision under a legislative instrument (relevant Poisons Regulations). This enabled a surge workforce to meet the demand of the vaccine program.

Provision of booster doses in Tasmania

On 5 December 2021, the TGA provisionally approved Pfizer for children aged 5 to 11 years. The dose is one-third of the size approved for people aged 12 years and over, with the recommended dosing of eight weeks between first and second doses. Given the variation in dose requirements, exclusive children's clinics were established across Tasmania, operating from 10 January 2022.

Similarly, Tasmania's approach to rolling out third vaccination doses and booster doses has followed ATAGI's recommendations, with supporting advice from AHPPC to National Cabinet. For example, following the publication of ATAGI's advice on 24 December 2021 expanding eligibility of boosters (to adults aged 18 years and older) and shortening the minimum period to

receive a booster dose, DoH expanded State Community Clinic offerings and provided communications on availability of boosters at participating GPs and pharmacy clinics.

Informing public communications

Throughout Tasmania's vaccination rollout, public messages from DoH have continued to outline the importance of vaccinations, particularly in the context of continuing to undertake other public health and social measures recommended at the time, for example hand hygiene, social distancing, mask wearing and the isolation of positive cases.

4.3 Financial Implications

Schedule C of the NPA supports the delivery of free COVID-19 vaccinations to all eligible people living in Australia. It sets out the respective responsibilities of the Commonwealth and the states and territories. Under the Schedule, the Commonwealth Government provided an Upfront Payment and continues to provide a Vaccination Dose Delivery Payment.

The Upfront Payment comprised $100 million to support the establishment of state-run vaccination clinics. Each state and territory received a share based on population. Tasmania received $2 million.

Under the Vaccination Dose Delivery Payment, the Commonwealth provides a 50 per cent contribution to the agreed price per vaccination dose delivered for all persons living in Tasmania (under Modified Monash 2 -7), the agreed price per vaccination is $32.45.

Schedule C was updated in March 2022 to include a Vaccine Rollout Support Payment. This new payment is in addition to the Upfront Payment and the Vaccination Dose Delivery Payment. Under the new Vaccine Rollout Support Payment, the Commonwealth will contribute 50 per cent of the genuine net additional costs incurred by states to set up additional COVID-19 clinics after

21 April 2021. Given the recency of the amended schedule, Tasmania has not yet submitted any claims under the Vaccine Rollout Support Payment.

Since the commencement of national vaccine arrangements in 2020, the Tasmanian Government has invested significantly to deliver the COVID-19 vaccination program in Tasmania.

Over 2020-21, Tasmania's vaccination program costs were approximately $4.6 million, comprising $3.2 million in salaries and wages and $1.4 million in other costs (such as equipment, consumables and premises costs). Based on the number of vaccine doses delivered in Tasmania in 2020–21, the Commonwealth Government contributed $1.8 million, leaving the remaining$2.8 million funded by the Tasmanian Government.

As the vaccination rollout has progressed, Tasmania's investment in the program has grown significantly. Over 2021 and into 2022, Tasmania's vaccination program is expected to total approximately $27.8 million, with a significant portion dedicated to salaries and wages and operational costs. It is expected $10.9 million in Commonwealth Government funding will be received for 2021-22, with state funding to cover the remaining $16.9 million.

4.4 Impacts of Vaccination Mandates

In considering the risk of transmission of COVID-19 and the risk posed by disruption to essential services, certain categories of workers in Tasmania were required to be vaccinated against COVID-19.

The Tasmanian requirements for vaccination have, at all times, been based on the guidance of AHPPC to National Cabinet and have been implemented on the basis of the risk of transmission of COVID-19 and consequences for workers, vulnerable clients and patients within certain settings (e.g. hotel quarantine and health services), the risk of disruption to essential services, and the risk to the broader community.

Vaccination requirements were made mandatory by the Director of Public Health through two Directions under Section 16 of the *Public Health Act 1997* (Tas).

- The Vaccination Requirements for Certain Workers Direction applied to:
- workers engaged or employed at residential aged care facilities (effective 17 September 2021),
- workers employed or engaged by or on behalf of quarantine sites or providing quarantine transport services (effective 17 September 2021),
- health and medical workers, workers at a health and medical facility, and students undertaking a clinical placement at a health or medical facility (effective 31 October 2021),
- disability support workers (two doses effective 21 November 2021) and
- in-home and community aged care workers are also likely to be included in the direction (two doses effective 30 November 2021).

The Directions require relevant individuals to produce evidence of vaccination or produce evidence of a medical exemption.

A second direction, Vaccination Requirements in Relation to Early Childhood Facilities, applied to workers in Tasmanian early childhood education and care, from 8 January 2022. In implementing this Direction, the DoH, via Public Health Services, consulted with the Tasmanian Department of Education and engaged directly with over 100 sector stakeholders (via a webinar) to ensure the sector had an opportunity to answer questions on the vaccination requirement and other infection prevention control measures.

Requiring certain workers to be vaccinated has been an important step in both ensuring some of the most vulnerable Tasmanians are protected in the provision of ongoing support and preventing transmission in high-risk settings. These requirements have been in line with what is being implemented in other states and territories.

Vaccinating our health workforce has been a critical step in protecting staff and vulnerable Tasmanians and ensuring the continuity of critical health services.

Vaccination requirements for healthcare workers

The Vaccination Requirements for Certain Workers Direction applies to, among others, all workers employed or engaged by public and private health care facilities (including non-clinical staff such as security personnel, cleaners, maintenance, catering and administration staff) and includes all DoH employees.

The Direction applies to medical and health facilities including hospitals (public and private, as well as day-procedure centres), premises owned or operated by DoH, commercial premises where health and medical services or treatments are provided on a regular basis, pharmacies, blood donation centres, and pathology collection centres. Under the Direction, people who provide health and medical services and treatments, whether in these settings or outside of them, are also required to be vaccinated.

The Direction required individuals to provide evidence of vaccination, or a medical exemption, by 31 October 2021. Following this date, any prospective DoH employee was required to provide evidence of vaccination, or medical exemption, as a condition of their employment.

Communication with the health sector

In implementing the Direction, DoH liaised with health sector stakeholders including the Health and Community Services Union, the Australian Nursing and Midwifery Federation, Community and Public Sector Union, Australian Medical Association, Primary Health Tasmania (PHT), the Pharmacy Guild, and the Pharmacy Society to identify and address implementation issues.

DoH worked closely with PHT, which surveyed Tasmanian GPs to scope anticipated issues or need for additional support to comply with the requirements. No significant issues or need for additional support was identified through this survey process.

More broadly, DoH provided regular updates on the scope and implementation of the Direction to the primary care sector via the Coronavirus Tasmania website and forwarded to GPs by PHT on behalf of DoH.

For other organisations (such as those providing community health and mental health supports), DoH's Emergency Coordination Centre communicated regularly with stakeholders via email updates to provide information on the scope and implementation of the Direction. In addition to this, the ECC met with key stakeholders and peak bodies including Mental Health Council of Tasmania, TasCOSS, Neighbourhood Houses Tasmania and Shelter Tas to provide advice on the application of the Direction.

Impact of the Direction on the DoH workforce

As at the deadline of 31 October 2021, 99 per cent of the DoH workforce had complied with the Direction. Health professional staff comprised a small proportion of the staff who did not provide evidence of vaccination.

Permanent employees who were non-compliant with the Direction were issued a lawful and reasonable direction to comply by 5pm on 7 November 2021. Fixed term and casual employees who were non-compliant with the Direction were issued with a notice of termination (with a notice period of 14 calendar days). DoH worked with individual staff members to ensure they received their first vaccination in a timely manner. Letters were sent to staff who had booked vaccination appointments after the cut-off, outlining the requirement for these staff to book a vaccination appointment by the end of day 14 November 2021.

As at 15 November 2021, the number of non-compliant DoH staff had reduced further. As the spread of this small proportion workers was fairly even across the state, with no large groups in particular speciality areas or hospital wards, the immediate impact of non-compliance with this Direction was minimal for DoH and was managed within existing workforce capacity processes.

On 26 November 2021, the Direction was updated to reflect that from 8 January 2022, those covered by the Direction must have received all doses of the vaccine. As a result, employees who had previously only reported that they had an appointment for a vaccine or had only received one dose became non-compliant from 8 January 2022. DoH wrote to individuals who would not meet the new requirement to advise them of the change and allow them adequate time to comply.

As of 21 March 2022, a very small proportion of health professional staff remain non-compliant with the Direction. DoH continues to work employees who are non-compliant with the Direction due to long term leave arrangements to support them to meet the requirements of the Direction.

Given the ultimately very small proportion of non-compliant staff, and the even spread of health professional staff across the state, there are no notable impacts on health service delivery for DoH as a result of the Direction.

Vaccination requirements for education workers

As detailed in Section 3.3, all DoE employees were required to be fully vaccinated under the DOE Vaccination Policy. The below table shows the figures for all DoE employees and their vaccination status as at 29 March 2022. Less than one per cent of permanent and fixed term staff are not fully vaccinated. This high rate of compliance has served to not only protect education staff and school students, but ensure the impact on the education workforce is minimal.

Vaccination Status	Permanent / Fixed Term		Casual / Relief ^	
Booster / Booster Scheduled	1,680	(14.9%)	97	(13.2%)
Vaccinated or Approval (Medical/Exceptional)	9,420	(83.6%)	546	(74.1%)
On Long Leave	115	(1.0%)	0	(0.0%)
To be Processed in ESS	0	(0.0%)	0	(0.0%)
Not Fully Vaccinated (First Dose/No Evidence)	21	(0.2%)	94	(12.8%)
LRD / ED5 Process (Not Fully Vaccinated)	39	(0.4%)	0	(0.0%)
Total	11,275		737	

5 BUSINESS SUPPORT
(Targeted Support Programs and Payments, Small Business)

The Tasmanian Government has provided targeted COVID-19 support to Tasmanian businesses by providing over $160 million in grants and support packages, benefiting thousands of Tasmanian businesses since March 2020. This support has been a critical measure for businesses impacted by COVID-19.

The Tasmanian Government will continue to monitor our economic performance and impacts on Tasmanian businesses and consider further support if it is needed.

Following the announcement of border opening in December 2021, the Department of State Growth (State Growth) established a high level 'COVID Recovery' coordination group, which met regularly to discuss emerging issues and coordinate a response. A Director of COVID Recovery was also appointed to coordinate appropriate responses, and a grants implementation framework was established to allow State Growth to rapidly roll out any business support as required.

The key activities managed by this group during the pre-border opening period were the:

1. Ongoing management of existing support programs and coordination of intelligence gathering with businesses and industry associations,
2. playing a facilitation role between business and Public Health organising forums and information products (videos, content on Business Tasmania's website and newsletter) and seeking to ensure key business questions were addressed;
3. supporting whole of government activities in preparations for border opening and the expected influx of additional flights and arrivals.

State Growth also actively monitored developments in other States who were weeks, or in some cases months, ahead of Tasmania in terms of virus spread in the community to see what impacts were being reported and what, if any, initiatives other jurisdictions were putting in place to support businesses.

During this period State Growth was also actively monitoring and responding to issues arising with small businesses, public transport, logistics and freight and the events and tourism sectors in Tasmania.

5.1 Measures Taken Since August 2021

A range of measures have been introduced, or, taken effect since August 2021 to support small business in Tasmania. These have included:

- Opening the first two rounds of funding under the *COVID-19 Micro and Small Business Border Closure Critical Support Grant* program. This program saw over 4,000 small businesses share in more than $73 million in grants.
- $3.5 million in support to Southern Tasmanian business impacted by the 15 October 2021 Lockdown Direction.
- Increase in support provided through Business Tasmania and advice to eligible business under the Enterprise Centres Tasmania program.

- $1.2 million over four years to support access to specialist advice through the *COVID-19 Small Business Advice and Financial Guidance Program*.
- Series of industry forums organized by Department of State Growth and attended by Public Health and Worksafe. These forums gave business a chance to be briefed about changes to COVID-19 response settings and ask questions about specific issues, for example, how to respond to cases in the workplace.
- Partnership between Department of State Growth, Business Tasmania, Tourism and Tasmania and Tasmanian Chamber of Commerce and Industry to provide messages promote public health information using existing newsletters and dedicated hotline support services.
- Announcement of the *COVID-19 Business Impact Support Program* January 2022. This program targeted business whose operations were impacted because:
  - critical staff were required to isolate or quarantine due to COVID-19, or
  - being forced to close due to a Public Health Direction, or
  - have suffered a significant reduction in demand.

Three rounds of this program have been opened target the periods 15 December 2021 – 14 January 2022, 15 January 2022 – 14 February 2022 and 15 February 2022 – 14 March 2022.

The support packages detailed above do not include industry specific support provided to the transport, events, arts, tourism and events sectors. Further details of these support measures are attached (Attachment L).

5.2 Financial Impact and Uptake

The below details of uptake and costs for individual support programs demonstrate that Tasmania's suite of business support programs have been successful in supporting businesses in need. Many of these programs are ongoing and the Tasmanian Government will continue to review these support measures to ensure they are providing the right levels of support to the right people.

COVID-19 Micro and Small Business Border Closure Critical Support Grant

$73 million distributed to 4,000+ small businesses between October 2021 and January 2022.

Lock Down Direction support – Southern Tasmania

$3.5 million distributed to 2,847 businesses in November 2021.

COVID 19 Small Business Advice and Financial Guidance Program.

Commenced 27 September 2021 and open until 20 May 2022, or funding is depleted. To date 220 businesses have received $318,500.

COVID-19 Business Impact Support Program – Round 1 (15 December 2021 - 14 January 2022)

$1.8 million provided to 949 businesses.

COVID-19 Business Impact Support Program – Round 2 (15 January – 14 February 2022)

$1.65 million provided to 749 businesses

COVID-19 Business Impact Support Program – Round 3 (15 February – 14 March 2022)

Opened on 16 March 2022 and applications close 5 April 2022.
345 applications to date with the assessment process underway.

6 COVID-19 CHECK-IN APP

The Check-in Tas application was introduced on 1 December 2020 and use of the app was made mandatory from 1 May 2021 at a wide range of locations, businesses and events. The Check-in Tas app was a key resource in pursuing an elimination/containment strategy for COVID-19.

Following the reopening of Tasmania's border, and in line with the move at both state and national levels from the virus suppression phase of the pandemic response towards the living with COVID-19 response phase, mandatory requirements for use of the app have now been varied to focus on use in high-risk venues and events, to support ongoing management of COVID-19.

The purpose of the app is to provide Public Health Services (PHS) with a quick and reliable tool to collect contact tracing information to enable contact tracing of positive cases of COVID-19 while Tasmania aimed to reduce the risk of community transmission of COVID-19 and maintain an elimination/containment strategy. The development of an app for contact tracing purposes, replacing other means of contact tracing (such as manual check-in), supported contact tracing required by directions under section 16 of the *Public Health Act 1997* (Tas) (the Public Health Act).

Development of the Check in TAS app

In November 2020, Tasmania entered into an agreement with the ACT Government to accept a licence for, and provision of, support services for the use of the Check-in app developed for the ACT. To implement the app in Tasmania, the Department of Health (DoH) undertook work to rebrand the app and to store data collected in Tasmania's contact tracing database. A further amendment to the app was requested by Tasmania to allow the app to display exposure sites. The Check-in TAS App has also undergone penetration testing and a threat and risk assessment, which checks for vulnerabilities or security flaws in the app.

DoH is not charged by the ACT Government for any updates or new releases for the app, and only incurs additional costs when a specific change is requested for the Tasmanian version. The total expenditure by the Tasmanian Government on the app to 15 February 2022 was $113 499.13 (ex. GST).

At National Cabinet on 19 September 2021, all jurisdictions agreed to integrate an individual's COVID-19 digital certificate into state and territory check-in apps to provide users with another way of storing and showing proof of COVID-19 vaccination. To support this, Services Australia and DoH entered a formalised agreement for the exchange of information to allow users to add their COVID-19 digital certificate to their Check-in TAS App. This allowed Tasmanian Police to access information about individuals' vaccination status, which supported the public health direction from 6 December 2021 requiring patrons to be fully vaccinated to enter venues where there is stand up drinking, such as pubs and clubs.

The information recorded through the Check-in TAS App is automatically stored in the right format within DoH for rapid response contact tracing, if required, and automatically deleted after 28 days.

DoH collects personal information through the app for contact tracing purposes. DoH will not use or disclose information collected through the app for any other purpose (unless it is

required by or authorised under law to do so). Information about the app's privacy policy and data use is available on the app and on the Tasmanian coronavirus website.

The purpose of taking contact details of people entering designated premises is to facilitate contact tracing in Tasmania. The requirement for people to provide details, either through the Check-in Tas App, or manually, is a direction issued by the Director of Public Health under section 16 of the *Public Health Act*. There have been a number of versions of the direction on contact tracing throughout the pandemic. However, it has always been clear in the direction that the collection of information, manually or through the app, is for the management, detection, notification, treatment or prevention of the spread of COVID-19, and to manage the threat or likely threat, to public health posed by COVID-19. The direction also states that information collected must not be used for any other purpose, other than authorised under the *Public Health Act*. Failure to comply with a direction issued under section 16 of the *Public Health Act* is an offence.

If businesses that are no longer required to comply with the Contact Tracing direction continue to collect such information, using a third-party app or manually, they must make it clear the information is not being collected for the DoH or for the purposes of contact tracing.

Usage and efficacy of the App

The Check-in Tas App has increased functionality to enable users to store vaccination status information and also display exposure sites. As at 17 March 2022, the Check-in Tas App has been downloaded a total of 1 149 262 times on to Apple and Android devices, with 1 242 896 393 check-ins across a total of 56 942 registered locations/businesses in Tasmania. A large portion of users linked their vaccination certificate to the app, with 408 469 certificates linked.

Information from the Check-in Tas App was used during 2021 to inform users of their potential exposure to a confirmed case of COVID-19. At this time, the objective was to eliminate COVID-19 in Tasmania and prevent cases of community transmission.

The Check-in Tas App has been utilised by PHS for contact tracing purposes and, since the changes to close contact definitions, for identifying high-risk exposure sites. PHS used the app successfully to identify potential close contacts of COVID-19 cases, primarily between September 2021 and January 2022, with the app identifying premises positive cases visited and those who may have been exposed. The app assisted in a quicker and easier way to collect this information as the manual check in process required extensive resourcing requirements for PHS, took longer to receive information from premises, and relied heavily on the individual accurately remembering their movements.

On 27 January 2022, the Premier announced a review of the use of the Check-in Tas App in response to the high levels of community transmission. The review acknowledged that contact tracing information was extremely valuable where community transmission was not widespread but is now most useful to help manage a large-scale outbreak or super spreader event. The app is most useful when cases numbers are low and the goal is to aggressively supress the spread of COVID-19 and when numbers are higher to manage risk associated with large gatherings and exposure sites with risk of increased transmission. The Deputy Director of Public Health reviewed the types of locations in Schedule 1 of the Contact Tracing Direction and determined that lower-risk settings be removed from the Schedule from 18 February 2022.

Since 18 February 2022 persons have only been required to check in at high-risk locations including certain large events, pubs, clubs, casinos, bars and gaming venues. Owners and operators of venues no longer required to collect check in information have been advised to remove QR codes from display but retain these resources in case changes to epidemiology require recommencing checking requirements.

7 CONCLUSION

The Tasmanian Government, through the *Reconnecting Tasmania Plan* and the successful implementation of a range of supporting strategies, has ensured that COVID-19 infections have been effectively managed since the reopening of borders commenced on 15 December 2021. High vaccination rates and ongoing work to ensure that Tasmanians receive additional doses of vaccine has ensured that COVID-19 has had a limited impact on our health system, economy and wider community.

Ongoing review of public health measures and adjustment of various settings, such as continuing to use the events framework and monitoring facemask requirements, ensure that a flexible approach can be taken that will allow us to respond to any outbreaks in a timely manner. Through working together effectively as a State, and with other jurisdictions and the Commonwealth has ensured that we are fully prepared for changes and able to adapt quickly and effectively in this complex environment. We will continue to review public health advice and adjust our approach to suit Tasmanian needs, an approach that served us well so far.

The Tasmanian Government continues to spend more across the health system and will continue to deliver a range of support measures to industries, businesses and individuals in need.

As the State shifts to a living with COVID-19 environment, the Tasmanian Government will continue to explore actions to stimulate Tasmania's economy and to provide social support as we transition to our new normal.

8 ATTACHMENTS

Attachment A	Reconnecting Tasmania
Attachment B	National Plan to transition Australia s National COVID-19 Response
Attachment C	Kirby Institute Tasmania Modelling
Attachment D	Doherty Modelling Report
Attachment E	APHCC Statement on Omicron Public Health Implications
Attachment F	Escalation Management Planning
Attachment G	National Framework for Managing COVID-19 in Schools and Early Childhood Education and Care
Attachment H	Education and Care and School Operational Plans
Attachment I	Summary of Activity to Support the Return to School
Attachment J	COVID-Safe Schools Plan (weeks 6-10)
Attachment K	Vaccination Rollout Campaigns
Attachment L	Targeted Business Support Programs

9 ACRONYMS

ACCHS	Aboriginal Community Controlled Health Services
AEFI	Adverse Event Following Immunisation
AHPPC	Australian Health Protection Principal Committee
AHPPC	Australian Health Protection Principal Committee
AT	Ambulance Tasmania
ATAGI	Australian Technical Advisory Group on Immunisation
CALD	Culturally and Linguistically Diverse
CCMF	Community Case Management Facilities
CDNA	Communicable Diseases Network Australia
CFLC	Child and Family Learning Centres
CHaPS	Child Health and Parenting Service
COVID-19	Coronavirus 2019 pandemic disease.
DCT	Department of Communities Tasmania
DEOC	Disability Emergency Operations Centre
DoE	Department of Education
DoH	Department of Health
DPAC	Department of Premier and Cabinet
DPFEM	Department of Fire and Emergency Management
DSG	Department of State Growth
ECC	Emergency Co-ordination Centre
ECEC	Early Childhood Education and Care
EOC	Emergency Operations Centres
FTE	Full Time Equivalent (staffing)
GP	General Practitioner
LiL	Online Launching into Learning
NAPLAN	National Assessment Program – Literacy and Numeracy
NDIS	National Disability Insurance Scheme
NGOs	Non-Government Organisations
NPA	National Partnership (Agreement) on COVID-19 Response
PAT	Progressive Achievement Tests
PCR	Polymerase Chain Reaction, a technique used in testing for viral infection
PHEOC	Public Health Emergency Operations Centre
PHS	Public Health Services
PHSM	Public Health and Social Measures
PIAG	Pandemic Isolation Assistance Grant
PPE	Personal Protective Equipment
RAT	Rapid Antigen Test
RHH	Royal Hobart Hospital
SoNG	Series of National Guidelines, released by CDNA
TasCOSS	Tasmanian Council of Social Services
TGA	Therapeutic Goods Administration
THS	Tasmanian Health Service
TOR	Terms of Reference
TTIQ	Testing, Tracing, Isolation and Quarantine
TVEOC	Tasmanian Vaccination Emergency Operations Centre
VLC	Virtual Learning Centre

Attachment A - Reconnecting Tasmania

Tasmanian Government (http://www.tas.gov.au)

Search site Search

Peter Gutwein
Premier of Tasmania

Reconnecting Tasmania

1. Coming to Tasmania

I'M COMING TO TASMANIA. WHAT DO I NEED TO DO?

Travellers to Tasmania, including returning residents, need to provide their contact and travel details before entering the State, to help manage the risk of COVID-19 at Tasmania's borders.

All travellers must register through the Tas e-Travel system (https://register.tasetravel.tas.gov.au) and you will be required to scan your QR code on arrival in Tasmania. You must have evidence of your vaccination certificate and – if required - a negative result from your COVID-19 PCR pre-departure test.

VACCINATED TRAVELLER: You need to be able to provide proof of vaccination status

Arriving from a low-risk area: You do not need to be tested for COVID-19 or quarantine and just need to register your travel via the Tas E-Travel website.

Arriving from a high-risk area: You are required to return a negative COVID-19 PCR test within 72 hours before departure to Tasmania.

If you are Tasmanian and have been out of the state for less than 7 days, you do not need to receive a test prior to entering the State, but you are required to be tested within 24 hours of returning. You do not need to quarantine while you wait for the test result unless you have symptoms. If a positive result is returned you will be contacted by Public Health authorities.

If you cannot provide evidence of your vaccination status or negative test result on arrival, you will be required to quarantine for up to 14 days or until you can provide evidence of vaccination or a negative COVID-19 PCR test on or after day five.

UNVACCINATED TRAVELLER:

You must apply for approval to enter Tasmania regardless of where you have been before arrival. Visit www.coronavirus.tas.gov.au (http://www.coronavirus.tas.gov.au) for information on how to apply to enter the State.

If you cannot provide evidence of your vaccination status, you will be required to quarantine for up to 14 days or until you can provide evidence of vaccination.

WHAT ARE HIGH RISK AND LOW RISK AREAS? Areas within Australia and overseas are declared extreme, high and low-risk based on the number of COVID-19 cases in the area, the level of community transmission and/or the variant of COVID-19 in the area.

I DON'T HAVE A SMART PHONE. HOW DO I APPLY TO ENTER TASMANIA, PROVIDE PROOF OF VACCINATION OR MY NEGATIVE TEST RESULT?

Travellers will be able to complete a manual form on arrival and will also be required to demonstrate the necessary evidence. This information is available on the COVID-19 website, and can also be obtain by calling the Public Health Hotline on 1800 671 738

People without smart phones are able to present a hard copy of their COVID test result present on arrival.

Private pathology clinics in other jurisdictions will conduct pre-travel COVID-19 tests and will generally provide a COVID-19 testing and results certificate to the traveller.

If you can't access your COVID-19 vaccination certificate online, you can ask your GP to print your immunisation history statement.

INTERNATIONAL TRAVEL – EXTREME-RISK AREAS

VACCINATED: You need to be able to provide proof of vaccination status

If vaccinated you will be required to produce a negative COVID-19 test 72 hours prior to travel then quarantine for seven days in a suitable premises, which could be home-based, on arrival. You will be tested on day 1, 5 or 6 and on day 13.

UNVACCINATED:

You will be required to produce a negative COVID-19 test 72 hours prior to travel, then quarantine in a designated facility for 14 days at your place of arrival (which would not be in Tasmania) with testing in place on day 1-5 or 6-13.

The only international exceptions to the extreme risk classification are Singapore, Samoa, Vanuatu, Tonga and the South Island of New Zealand which fall under the same category as a high risk jurisdiction where requirements are to be fully vaccinated and produce a COVID-19 negative test 72 hours prior to travel. This also applies to Antarctica only for international expeditioners from Hobart to Christchurch who quarantine prior to their departure.

2. Vaccination Status & Testing

WHAT IS THE DEFINITION OF A VACCINATED TRAVELLER?You are considered to be fully vaccinated if:

- You have received two doses of a Therapeutic Goods Administration (TGA) approved COVID-19 vaccine and;
- At least 14 days have passed since the final dose of vaccine in a course of immunisation. Mixed doses count towards being fully vaccinated as long as all vaccines are approved or recognised by the TGA. If you have had two doses of an approved TGA vaccine but not a booster dose, you are still considered fully vaccinated.

You are also considered to be fully vaccinated, if you have acceptable proof you cannot be vaccinated for medical reasons or you under the age of 12.

I HAVE TO GET A TEST BEFORE ARRIVING IN TASMANIA – CAN I GET A RAPID ANTIGEN TEST?

No. A test must be a Polymerase Chain Reaction (PCR) test, which involves nasal and throat swabs. This type of test is highly accurate and considered the gold standard for detecting an active infection of COVID-19. You are exempt from the testing requirement if:

- You are under five years of age; or
- You have a current medical exemption from requiring undertaking a PCR COVID-19 test; or
- You are a transport, freight and logistics worker or international aircrew complying with the testing regime that applies to these workers.

DO MY CHILDREN NEED TO BE TESTED FOR ENTRY?

Under 5 years - you are exempt from the testing requirement if you are under five years of age.

Over 5 years – you are required to have a PCR COVID-19 test

I'M A FIFO WORKER IN A HIGH-RISK AREA. HOW DO I GET A COVID-19 TEST 72 HOURS IN ADVANCE WHEN I DO NOT HAVE ACCESS TO A TESTING SITE PRIOR TO DEPARTURE?

If you cannot provide evidence of your negative test result on arrival, you will be required to quarantine until you can provide evidence of a negative COVID-19 PCR test on or after day five. If a COVID-19 test is taken after arrival, you will be advised to stay home until you get a negative test result. You need to upload the result to the Tas e-Travel system (https://register.tasetravel.tas.gov.au).

MY DAUGHTER HAS JUST TURNED 12 AND HAS ONLY HAD ONE DOSE OF VACCINE. CAN SHE STILL ENTER TASMANIA?

You are considered a vaccinated traveller if you are under the age of 12 years and two months.

3. COVID-19 Case Management

I'VE VISITED A LOW-EXPOSURE SITE. WHAT DO I DO?

If you have visited a low-risk exposure site, you must monitor yourself for symptoms. You must get tested if you develop symptoms, even if they are mild. You are not required to quarantine.

I'VE BEEN TOLD I'M A CASUAL CONTACT. WHAT DOES THAT MEAN AND WHAT DO I NEED TO DO?

A casual contact is someone who has been in the same place as a confirmed case during their infectious period but does not meet the requirements for a close contact.

You must get tested between days 3 and 5.

You are not required to quarantine but you must wear a mask for 14 days from exposure to the COVID-19 case, when you can't physically distance from others.

If you develop symptoms before or after the required test, you should isolate and have a test immediately.

The requirements for casual contacts are the same for vaccinated or unvaccinated people.

I AM A CLOSE CONTACT OF SOMEONE WHO HAS TESTED POSITIVE. WHAT DO I NEED TO DO?

A close contact is someone who has had face-to-face contact with a confirmed COVID-19 case during their infectious period, creating a reasonable risk of transmission.

VACCINATED:

You must quarantine immediately and have a COVID-19 test. You must get tested again on day 5 or 6. If your test results are negative, you will be released from quarantine after 7 days. You must also be tested again on day 12 or 13. If you develop symptoms between the required tests, you should isolate and have a test immediately.

For days 8-14, you must:

- maintain physical distancing (1.5m) from other people
- wear mask where you can't keep your distance
- avoid non-essential activities
- not enter any high-risk settings, except for essential reasons.
- avoid contact with vulnerable people (eg elderly, pregnant, people with chronic health conditions).

UNVACCINATED:

You must quarantine immediately for 14 days from exposure to the COVID-19 case.

You must have a minimum of two COVID-19 tests. You will need to be tested immediately at the start of your quarantine, and again on day 12–13. If your test results are all negative, you will be released from quarantine after 14 days.

***Example:** If a case was one of eight people in a group who dined at a restaurant, the other people at the table would likely be close contacts. People at other tables, which had appropriate physical distance between tables, may be casual contacts. If the case has paid the bill at the counter and the person serving them wore a mask, that staff member would likely also be a casual contact.*

SOMEONE I LIVE WITH HAS TESTED POSITIVE. DO I HAVE TO QUARANTINE?

VACCINATED:

People who are **vaccinated** and in the same household as a close contact are not required to quarantine but should limit further exposure to the contact and avoid high-risk settings for 14 days. If you show symptoms, you should get tested.

UNVACCINATED:

People who are **unvaccinated** and in the same household as a close contact must also follow the quarantine requirements.

I'M A BUSINESS OWNER AND A COVID-19 POSITIVE CASE VISITED MY PREMISES. DO I HAVE TO SHUT?

If Public Health notifies you that a confirmed COVID-19 case is linked to your workplace, they will work with you to identify what you need to do to protect other people and continue normal activities within your business as soon and as safely as possible.

The initial steps Public Health may ask you to take are to:

1. **Review and activate your COVID-19 Safety Plan** (https://www.coronavirus.tas.gov.au/business-and-employees/covid-19-safe-workplaces-framework) **and**/or Outbreak Management Plan (https://www.coronavirus.tas.gov.au/business-and-employees/covid-19-case-and-outbreak-management/case-and-outbreak-management-plans).
2. **Instruct people in your setting to wear face masks.**
3. **Support Public Health contact tracing** by collecting and providing any additional staffing and visitor information that has not been collected via the Check in TAS app. This may include staffing rosters, manual check in/visitor log sheets or spreadsheets.
4. **Advise any contacts you may identify to quarantine at home** and follow the quarantine instructions (https://www.coronavirus.tas.gov.au/travellers-and-visitors/quarantine-isolation-and-stay-at-home-directions/quarantine).
5. **Liaise with Public Health to coordinate appropriate communications** about the case or outbreak to other people who are associated with your workplace, such as staff, visitors, contractors and customers.
6. **Organise cleaning and disinfection** of frequently touched areas, as outlined in your COVID-19 Safety Plan.
7. **Continue to encourage COVID-safe behaviours** including physical distancing, hand hygiene, advising staff and visitors to stay at home if unwell, and covering coughs and sneezes.
8. Importantly, if you have any questions, contact the public health hotline.

4. Vaccinations and Mandates

CAN I GET A BOOSTER SHOT?

All people aged 18 years and older are eligible for a booster vaccine from five months after the second dose of their primary course of COVID-19 vaccination.

The Pfizer vaccine has been approved for booster doses and is available at GP clinics and community vaccination clinics, as well as participating pharmacies.

MY CHILD IS 5 YEARS OLD. CAN THEY NOW GET VACCINATED?

The Pfizer vaccine has been provisionally approved for use in Australia for children aged 5 to 11 by the Therapeutic Goods Administration (TGA). The TGA has approved a special paediatric dose of the vaccine for children aged 5 to 11 that is one-third of the size approved for people aged 12 and over. Children will receive two doses, eight weeks apart. The choice to vaccinate children is strongly recommended but voluntary and will not be mandated.

I WORK IN THE EARLY CHILDHOOD EDUCATION AND CARE (ECEC) SECTOR. AM I REQUIRED TO BE VACCINATED?

Yes. You will be required to be vaccinated against COVID-19 by early next year. ECEC services include long day care, family day care, outside school hours care, occasional care and in-home care. Anyone working in the ECEC sector will need to have at least their first dose of a COVID-19 vaccine by 8 January to be able to work in the sector.

HAS MY WORKPLACE MANDATED VACCINATION?

Many workplaces now have mandatory vaccination directives in place. To see if you are required to be vaccinated, visit www.coronavirus.tas.gov.au (http://www.coronavirus.tas.gov.au).

I'M NOT VACCINATED. DOES THIS PROHIBIT ME FROM ENTERING CERTAIN PREMISES?

Unvaccinated patrons cannot enter pubs, nightclubs, bars and event (such as music festivals) where people are freely mixing and moving, including drinking standing up.

5. High-Risk Areas

WHAT AREAS ARE CONSIDERED HIGH-RISK?

The following areas are currently considered high-risk *as at 15 December 2021

NSW/ACT

Camden LGA

Campbelltown LGA

City of Canterbury-Bankstown

City of Liverpool

Cumberland City Council

Fairfield LGA

Woollondilly Shire LGA

Australian Capital Territory (entire territory)

VIC

City of Banyule

City of Bayside

City of Boroondara

City of Brimbank

City of Casey

City of Darebin

City of Frankston

City of Glan Eira

City of Greater Dandenong

City of Greater Geelong

City of Hobsons Bay

City of Hume

City of Kingston

City of Knox

City of Manningham

City of Maribyrnong

City of Melbourne

City of Melton

City of Monash

City of Moonee Valley

City of Moreland

City of Port Phillip

City of Stonnington

City of Whittlesea

City of Wyndham

City of Yarra

Shire of Cardinia

Shire of Mornington Peninsula

Shire of Yarra Ranges

Mask-Wearing

DO I NEED TO WEAR A MASK?

The wearing of masks are recommended where you cannot physically distance in indoor spaces. There are situations when wearing a mask is mandatory in Tasmania. The mask must cover your mouth and nose.

Airports & Spirit of Tasmania

Face masks must be worn by everyone aged 12 years and older who:

- Is in an indoor area of the airport that is open to passengers or a member of the public;
- Is boarding a commercial domestic aircraft, including when on the tarmac;
- Is on board a commercial domestic aircraft in Tasmanian airspace;
- In an indoor area of the Spirit of Tasmania terminal that is open to passengers or other members of the public;
- In a vehicle that is at the Spirit of Tasmania terminal, on board the vessel, or while proceeding through the Biosecurity screening and other check points;
- In a communal area on board the Spirit of Tasmania vessel while the vessel is at the terminal or in Tasmanian waters; and
- In other situations as required by the Spirit of Tasmania according to its conditions of travel or workplace policies.

Healthcare & Aged Care

- a public hospital;
- a private hospital;
- a day-procedure facility; and
- all persons visiting a residential aged care facility, except for the residents, must wear a surgical face mask while they remain on the premises (this requirement includes children under the age of 12 years, where practicable).

Events

Masks must be worn at any event that has more than 1000 people in attendance, regardless of whether the event is seated or unseated, indoors or outdoors. This includes while queuing, entering or exiting from the event.

Coronavirus Support

PUBLIC HEALTH HOTLINE:1800 671 738

BUSINESS SUPPORT: Business support | Coronavirus disease (COVID-19) (https://www.coronavirus.tas.gov.au/business-and-employees/business-support)

CORONAVIRUS TESTING SITES: Testing for COVID-19 | Coronavirus disease (COVID-19) (https://www.coronavirus.tas.gov.au/keeping-yourself-safe/testing-for-covid-19)

Latest releases

Supporting our farmers on the Harvest Trail (https://www.premier.tas.gov.au/releases/supporting_our_farmers_on_the_harvest_trail)

Skills for economic recovery (https://www.premier.tas.gov.au/releases/skills_for_economic_recovery)

Further support for Tasmania's screen industry during COVID-19 (https://www.premier.tas.gov.au/releases/putting_downward_pressure_on_fuel_prices_in_tasmania2)

Young Tasmanian Aboriginal Leaders Scholarships (https://www.premier.tas.gov.au/releases/young_tasmanian_aboriginal_leaders_scholarships)

Supporting our primary industries (https://www.premier.tas.gov.au/releases/supporting_our_primary_industries)

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Australian Government

National Plan to transition Australia's National COVID-19 Response

National Cabinet agreed to a plan to transition Australia's National COVID-19 Response from its current pre vaccination settings, focussing on continued suppression of community transmission, to post vaccination settings focussed on prevention of serious illness, hospitalisation and fatality, and the public health management of other infectious diseases

Phases triggered in a jurisdiction when the average vaccination rates across the nation have reached the threshold and that rate is achieved in a jurisdiction expressed as a percentage of the eligible population (16+), based on the scientific modelling conducted for the COVID-19 Risk Analysis and Response Task Force

~70% vaccination (2 doses)

≥80% vaccination (2 doses)

A. Current Phase: Vaccinate, Prepare and Pilot*

Continue to strongly suppress the virus for the purpose of minimising community transmission

Measures may include:

- Accelerate vaccination rates;
- Close international borders to keep COVID-19 out;
- Early, stringent and short lockdowns if outbreaks occur;
- Minimise cases in the community through effective test, trace and isolate capabilities;
- Implement the national vaccination plan to offer every Australian an opportunity to be vaccinated with the necessary doses of the relevant vaccine as soon as possible;
- Inbound passenger caps temporarily reduced
- Domestic travel restrictions directly proportionate to lockdown requirements;
- Commonwealth to facilitate increased commercial flights to increase international repatriations to Darwin for quarantine at the Centre for National Resilience in Howard Springs;
- International Freight Assistance Mechanism extended;
- Trial and pilot the introduction of alternative quarantine options, including home quarantine for returning vaccinated travellers;
- Expand commercial trials for limited entry of student and economic visa holders;
- Recognise and adopt the existing digital Medicare Vaccination Certificate (automatically generated for every vaccination registered on AIR);
- Establish digital vaccination authentication at international borders;
- Prepare vaccine booster programme; and
- Undertake a further review of the national hotel quarantine network.

B. Vaccination Transition Phase

Seek to minimise serious illness, hospitalisation and fatality as a result of COVID-19 with low level restrictions

Measures may include:

- Maintain high vaccination rates, encouraging uptake through incentives and other measures;
- Minimise cases in the community through ongoing low-level restrictions and effective track and trace;
- Lockdowns less likely but possible;
- International border caps and low-level international arrivals, with safe and proportionate quarantine to minimise the risk of COVID entering;
- Ease restrictions on vaccinated residents (TBD);
- Restore inbound passenger caps at previous levels for unvaccinated returning travellers and larger caps for vaccinated returning travellers;
- Allow capped entry of student and economic visa holders subject to quarantine arrangements and availability;
- Introduce new reduced quarantine arrangements for vaccinated residents; and
- Prepare/implement vaccine booster programme (depending on timing).

C. Vaccination Consolidation Phase

Seek to minimise serious illness, hospitalisations and fatalities as a result of COVID-19 with baseline restrictions

Measures may include:

- Maximise vaccination coverage;
- Minimum ongoing baseline restrictions, adjusted to minimise cases without lockdowns;
- Highly targeted lockdowns only;
- Continue vaccine booster programme;
- Exempt vaccinated residents from all domestic restrictions;
- Abolish caps on returning vaccinated Australians;
- Allow increased capped entry of student, economic, and humanitarian visa holders;
- Lift all restrictions on outbound travel for vaccinated Australians; and
- Extend travel bubble for unrestricted travel to new candidate countries (Singapore, Pacific);
- Gradual reopening of inward and outward international travel, with safe countries and proportionate quarantine and reduced requirements for fully vaccinated inbound travellers.

D. Final Post-Vaccination Phase

Manage COVID-19 consistent with public health management of other infectious diseases

Measures may include:

- Open international borders;
- Quarantine for high-risk inbound travel;
- Minimise cases in the community without ongoing restrictions or lockdowns;
- Live with COVID-19: management consistent with influenza or other infectious diseases;
- Boosters as necessary;
- Allow uncapped inbound arrivals for all vaccinated persons, without quarantine; and
- Allow uncapped arrivals of non-vaccinated travellers subject to pre-flight and on arrival testing.

**No jurisdiction required to increase restrictions beyond current settings*

The Plan is based on the current situation and is subject to change if required

The COVID-19 Risk Analysis and Response Taskforce's report is available at: pmc.gov.au.

Modelling of hospital and intensive care unit (ICU) requirements for Tasmania

Aims: to understand the health system surge requirements for Tasmania, in the event of a COVID-19 epidemic, once restrictions are lifted.

Methods: We used a deterministic SEIR mathematical model of COVID-19 based on a published and peer-reviewed model, updated for the age specific population structure of Tasmania, hospital capacity of Tasmania and specific Tasmanian targets for vaccination. The COVID-19 model parameters reflect the Delta variant, including R0 of 6 and an incubation period of 5 days. The model incorporates age-specific vaccination and vaccine protection at current rates of uptake (based on data provided from Tasmania). Vaccine effectiveness against Delta is assumed to be 31% following one dose for both vaccines, and 88% and 67% for Pfizer and AZ respectively after two doses. The vaccine effectiveness against hospitalisation, ICU and death is assumed to be >90% for both vaccines. Assumptions for face masks effectiveness were taken from a published, peer reviewed study of mask effectiveness during the Victorian second wave. The implementation of mandatory masks use has been estimated to be 28% (22-33%) effective in reducing transmissions while 70% were wearing masks. If mask coverage (70%) * mask effectiveness is 28%, then masks are estimated to be 40% effective.

The eligible population for vaccination in Tasmania is considered to be people 12 years and older. The vaccination rate was obtained from the publicly available data on first and second dose coverage over time in Tasmania. We modelled the vaccine roll out based on data provided, which expected 90% of the 16+ age group to be fully vaccinated by December first 2021, and 90% of the age group 12-15 having a first dose by middle/late December and 90% fully vaccinated by 17 of January 2022. The gap between first and second dose is considered to be 6 weeks.

Data from NSW was used for some COVID estimates, given Tasmania has no COVID-19 cases currently. Hospitalization, ICU and deaths rates were taken from NSW data and assumed to be 12% hospitalisation rate and 2% ICU admission overall, however Table 1 shows age-specific rates. Due to small numbers in NSW, the proportion of cases requiring ICU in unvaccinated children 0-11 was estimated from a large study in the US. Age-specific deaths rates were calculated using age-specific case incidence data from NSW and adjusted for vaccination rates by age groups, with 90% protection against these outcomes for fully vaccinated people. Median length of hospital stay and ICU stay was taken from a systematic review, which estimated a mean length of stay in ICU of 7 days. This is an optimistic scenario, based on reports from NSW that intubated patients have a

considerably longer length of stay. The expected length of stay in Tasmania can be determined with discussion.

The contact matrix used is the one estimated for New Zealand rather than the average for Australia, to better reflect the lower population density in Tasmania. The model incorporates contacts tracing, testing and isolation of symptomatic people, while we model the necessity of masks and reduction in movements or mixing people.

We provide modelling of the requirements for ICU and hospital care for Tasmania under different vaccination scenarios (80-90%), different epidemic scenarios and different strategies for opening borders, to assist with planning for surge capacity and understanding the health system impact of policy decisions.

Initial conditions: The outbreak starts on December 1, and model runs from December 1, 2021, for 200 days, until June 2022. We start with 90% of the population 16 years old and over being fully vaccinated, while during the evolution of the outbreak, 90% coverage in 12-15 year olds is reached by mid January. We started with 10 initial infected cases at day 1 (December first), 2 symptomatic and 8 latent and untraced.

Scenario 1: No restrictions, varying contact tracing rates.

Scenario 2: Mandatory masks for people aged 10+, varying contact tracing rates.

Model description

We use a deterministic compartmental model for disease transmission, built using Matlab 2020. It is an expanded SEIR model based on a system of ordinary differential equations. The differential equations move the population through disease epidemiological stages and response stages. Once infected, the epidemiological stages in which people move through are being susceptible not vaccinated (S), vaccinated with one dose (V1) or two doses (V2), latent not infectious yet (E and Ev for vaccinated), latent infectious undiagnosed (E^u and E^{uv} for vaccinated), symptomatic infectious stages for undiagnosed (I1,I11 and I1v, I11v for vaccinated, where I1 and I1v last 1 day and is the first symptomatic day where an infectious person spreads more, while I11 and I11v represent the following 6 days of symptomatic period less infectious) and diagnosed (I2,I22 and I2v and I22v for vaccinated), recovered (R) or death (D), and public health response stages, as latent infectious diagnosed (E^t and E^{tv} for vaccinated) or isolated (Q and Qv for vaccinated), cases hospitalized (H) and requiring intensive care unit (ICU). We have two compartments for asymptomatic people who never

develop symptoms, (A1 and A2). We assume they can infect others - A1 represents the peak of their infectiousness and A2 the 6 following days of gradually decreasing infectivity (A1v and A2v for vaccinated). Finally, the model has a compartment for uninfected contacts traced (C), which will stay home quarantine for 12 days before moving back to the susceptible compartment. Vaccinated people with one dose have 31% reduction in risk of infection, while people fully vaccinated have 88% (Pfizer) or 67% (AZ) reduction in risk of infection per contact, however both vaccine recipients once fully vaccinated have 90% reduction in hospitalization, ICU requirement and risk of death compared to no vaccinated people. Each of those compartments are age-specific (i) for 16 age groups, 5 years wide 0-74 years old and a 75+ last age group.

Table 1: Data/parameters used

Symbol	Definition	Value
$R0$	Basic reproductive number	6
θ	Percentage of symptomatic people isolated	90%
ρ	Percentages of contacts traced and home quarantined	80%-50%
q_1	Duration of quarantine for contacts traced isolation for symptomatic	12
d_1	Latent duration not infectious	3.2 days
d_2	Pre symptomatic infectious duration	2 days
d_3	Symptomatic infectious duration	7 days
v_1	Vaccine effectiveness against infection following dose 1	31%
v_2	Vaccine effectiveness against infection following dose 2	88% Pfizer and 67% AZ (People over 60 are considered to have had mostly AZ)
N	Total population	542,000
g	Asymptomatic	35%
μ	Age-specific case fatality rate	0-9 0% 10-29 0.02% 30-49 0.08% 50-59 0.24% 60-69 1% 70+ 9.14%
μv	Age-specific case fatality rate for vaccinated people	90% reduction from **μ**
ICU	Hospitalization rates	0-4 4% 5-9 2% 10-19 3% 20-29 8% 30-49 12% 50-59 19% 60-69 26%

		70+ 50%
ICU	ICU rates	0-9 0.009% 10-19 0.0046% 20-49 1% 50-59 4% 60-69 7% 70+ 10%
HV and ICUV	Hospitalizations and ICU for vaccinated people	90% reduction of rates above
dh	Duration in hospital	5 days
dicu	Duration in ICU	7 days
ICU maximum capacity		114 beds
m	Masks effectiveness in infection reduction	20% (considered to be wear only indoor)
mr	Movement restriction	Varied from 0, 10, 30 and 60%.
adr	Asymptomatic detection rate	Those results are plotted for worse case of 0%

Differential equations

$$dS_i/dt = -\lambda * S_i - \rho * \lambda 2 * S_i + C_i/q_1 - doses$$

$$dE_i/dt = \lambda * S_i + (1 - v1) * \lambda * V1_i - E_i/d_0$$
$$dEv_i/dt = (1 - v2) * \lambda * V2_i - Ev_i/d_0$$

$$dE_i^u/dt = (1 - \rho) * E_i/d_0 - E_i^u/d_1$$
$$dE_i^t/dt = \rho * E_i/d_0 - E_i^t/d_1$$
$$dEv_i^u/dt = (1 - \rho) * Ev_i/d_0 - Ev_i^u/d_1$$
$$dEv_i^t/dt = \rho * Ev_i/d_0 - Ev_i^t/d_1$$

$$dC_i/dt = \rho * \lambda 2 * S_i - C_i/q_1$$

$$dI_i^1/dt = (1 - g) * E_i^u/d_1 - I_i^1/d$$
$$dI_i^2/dt = (1 - g) * E_i^t/d_1 - I_i^2/d$$
$$dIv_i^1/dt = (1 - g) * Ev_i^u/d_1 - Iv_i^1/d$$
$$dIv_i^2/dt = (1 - g) * E_i^t/d_1 - I_i^2/d$$
$$dA_i^1/dt = g * (E_i^u/d_1 + E_i^t/d_1) - A_i^1/d$$
$$dAv_i^1/dt = g * (Ev_i^u/d_1 + Ev_i^t/d_1) - Av_i^1/d$$

$$dI_i^{11}/dt = I_i^1/d - \theta * I_i^{11}/d_4 - (1 - \theta) * I_i^{11}/d_6$$
$$dI_i^{22}/dt = I_i^2/d - I_i^{22}/d$$
$$dIv_i^{11}/dt = Iv_i^1/d - \theta * Iv_i^{11}/d_4 - (1 - \theta) * Iv_i^{11}/d_6$$
$$dIv_i^{22}/dt = Iv_i^2/d - Iv_i^{22}/d$$
$$dA_i^2/dt = (1 - adr) * A_i^1/d - A_i^2/d_6$$

$$dAv_i^2/dt = (1 - adr) * Av_i^1/d - Av_i^2/d_6$$

$$dQ_i/dt = adr * A_i^1/d + I_i^{22}/d + \theta * I_i^{11}/d_4 - (1 - (h + icu + \mu)) * Q_i/q_1 - (h + icu + \mu) * Q_i/d_5$$

$$dQv_i/dt = adr * Av_i^1/d + Iv_i^{22}/d + \theta * Iv_i^{11}/d_4 - (1 - (hv + icuv + \mu v)) * Qv_i/q_1 - (hv + icuv + \mu v) * Qv_i/d_5$$

$$dH_i/dt = h * Q_i/d_5 + hv * Qv_i/d_5 - H_i/dh$$

$$dICU_i/dt = icu * Q_i/d_5 + icuv * Qv_i/d_5 - ICU_i/icu$$

$$dR_i/dt = (1 - \mu_i) * (1 - \theta) * I_i^{11}/d_6 + (1 - \mu v_i) * (1 - \theta) * Iv_i^{11}/d_6 + A_i^2/d_6 + Av_i^2/d_6 + (1 - (h + icu + \mu)) * Q_i/q_1 + (1 - (hv + icuv + \mu v)) * Qv_i/q_1 + H_i/dh + ICU_i/icu$$

$$dD_i/dt = \mu_i * (1 - \theta) * I_i^{11}/d_6 + \mu v_i * (1 - \theta) * Iv_i^{11}/d_6 + \mu_i * Q_i/d_5 + +\mu v_i * Qv_i/d_5$$

$$dV1_i/dt = doses - V1_i/d_7 - (1 - v1) * \lambda * V1_i$$

$$dV2_i/dt = V1_i/d_7 - (1 - v2) * \lambda * V2_i$$

The force of infection is described as

$$\lambda_i = \sum_{j=1}^{18} \frac{\beta_1 * c_{i,j} * (E_j^u + Ev_j^u)}{N} + \sum_{j=1}^{18} \frac{\beta_2 * c_{i,j} * (E_j^t + Ev_j^t)}{N} + \sum_{j=1}^{18} \frac{\beta_3 * c_{i,j} * (I_j^1 + I_j^2 + A_j^1 + Iv_j^1 + Iv_j^2 + Av_j^1)}{N} + \sum_{j=1}^{18} \frac{\beta_4 * c_{i,j} * (I_j^{11} + I_j^{22} + A_j^2 + Iv_j^{11} + Iv_j^{22} + Av_j^2)}{N}$$

Where $\beta_1 = 1.32$ for latent undiagnosed contacts, $\beta_2 = \frac{\beta_1}{2}$ for latent diagnosed and home quarantined (50% reduction in R0), $\beta_3 = 2.16$ for the first day of symptoms and $\beta_4 = 0.2$ for the following 6 days of symptoms, to reproduce an overall R0=6 without interventions. $c_{i,j}$ is the age-specific contact matrix adapted from NZ, and *N* is the total population. Then we added the reduction in transmission by mask use (multiplied λ_i by $1 - m_i$) where m_i is a combination of proportion of the population wearing it and mask effectiveness to reduce the force of infection.

Results

With the vaccine rollout and the expected 90% vaccination coverage in the 12+ years old just after 47 days from the start of the epidemic, we modelled two scenarios, without any restriction and with indoor masks use in people 12 years and older. For those scenarios, we started with the best case of 80% contacts traced and quarantined while in latency period and then decreased the proportion of contacts traced.

The results show that in the case of no restrictions, a minimum of 80% contacts need to be traced, while the use of masks indoors for the age group 10+ even if contact tracing is reduced to 50%, can mitigate the impact of lower contact tracing.

An important observation is that when looking at age specific results, cases are mostly in the unvaccinated age groups (including children). Cumulative results by age groups are showed after 50 days (January 19), when is assumed 90% 12+ are fully vaccinated. A limitation is that hospitalization and ICU data comes from NSW when the vaccination coverage was low at the start of the outbreak, and cases spreading over the older population, therefore when we calculated those rates in the youngest age groups the sample was small and icu and deaths rates in 0-9 years old are 0%. This highlights the need to update the data in the future. Figures to follow:

Scenario 1: No restrictions

Figure 1.1: Cumulative cases, no restrictions

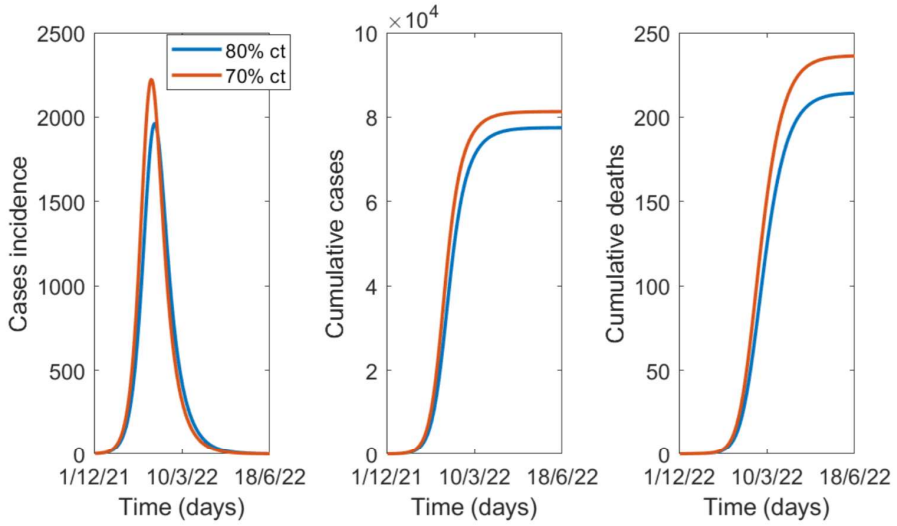

Table 1.1: Cumulative cases at 200 days with 70-80% contact tracing

CT	cases	deaths
80%	77492	214
70%	81305	236

Figure 1.2: Hospital and ICU bed requirements, no restrictions (line represents the code black threshold)

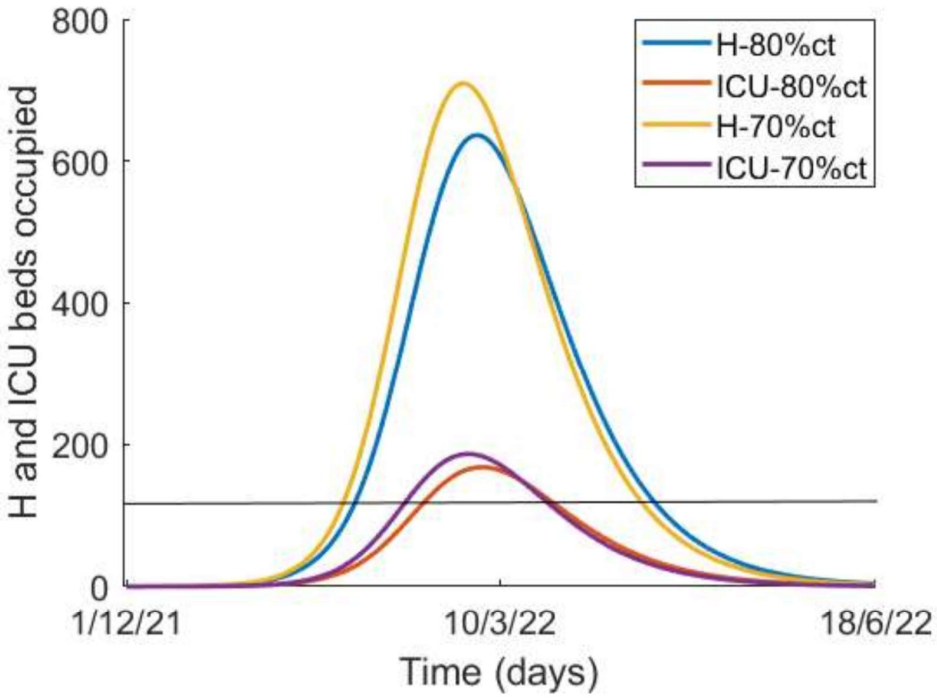

Table 1.2 Peak hospital and ICU beds required in a single day

	CT	Date	Peak daily usage
H	80%	March 4	636
	70%	February 28	709
ICU	80%	March 5	168
	70%	March 2	186

Scenario 2: Contact tracing fixed at 80%, everyone 10+ wearing masks indoors compared to 5+ wearing masks indoors

Figure 2.1: Cumulative cases, universal masking 10+ and 5+

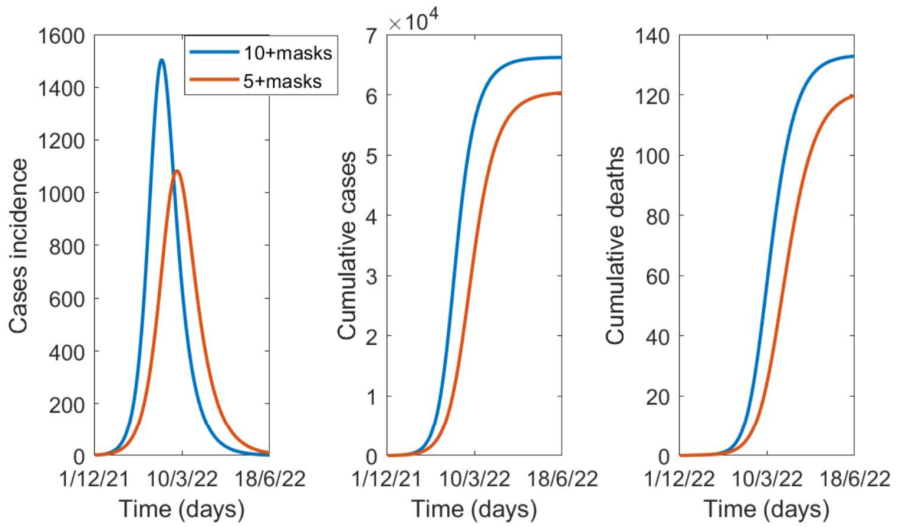

Table 2.1: Cumulative cases and deaths after 200 days

Universal masking	cases	deaths
10+	66196	132
5+	60333	120

Figure 2.2: Hospital and ICU bed requirements, mask guidelines for 10+ and 5+ (line represents the code black threshold)

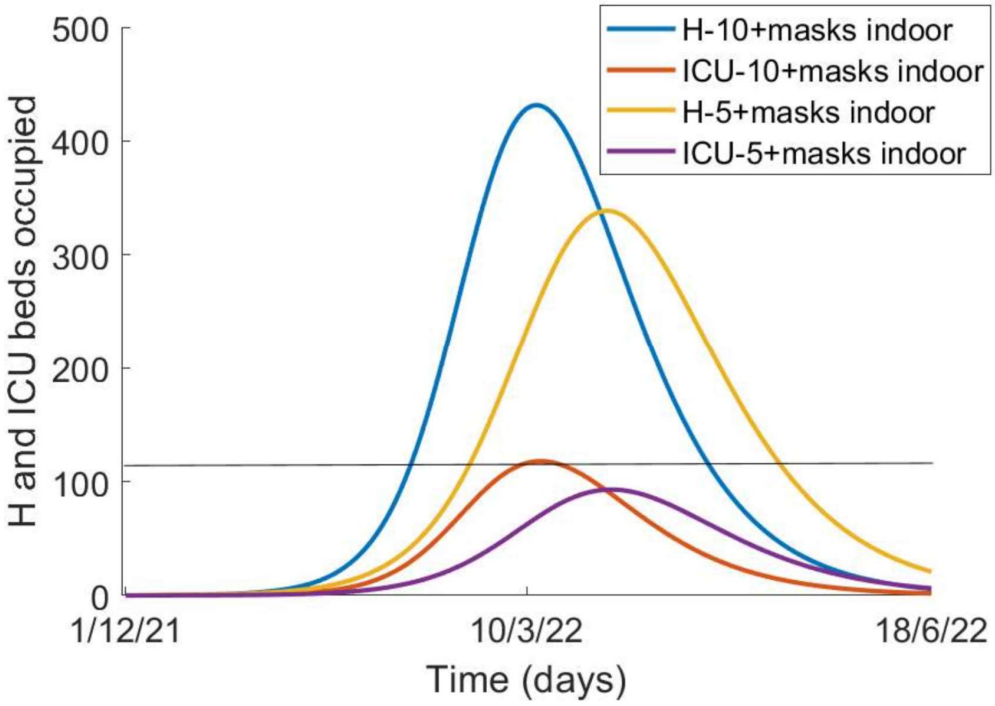

Table 2.2: Peak hospital and ICU beds required in a single day by age group by mask guidelines

	Masks	Date of peak	Max daily usage
H	10+	March 12	431
	5+	March 30	339
ICU	10+	March 14	118
	5+	April 1	93

SCENARIO 3: Fixed contact tracing 80%, mask use indoors for 12+ and varying movement restriction (mr) - 10%, 30% and 60%

Figure 3.1: Cumulative cases, varied movement restrictions

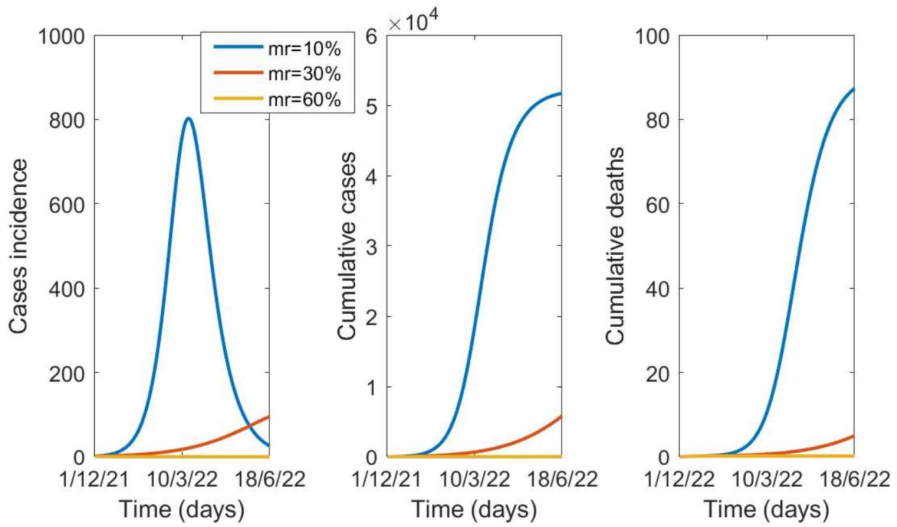

Table 3.1: Cumulative cases and deaths, varied movement restrictions

Movement restriction with masks for 12+ and 80% contact tracing	cases	deaths
10%	51699	87
30%	5804	5
60%	15	0

Figure 3.2: Hospital and ICU bed requirements, varying movement restrictions (line represents the code black threshold)

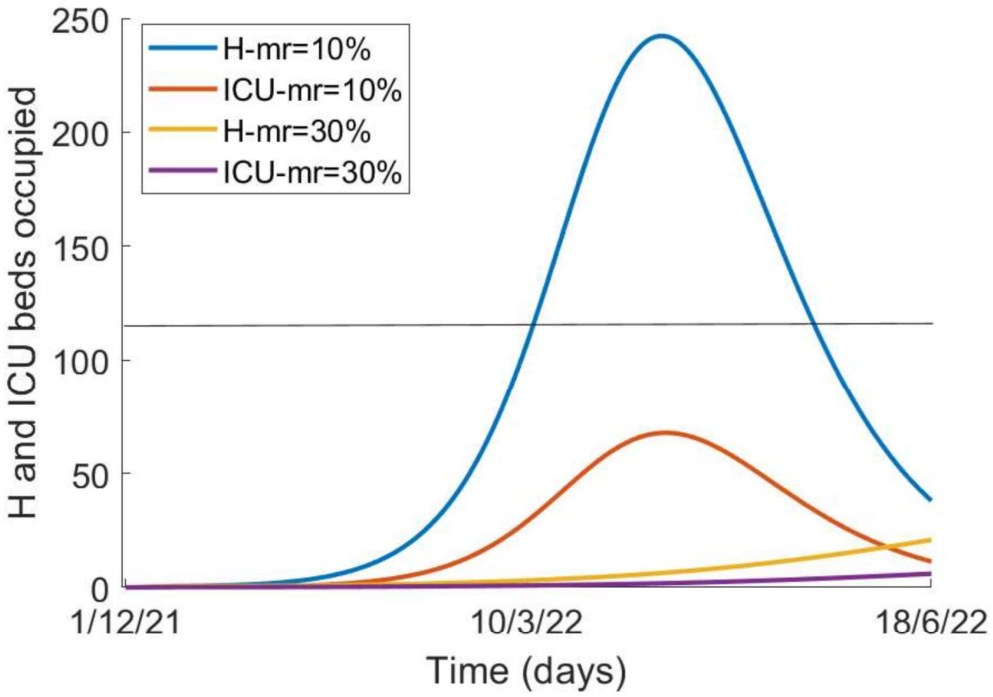

Table 3.2: Peak hospital and ICU beds required in a single day (masks plus movement restriction)

	Movement restriction	Date	Max usage
H	10%	April 12	242
	30%	June 18	20
ICU	10%	April 13	68
	30%	June 18	6

SCENARIO 4: Masks indoor for 12+ (80%), reduction of contacts tracing to 50% and varying movement restriction by 10%, 30% and 60%.

Figure 4.1: Cumulative cases, 80% masks, 50% contact tracing, varied movement restrictions

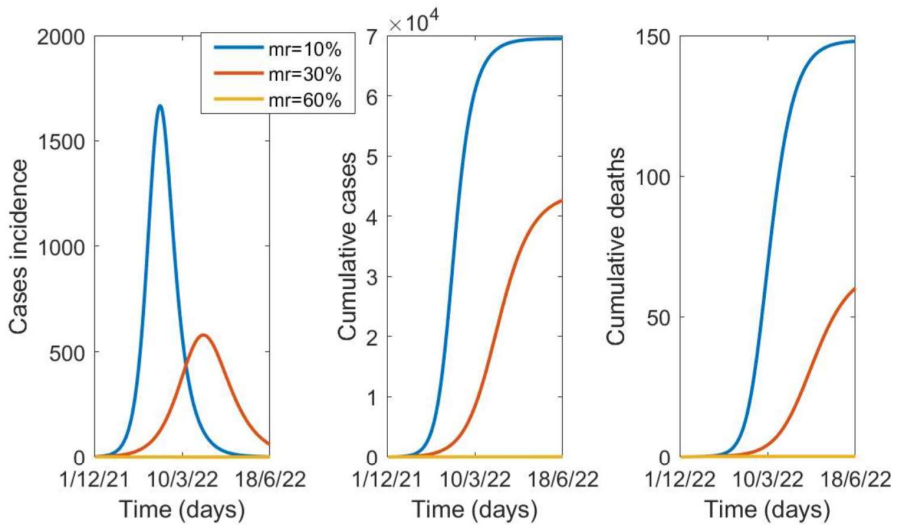

Table 4.1: Cumulative cases and deaths at 200 days, 80% masks, 50% contact tracing, varied movement restrictions

Movement restriction	cases	deaths
10%	69493	148
30%	42642	60
60%	30	0

Figure 4.2: Hospital and ICU bed requirements, 80% mask use, varying movement restrictions (line represents the code black threshold) and 50% contact tracing.

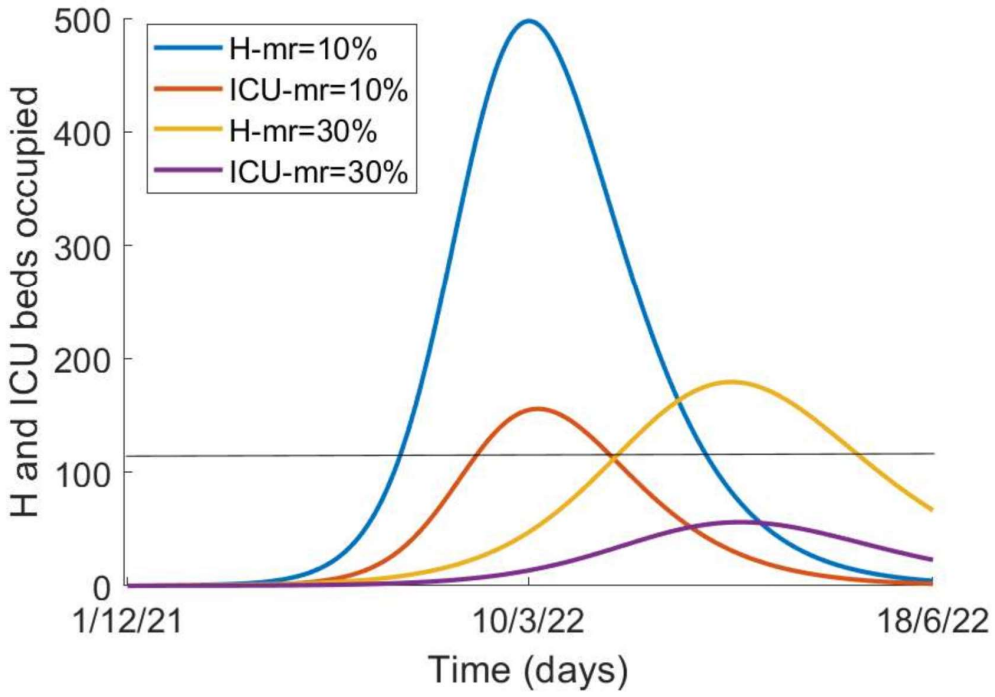

Table 4.2: Peak hospital and ICU beds required in a single day by age group, 80% mask use, varying movement restrictions and 50% contact tracing

	Movement restriction	Date of peak	Max daily usage
H	10%	March 10	397
	30%	April 29	179
ICU	10%	March 13	155
	30%	May 2	56

Attachment D - Doherty Modelling Report

Doherty Modelling Report for National Cabinet 30 July 2021

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TECHNICAL APPENDIX

Executive summary

- Models of COVID-19 infection and vaccination were used to define a target level of vaccine coverage for transition to Phase B of the National Plan. The model was based on the simplifying assumption of a single national epidemic, with COVID-19 transmission, severity and vaccine effectiveness as for the Delta variant.
    - Vaccine allocation scenarios were defined towards threshold coverage targets (16+ years) of 50/60/70/80%, noting achieved coverage to date has been largely concentrated in high-risk groups and elder populations in line with existing strategy;
    - We compared relative impacts on transmission and health outcomes of continuing the current risk focused strategy, with alternatives focused on reducing infection spread across the whole population. We included a scenario assessing the additional impact of increasing age eligibility for vaccination to 12+ years;
    - Recognising that additional social measures would likely be required to constrain epidemic growth under different achieved coverage assumptions, we estimated ability of the 'test, trace, isolate, quarantine' approach and different bundles of public health and social measures to reduce transmission across the population;
    - Clinical consequences of uncontrolled outbreaks were estimated by seeding infections at the time of reaching threshold levels of vaccine coverage, for the different allocation strategies.
- Stated objectives of the immunisation program enabling the transition to Phase B are to constrain severe outcomes within clinical capacity and reduce the intensity and length of requirement for socially and economically impactful public health and social measures.
    - For 'baseline' levels of social and behavioural restrictions, rapid epidemic growth is expected at 50 and 60% coverage, with more substantial transmission reduction by 70 and 80% targets. In these scenarios reduced effectiveness of the public health 'test, trace, isolate, quarantine' (TTIQ) response is anticipated due to high caseloads;
    - Accordingly, extended and stringent social measures would likely be required to control epidemic growth if the transition to Phase B is made at 50% or 60% coverage;
    - Supporting optimal public health TTIQ capacity by applying continuous low level social restrictions makes the requirement for stringent lockdowns unlikely at 70% population vaccine coverage, under transmission reducing allocation strategies;
    - At this stage of the national COVID-19 vaccine rollout, extending eligibility to key transmitting age groups offers greatest potential to reduce transmission even at lower coverage, reducing workplace absenteeism, clinical cases and deaths across the whole population;
    - Expanding the vaccine program to the 12-15 year age group has minimal impact on transmission and clinical outcomes for any achieved level of vaccine uptake;
    - These findings are conditional on public health workforce and response capacity which varies nationally, population compliance with public health recommendations and orders, and persistence of immunity following infection or vaccination over a 6 months timeframe;
    - Emergence of 'vaccine escape' variants will require re-evaluation of targets and associated requirements for public health measures.
- *This phase of reporting defines aspirational coverage targets to minimise the consequences of community transmission. Achievement of these targets at small area level will be critical to ensure equity of program impact, as ongoing outbreaks in undervaccinated populations are reasonably anticipated from international experience.*
- *Particular attention should be paid to groups in whom socioeconomic, cultural and other determinants are anticipated to result in higher transmission and/or disease outcomes.*
- *Ongoing situational assessment of measured transmission potential and circulating SARS-CoV-2 variants in the Australian population over coming months will allow benchmarking of these hypothetical scenarios to guide real time policy decision making about the transition to Phase B of the National Plan.*

Rationale

On 2nd July 2021, National Cabinet agreed to formulate a National Plan to transition Australia's COVID response. The plan consists of four phases defined by achievement of vaccination thresholds broadly expressed as a percentage of the eligible population (aged 16+ years). Modelling is to be used to define target levels of coverage sufficient to transition between:

A. Current Phase – Vaccinate, prepare and pilot, with a continuing focus on strongly suppressing the virus, including through the use of early and stringent short lockdowns, for the purpose of minimising community transmission;
B. Post vaccination phase – focused on minimisation of serious illness, hospitalisation and fatality as a result of COVID-19 through a combination of vaccination and some ongoing degree of light social restrictions, with lockdowns deemed unlikely;
C. Consolidation phase – public health management of COVID-19 consistent with other infections, but no lockdown requirement;
D. Final phase – removal of all border restrictions.

Background

Modelling prepared for National Cabinet on the 4th June 2021 considered the likely impact of Astra Zeneca vaccines on transmission potential of the Alpha strain of SARS-CoV-2, as well as a *more transmissible variant* with properties similar to the Delta strain of the virus. That work demonstrated that even at very high levels of vaccine uptake (80% or above), suppression of epidemic growth below the critical reproduction number of one required to attain 'herd immunity' was unlikely for such a strain. However, substantive reductions in transmission potential could be achieved which, together with intermittent application of social measures, would constrain the rate and extent of epidemic growth. In addition, the decrease in disease severity in vaccinated individuals would lead to lower rates of hospitalisation, intensive care utilisation and death.

This next phase of work focuses on the Delta variant as a 'base case' strain, using updated transmission, severity (Table S1) and vaccine effectiveness assumptions (Table S2.3, S2.5) against this strain.

- Should more transmissible variants emerge in future, transmission potential will be higher than anticipated here for any given level of completed vaccine coverage.
- Sensitivity analyses explore scenarios for a hypothetical future variant against which vaccines are only half as effective. In such a case, vaccine impacts on transmission potential will be less, due to a reduction in vaccine protection against infection *and* an increase in 'breakthrough' infections in immunised individuals (Table S2.4).

Ongoing situational assessment of measured transmission potential and circulating SARS-CoV-2 variants in the Australian population over coming months will allow benchmarking of these hypothetical scenarios to guide real time policy decision making about the transition to Phase B of the National Plan.

We extend on earlier methods to consider more realistic scenarios of vaccine distribution for the Australian population, incorporating both Astra Zeneca and Pfizer vaccines. Under the evidently coarse simplifying assumption that COVID-19 would spread uniformly across the Australian continent, we use an agent-based model of the total population to represent epidemic dynamics and the combined impacts of vaccination and public health and social measures to limit transmission and reduce the outcomes of interest. Hospital and ICU admissions are benchmarked against stated national capacity, based on the additional simplifying assumption that such resources are equally accessible to every Australian.

Objectives

Objectives of the immunisation strategy to enable a transition from Phases A to B are:

1. Minimisation of moderate and severe health outcomes, defined as all identified cases leading to workforce absenteeism as well as that subset resulting in hospitalisation, intensive care requirement and death (to be constrained within national capacity for hospital ward and ICU admissions);
   and
2. Reduction of the intensity and length of application of socially and economically disruptive public health and social measures, which are currently the primary means of reducing transmission. Ongoing 'light' restrictions will likely be needed to augment vaccine impacts, but lockdowns would be deemed unlikely.

Given the time horizon, transitions to later phases (C and D) will be associated with greater uncertainty because of:

- Likely emergence of new variants within Australia or internationally exhibiting one or more of heightened transmissibility, severity or immune escape;
- Changing global epidemiology of COVID-19 affecting the risk profile of travellers from different countries and regions;
- Waning of vaccine-derived and natural immunity over time;
- Development of new vaccine products (eg multivalent or specific VOC vaccines) and schedules including administration of booster doses to high risk subgroups or whole population;
- Population fatigue and the potential for declining compliance with restrictions;
- Potential for future development of readily bioavailable therapeutics that might be used for either or all of transmission reduction, prevention of disease progression and life-saving therapies.

Acknowledging Australia's vast geographical distances and the variable size, demography, rurality/remoteness and public health/health service capacity of states and territories our next phase of work will adapt the agent-based model framework to represent the key population characteristics and public health and clinical capacities of each. Working closely with the jurisdictions, we will consider the way in which state-based differences may require tailored adaptation of the national strategy, including definition of key subpopulation coverage targets, to achieve overarching program objectives.

Exploring vaccine thresholds for transition to Phase B of the National Plan

To define a 'manageable' level of vaccine coverage for transition to Phase B of the national plan, we explore the consequences of uncontrolled outbreaks that effectively seed ongoing community transmission of COVID-19, following completion of alternative target vaccine coverage/allocation scenarios.

When defining overall target coverage thresholds for the eligible population, it is vital to consider the distribution of doses received across all age categories, which will impact on population level outcomes of the program in different ways:

- Older individuals are more likely to experience severe disease outcomes, making them an early priority group for vaccine protection in Australia's COVID-19 vaccine rollout;
- Young and working age adults are peak transmitters of COVID-19. Increasing the proportional coverage in these groups will have a greater impact to reduce transmission.

We assume that case isolation, contact tracing and quarantine will continue, while recognising that the intensity and effectiveness of these public health responses must decline as caseloads increase. Likely requirements for overlaid 'bundles' of social measures to constrain epidemic growth are considered.

Defining vaccine allocation scenarios within supply/delivery constraints

From a starting point of achieved vaccine coverage in the Australian age eligible (16+ years) population as of 12th July 2021 based on Australian Immunisation Register (AIR) data (33% one-dose completion, 11.5% two-dose completion – Table S3.1), we have devised a series of vaccine delivery scenarios towards completed (2 dose) coverage targets of 50, 60, 70 and 80% in the age eligible (16+) population.

Within the constraints of available supply and achievable delivery, vaccines are allocated according to current routine indications as follows:

- Astra Zeneca – age eligible population 60+ years, dosing interval 12 weeks, delay from second dose completion to full efficacy 2 weeks;
- Pfizer/BioNTech – age eligible population 16+ years, dosing interval 3 weeks, delay from second dose completion to full efficacy 2 weeks.

Given these assumptions, we compare alternative theoretical approaches to delivery, to explicitly indicate the importance of allocation for impacts on transmission and disease:

Table 1.1 – Vaccine allocation strategies by age, assuming current recommendations for Astra Zeneca vaccine age eligibility (60+ years) and dosing interval (12 weeks)

Strategy	Allocation sequence
Oldest first	Vaccinations are prioritised from oldest to youngest. Specifically, prioritization occurs in the following order: 80+, 70-79, 60-69, 50-59, 40-49, 30-39, 20-29, 16-19
40+ years first	Vaccinations are prioritised from 40+ upwards, then 16+. Specifically, prioritization occurs in the following order: 40-49, 50-59, 60-69, 70-79, 80+, 16-19, 20-29, 30-39
All adults	Vaccinations are not prioritised in any particular order by age

Along with age-based allocation strategies, we compare the impact of approaches intended to hasten the timing of vaccine rollout within available supply, towards threshold coverage targets. Proposed changes in indications for the Astra Zeneca vaccine are aligned with the recent ATAGI advice on recommendations for outbreak settings, developed in the context of a surge in cases in

NSW (https://www.health.gov.au/news/atagi-statement-on-use-of-covid-19-vaccines-in-an-outbreak-setting).

Table 1.2 – Strategies to accelerate rollout, by reducing the Astra Zeneca (AZ) vaccine dosing interval from 12 weeks and/or lowering the age recommendation from 60+ years

Strategy	Allocation sequence	Impact on VE against infection (E_i)	Overall reduction in transmission*
AZ 40+ years	Recommend Astra Zeneca for 40+ year olds	Nil beyond dose interval	86% (assuming 12-week interval)
AZ 8 weeks	Reduce AZ dosing interval to 8 weeks	15% reduction	83%
AZ 4 weeks	Reduce AZ dosing interval to 4 weeks	25% reduction	81%

**Calculated overall reduction in transmission = $1-(1-E_i)*(1-E_t)$*

In the absence of robust evidence for the efficacy of 4- and 8-week interval dosing schedules for AZ against the Delta strain, we estimated vaccine efficacy for these scenarios by assuming 25% (4-week) and 15% (8-week) reductions in efficacy against infection following 2 dose completion relative to the 12-week schedule. This is broadly consistent with observed reductions in efficacy against both symptomatic infection and antibody titre from 2020 strains with <6-week versus ≥12 week schedule (Voysey et al. *Lancet* 2021, relating antibody responses to efficacy according to Khoury et al. *Nature Medicine* 2021). Assuming that the reduction in onward transmission from a vaccinated infected individual (E_t) is unchanged, these estimates result in an overall efficacy against disease transmission of 81% for a 4-week interval and 83% for an 8-week interval (Table 1.2).

Timeliness of achieving coverage targets by vaccine allocation scenario

The rate of vaccine delivery is shown in Figure S1 and the indicative date of completion of the rollout for different combinations of these strategies is reported in Table 1.3. Greatest potential benefits are observed early in the rollout, with achievable gains of almost a month to reaching 50% uptake by shortening the dosing interval to 4 weeks and making a positive recommendation for administration to 40+ year olds. Lesser temporal gains are observed for higher target thresholds. Completion dates are equivalent regardless of the age-based allocation (oldest, 40+ years first or all adults). The distribution of proportional coverage by age cohort for the different allocation strategies is shown in Table S3.2.

Table 1.3 – Date of achieving a given vaccine coverage threshold by any age-based allocation strategy (oldest, 40+ years first or all adults), assuming a start date and population completed doses (AIR) as of 12th July 2021

AZ recommendation		Date by which coverage target achieved			
Age	**Interval**	**50%**	**60%**	**70%**	**80%**
60+ years	**12-weeks**	4 October	18 October	1 November	22 November
	8 weeks	27 September	11 October	1 November	22 November
	4 weeks	27 September	11 October	1 November	22 November
40+ years	**12-weeks**	4 October	11 October	25 October	15 November
	8 weeks	20 September	4 October	18 October	8 November
	4 weeks	6 September	4 October	18 October	8 November

Transmission potential (TP) by vaccine coverage and allocation strategy

The rate of epidemic growth following loss of control is related to the population level *transmission potential (TP),* a measure routinely reported in the Common Operating Picture. TP is akin to the effective reproduction number (R_{eff}). If below 1, no public health actions are required to control disease and an outbreak will be self-limiting. The higher above 1 it moves the more rapidly case numbers will escalate and the harder the disease is to control with public health measures. Vaccination reduces population level susceptibility to infection, and ongoing spread from immunised infected individuals, thereby reducing TP.

Baseline TP will be influenced by spontaneous and imposed changes in physical distancing behaviours, the number of social contacts on average between individuals and the timeliness of test, trace, isolate, quarantine (TTIQ) measures. We use a starting TP of 3.6 for the Delta variant based on averaged observations from NSW in March 2021, a period with minimal social restrictions and no major outbreaks. TTIQ assumptions are based on the performance of the Victorian public health response at the height of the 'second wave' in 2020 as our best estimate of achievable effectiveness at high caseloads. Note that the TP in WA over the same period under similar levels of restrictions was 4.5.

Tables 2.1-2.3 report the TP achieved under alternative vaccine allocation and delivery strategies. Given greater proportional coverage of peak transmitting age groups (Table S3.2, Figures S2.2-2.5) the 'all adults' allocation strategy is slightly more effective at reducing TP earlier in the rollout, across all delivery approaches and vaccine eligibility assumptions. Improved early constraint of transmission can have substantive impacts on the timing and peak of epidemics, because of the nonlinear nature of epidemic growth. The marginal gain in timeliness of reaching the 50% coverage threshold under the accelerated AZ strategies is at some short-term cost of TP reduction, given the lower efficacy of reduced interval schedules. We will therefore constrain scenarios in this report to those assuming 'standard' AZ recommendations, noting that the potential benefits of accelerated delivery in short term response merit further exploration.

Table 2.1: Scaled values of Delta variant transmission potential (TP) for 50%, 60%, 70% and 80% population coverage by the 'Oldest first' vaccine allocation strategy, and exploring age recommendations and dosing intervals for AZ. We use a starting TP of 3.6.

AZ recommendation		Eligible population coverage (16+)			
Age	**Interval**	**50%**	**60%**	**70%**	**80%**
60+ years	**12-weeks**	2.1	1.7	1.5	1.3
	8 weeks	2.2	1.9	1.5	1.3
	4 weeks	2.2	1.9	1.5	1.3
40+ years	**12-weeks**	1.8	1.7	1.4	1.3
	8 weeks	2.1	1.8	1.5	1.3
	4 weeks	2.5	1.8	1.5	1.3

Table 2.2: As for Table 2.1 but by the '40+ years first' allocation strategy

AZ recommendation		Eligible population coverage (16+)			
Age	**Interval**	**50%**	**60%**	**70%**	**80%**
60+ years	**12-weeks**	2.1	1.9	1.6	1.3
	8 weeks	2.2	2	1.6	1.4
	4 weeks	2.2	2	1.6	1.4
40+ years	**12-weeks**	2	1.8	1.6	1.3
	8 weeks	2.2	1.9	1.7	1.4
	4 weeks	2.4	2	1.7	1.4

Table 2.3: As for Table 2.1 but by the 'All adults' allocation strategy

AZ recommendation		Eligible population coverage (16+)			
Age	**Interval**	**50%**	**60%**	**70%**	**80%**
60+ years	**12-weeks**	2	1.7	1.5	1.3
	8 weeks	2.1	1.8	1.5	1.3
	4 weeks	2.1	1.8	1.5	1.3
40+ years	**12-weeks**	1.8	1.7	1.5	1.3
	8 weeks	2	1.8	1.5	1.3
	4 weeks	2.3	1.8	1.5	1.3

Implications of 'vaccine escape' variants for impacts on transmission potential

The three age-based vaccine allocation scenarios were explored, assuming a future variant against which vaccines are less protective (Table 3.1). We model the impact of this 'vaccine escape' variant by assuming a reduction of 50% in vaccine efficacy for both infection (E_i) and onward transmission (E_t). This would result in reductions of 36% (Pfizer) and 39% (Astra Zeneca) in the efficacy of two vaccine doses against overall transmission, relative to Delta (Table S2.4). The 'all adults' allocation strategy remains marginally better than the other two scenarios, but even at 80% eligible population coverage, TP remains high at 2.0.

Table 3.1 Scaled values of transmission potential (TP) for a variant against which vaccines are only half as effective, for 50%, 60%, 70% and 80% population coverage achieved under the three age-based allocation strategies. Standard age (60+) and dosing interval (12 weeks) recommendations are assumed for the AZ vaccine. Comparators for each strategy are the top rows of each of Tables 2.1, 2.2 and 2.3.

Strategy	Eligible population coverage (16+)			
	50%	**60%**	**70%**	**80%**
Oldest first	2.7	2.4	2.2	2.0
40+ years first	2.6	2.4	2.2	2.0
All adults	2.5	2.3	2.1	2.0

Implications of extending vaccine eligibility to the population aged 12+ years

The potential benefit of immunising school children aged 12-15 years was also explored. The primary purpose of this 'thought experiment' was to assess the impact of extending the age of vaccine eligibility down to age 12 years.

To implement this hypothetical scenario, we assumed the rate of delivery to this group approximated that of the overall national program. For each date at which whole population two dose coverage targets were achieved, we assumed that the same proportion of this school aged cohort would have received at least one vaccine dose.

In reality, the achievable pace of rollout to this age cohort will depend on supply considerations determining whether and when additional doses might be allocated to this group. There will also be jurisdictional differences in the workforce available to deliver immunisation through school-based programs, which would be assumed the most efficient way to achieve high uptake. These supply, allocation and delivery issues need to be resolved before more realistic scenarios can be implemented in the model.

The impact achieved by expanding age eligibility was a reduction in TP of 0 or 0.1 across all allocation strategies and coverage thresholds. **Based on these minimal impacts, it is anticipated that inclusion of 12-15 year olds in the vaccine roll out as an early priority group would not materially change the expected overall health outcomes at each key vaccination threshold**. For a given level of vaccination, the total number of Australians who experience severe illness from COVID-19 will be similar regardless of whether the vaccination rate has been achieved across the 12+ or 16+ population.

Table 3.2: Scaled values of Delta variant transmission potential (TP) showing the *overall impact (difference in brackets)* on TP of additionally immunising school children aged 12-15 years, for 50%, 60%, 70% and 80% population coverage achieved under the three age-based allocation strategies. Standard age (60+) and dosing interval (12 weeks) recommendations are assumed for the AZ vaccine. Comparators for each strategy are the top rows of each of Tables 2.1, 2.2 and 2.3.

Strategy	Eligible population coverage (16+)			
	50%	60%	70%	80%
Oldest first	2 (-0.1)	1.7 (0)	1.4 (-0.1)	1.2 (-0.1)
40+ years first	2.1 (0)	1.9 (0)	1.6 (0)	1.3 (0)
All adults	1.9 (-0.1)	1.7 (0)	1.4 (-0.1)	1.2 (-0.1)

Impact of public health response and bundled social measures on TP

The ability to reduce TP to less than 1 is needed both to contain community transmission in the current suppression phase (A) and to prevent cases from exceeding health sector capacity in phase B. Personal risk reduction behaviours and constraints on social mixing known as Public Health and Social Measures (PHSM) are the levers currently employed to manage TP in response to incursions and outbreaks. Over time, behaviours change, either spontaneously because of heightened concern or complacency, or in response to public health orders invoking various elements of PHSMs.

We therefore investigated what level of PHSM would be required to bring TP below 1 under different scenarios of vaccination coverage. We considered four 'bundles' of PHSM restrictions: baseline, low, medium and high. Each bundle relates to a specific time and place in Australia's pandemic experience, thereby capturing both real-world behavioural responses and the proportional reduction in TP achievable by PHSMs in our context:

- Baseline PHSM - only minimal density/capacity restrictions, as in NSW March 2021 (baseline TP as used above)
- Low PHSM - more stringent capacity restrictions, as in NSW 23 August 2020
- Medium PHSM - stringent capacity restrictions, group size limits, stay-at-home orders (except work, study, essential purposes), as in NSW 1 July 2021
- High PHSM - no household visitors, curfew, stay-at-home orders (except essential purposes & permitted work), as in VIC 23 August 2020

As in the TP estimates above, each of these PHSM bundles includes a Test, Trace, Isolate, and Quarantine (TTIQ) capability. We assume that once community transmission becomes established leading to high caseloads, TTIQ is less efficacious than the optimal levels observed in Australia because public health response capacity is finite. We calibrate this partial TTIQ effect to its impact on TP as at Australia's daily peak of local cases in VIC 4 August 2020. By comparing optimally and partially effective responses, we assess the contribution of TTIQ to the overall level of achievable constraint on transmission.

Figures 1.1 and 1.2 illustrate that as vaccination coverage increases, less stringent PHSM will be required to bring TP below 1. Maintaining a rapid and highly effective TTIQ response capacity is critical for ongoing epidemic control. Should TTIQ responses become only partially effective due to high caseloads, high PHSM would be needed to curb transmission at the 50% and 60% coverage thresholds, whilst low PHSM *may* be sufficient for control at 80% coverage (Figure 1.1). More optimistically, the combination of 70% vaccine coverage and ongoing low PHSMs would likely be sufficient for control, *if optimal TTIQ can be maintained* (Figure 1.2). Note that compliance with imposed measures will vary their effectiveness between populations and timepoints. This uncertainty is conceptually represented by the upper and lower bounds of each 'box' for each set of restrictions in the Figures.

When interpreting the combined impacts of these measures it is important to reflect that:

- Weekly situational assessments provided to AHPPC reveal substantial variation in TP over time by jurisdiction in the absence of active cases affecting the 'starting TP' upon which measures act;
- The proportional reduction in TP achieved by imposition of public health orders differs nationally and within a given jurisdiction over time and at small area level, reflecting variable population co-operation with PHSMs that affect the degree of achievable ongoing or reactive suppression;
- TTIQ response capacity varies markedly by jurisdiction, based on the size of the public health workforce and related laboratory capacity, both of which are critical to rapid case identification for the purposes of case isolation and contact tracing.

Because of these differences, a precautionary approach is advised when defining a 'national' vaccine coverage threshold that would be applicable across small and large jurisdictions.

Figure 1.1: Combined effects of vaccination and PHSM scenarios on COVID-19 transmission potential under the 'All adults' vaccination scenario assuming only *partial TTIQ effectiveness*, due to high caseloads. Standard age (60+) and dosing interval (12 weeks) recommendations are assumed for the AZ vaccine.

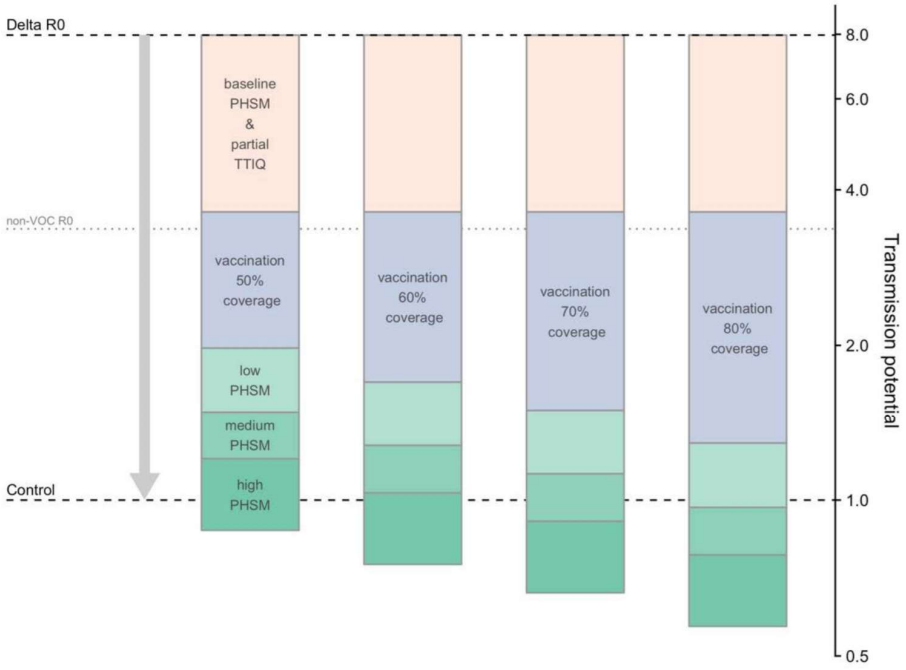
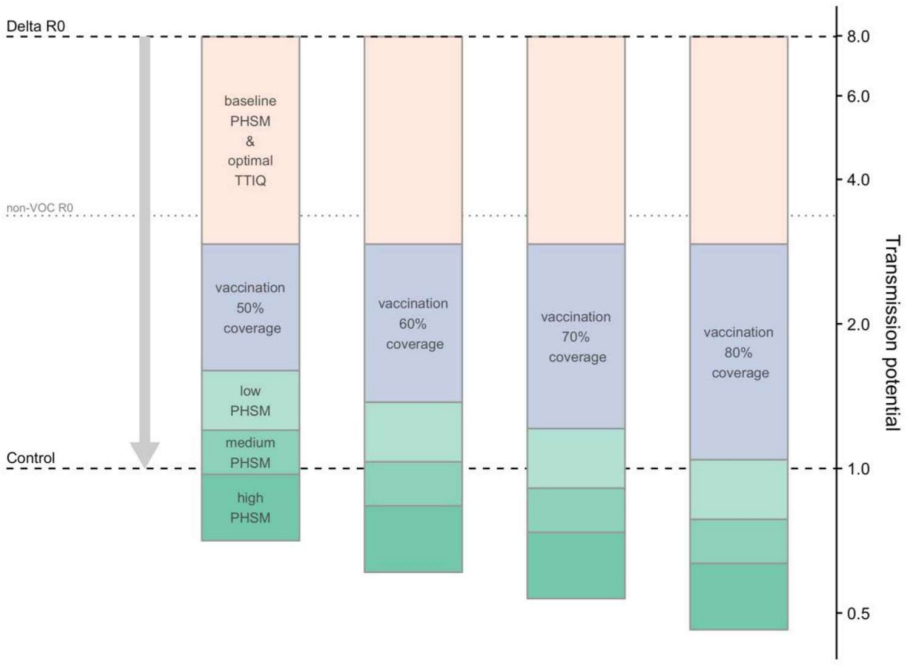


Figure 1.2: As for Figure 1.1 but assuming *optimal TTIQ effectiveness*



Anticipated requirements for social measures, by coverage scenario

During outbreak suppression (phase A) early stringent lockdowns are temporarily used to bring TP below 1 for the purposes of driving local cases from an outbreak to zero, in the context of an optimal TTIQ response. During phase B, stringent PHSM might need to be used *intermittently* to reduce caseloads to prevent overwhelming the health sector. Ongoing application of some degree of social measures through this phase reduces the likelihood for high restrictions and preserves TTIQ effectiveness by keeping case numbers low.

TP estimates with and without stringent PHSM can be used to calculate the approximate proportion of time those stringent measures would need to be in place to prevent exceedance of health sector capacity over a hypothetical long-term. This static analysis can indicate the plausible societal and economic impacts of the PHSM required to constrain transmission under each scenario and coverage over the long-term. The next section considers epidemic dynamics and clinical consequences of infections for 'baseline' social measures and partially effective TTIQ (assumed if caseloads escalate).

Tables 4.1 and 4.2 compare the proportion of time that would need to be spent with high PHSM on top of ongoing light restrictions to maintain case counts at some level, by vaccine coverage and allocation strategy. We assume periodic switching between low PHSM and high PHSM over a long period with the same vaccination coverage. With long-term coverage held at 50%, 60%, or 70%, high PHSM would be needed for significant fractions of time (18-89%) if caseloads escalate, leading to 'partial' TTIQ effectiveness. For the 'optimal' TTIQ scenario and an achieved adult population coverage of 70%, high PHSM would be needed rarely if at all.

Table 4.1: Percentage of time high PHSM would need to be in place for long-term control, with reversion to low PHSM at other times, for 50%, 60%, 70% and 80% population coverage achieved under the three age-based allocation strategies. These scenarios assume *partial* TTIQ effectiveness, under high caseloads. Standard age (60+) and dosing interval (12 weeks) recommendations are assumed for AZ vaccine.

Strategy	Eligible population coverage (16+)			
	50%	60%	70%	80%
Oldest first	82%	49%	18%	0%
Middle years first	89%	67%	39%	2%
All adults	75%	46%	22%	0%

Table 4.2: As for Table 4.1 but assuming *optimal* TTIQ effectiveness, given low caseloads

Strategy	Eligible population coverage (16+)			
	50%	60%	70%	80%
Oldest first	42%	9%	0%	0%
Middle years first	49%	27%	0%	0%
All adults	35%	6%	0%	0%

More detailed breakdowns of the level of time likely required under differing degrees of social restrictions for the various coverage thresholds and allocation strategies are shown in Tables S4.2 and 4.3 (assuming partial/optimal TTIQ), and S4.4 and 4.5 (in context of ongoing 'light' restrictions).

Dynamics and consequences given timing of transition to Phase B

Epidemic simulations assume a population size of 24 million. Infection outputs reflect the range of results observed across 20-30 separate model runs for each scenario. We assume that a single outbreak involving 30 individuals initiates community transmission at the time of transition to Phase B, once target vaccine coverage is achieved. Each simulation is run for 180 days after this initiating date. As immunisation rollout is ongoing, achievement of future vaccine targets is indicated as relevant, in relation to evolving epidemics.

Early epidemic growth given established transmission, for key scenarios

Exemplar epidemic curves are shown for the different coverage levels and allocation assumptions in Figures 2.1-2.3 below to demonstrate the relative rate and extent of epidemic growth for each. Given rapidly escalating caseloads in such scenarios, we assume only 'partial' TTIQ effectiveness. In the first instance we report the total number of incident infections, agnostic to their severity and including asymptomatic individuals. Note that these exemplar scenarios assume a starting transmission potential of 3.6, consistent with estimated levels of distancing behaviour in NSW during March 2021 (see Table 1.1). The speed and extent of epidemic growth would be greater for jurisdictions with higher transmission potential and/or if further relaxation of distancing behaviour occurred.

Figure 2.1: Epidemic growth to 180 days given transition to Phase B leading to established community transmission for the threshold coverage targets of 50, 60, 70 and 80%, with vaccine allocation according to the 'Oldest first' strategy (*note different y axes)

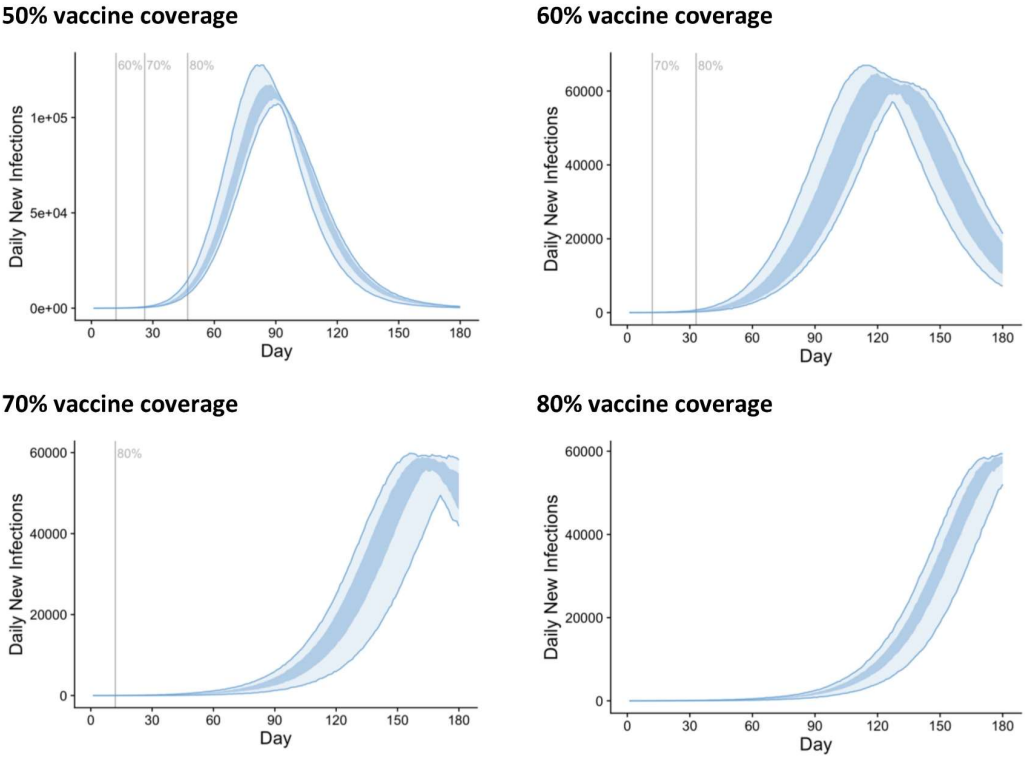
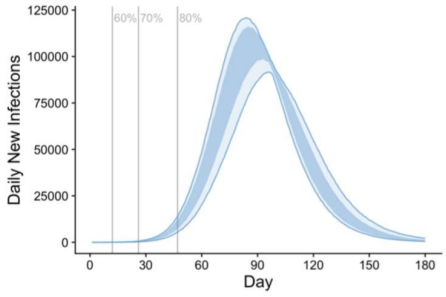
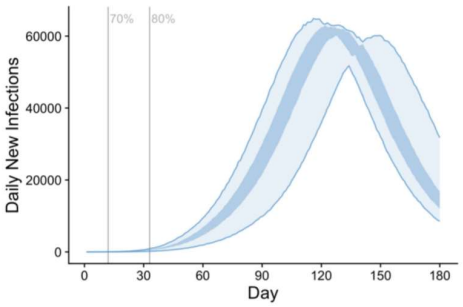


Figure 2.2: As for Figure 2.1 but for the '40+ years first' strategy (*note different y axes)

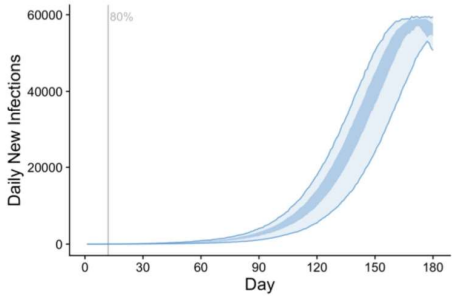
50% vaccine coverage



60% vaccine coverage



70% vaccine coverage



80% vaccine coverage

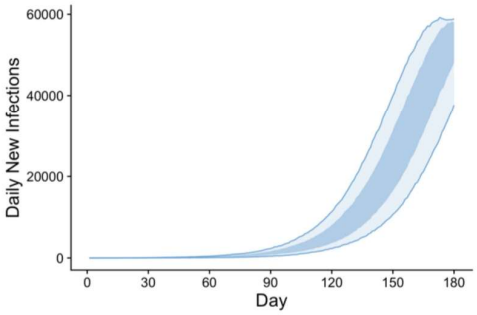
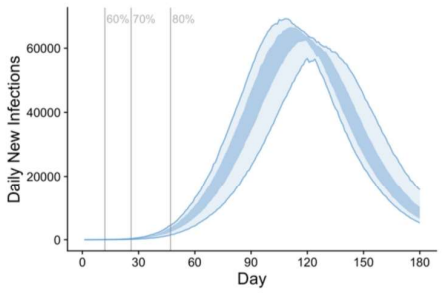
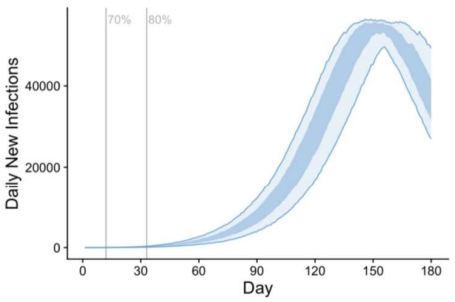


Figure 2.3: As for Figure 2.1 but for the 'All adults' strategy (*note different y axes)

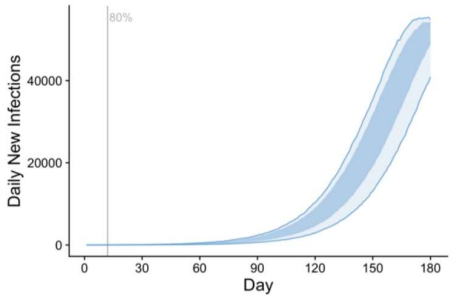
50% vaccine coverage



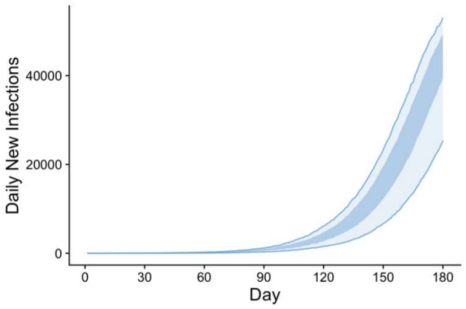
60% vaccine coverage



70% vaccine coverage

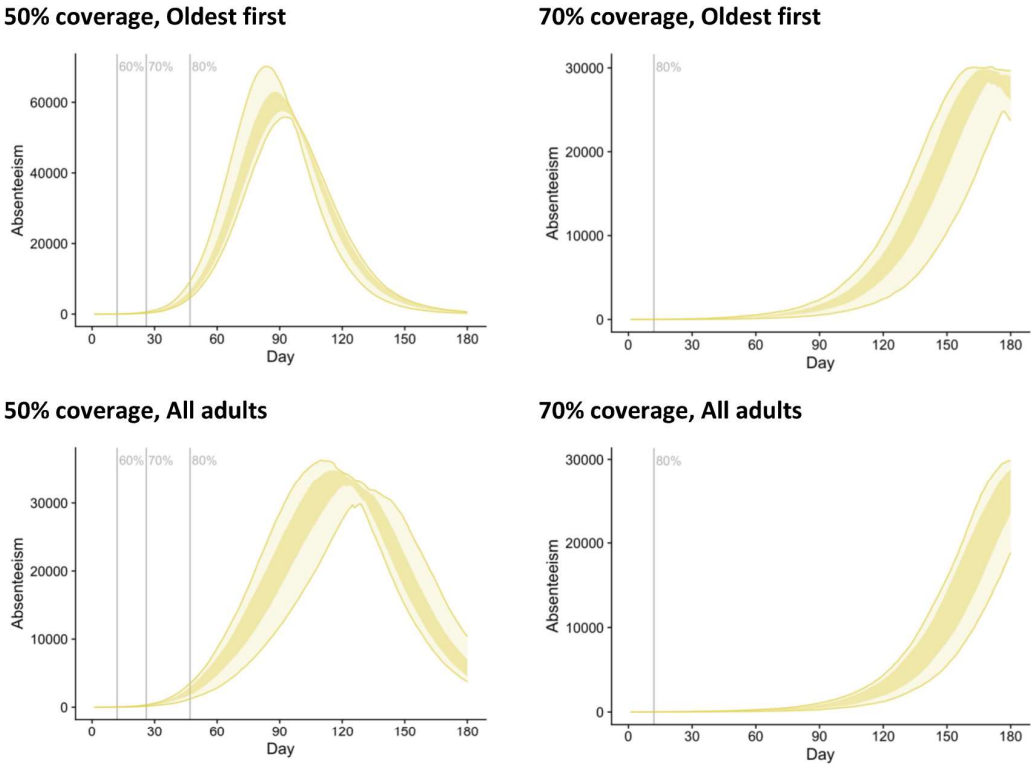


80% vaccine coverage



Figures 2.1-2.3 demonstrate marked differences in early epidemic dynamics with increasing vaccine coverage. Comparison of the y axis for the 50% coverage scenarios in Figures 2.1 and 2.3 shows the marked reduction in incident infections achieved by preferentially immunising younger age groups, for the same level of achieved population vaccine coverage. Figure 2.4 relates these infections to anticipated workforce absenteeism of symptomatic individuals identified as cases and isolated for the minimum period of 10 days, assuming that they would be fit to return to work thereafter (workforce participation rates based on Treasury statistics, by age – Table S5).

Figure 2.4: Prevalence of individuals absent from the workforce due to symptomatic infection and mandatory isolation (10 days) for the 50 and 70% coverage scenarios, assuming 'Oldest first' and 'All ages' allocation strategies (*note y axes differ)



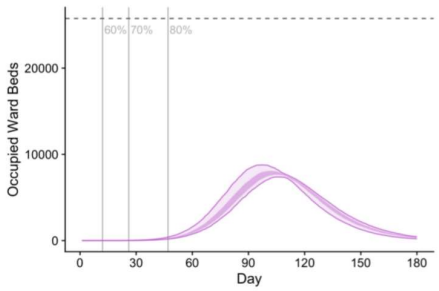
Associated health impacts of transmission, relative to health sector capacity

Outputs from the infection model provided inputs to the clinical pathways model. Each input is iterated over multiple runs so that the clinical pathways model is run 200 times for each scenario. Figures 3.1-3.3 report the range of corresponding health impacts across simulations for the epidemic growth scenarios shown above.Workforce absenteeism, occupied hospital beds, occupied ICU beds and deaths lag incident cases given time for progression of the clinical course towards more severe outcomes. Where relevant, these are related to estimated national clinical capacities (Table S6).

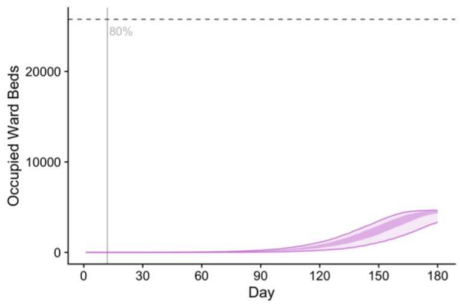
Note that even for high coverage, late epidemics are observed, with associated severe outcomes, reflecting the ability for circulation in unvaccinated population subgroups, which are likely to be concentrated within communities and geographical areas. Further improvements in vaccine uptake would be needed to prevent these outcomes.

Figure 3.1: Occupied hospital ward beds over the course of the epidemic, in relation to stated national capacity, which represents 50% of the total. Scenarios shown are for 50% achieved coverage at epidemic onset, with vaccines allocated to 'oldest first' or 'all adults'

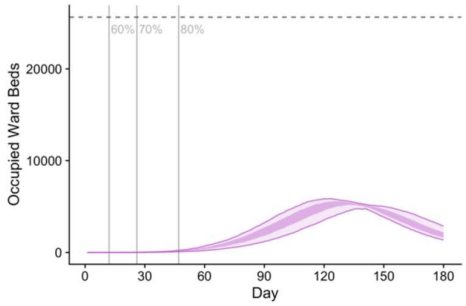
50% coverage, Oldest first



70% coverage, Oldest first



50% coverage, All adults



70% coverage, All adults

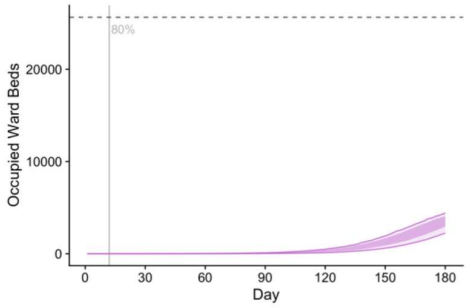
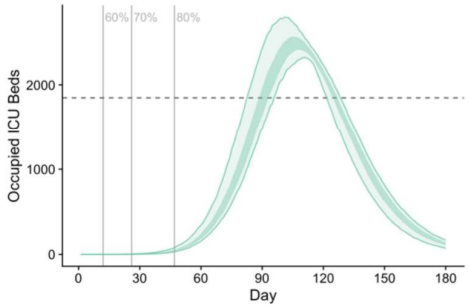
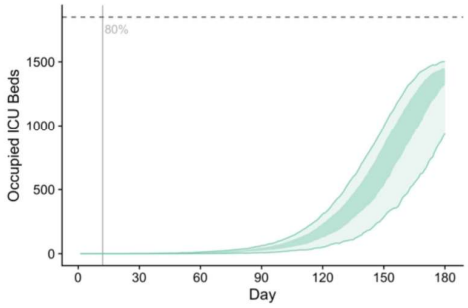


Figure 3.2: As for Figure 3.1 but for occupied ICU beds in relation to national capacity

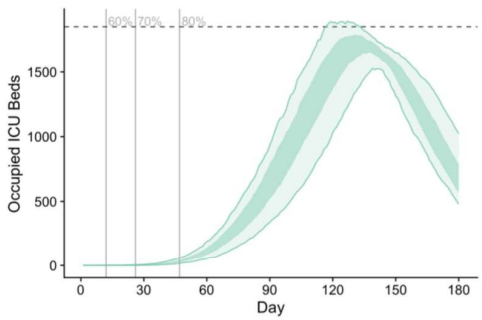
50% coverage, Oldest first



70% coverage, Oldest first



50% coverage, All adults



70% coverage, All adults

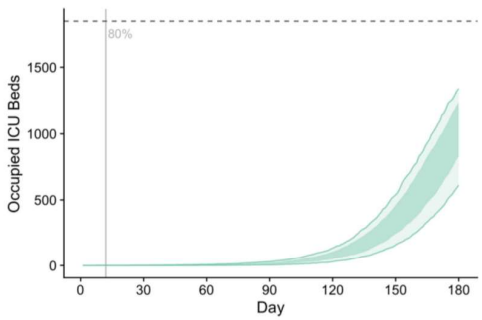
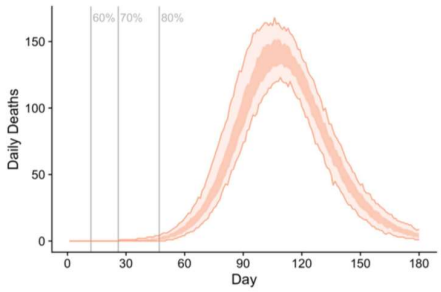
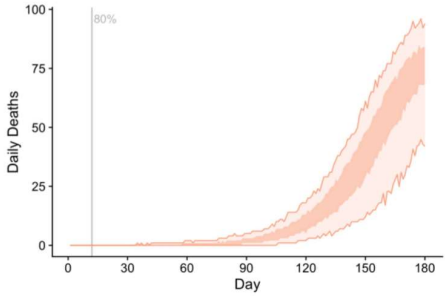


Figure 3.3: As for Figure 3.1 but reporting daily deaths (*note y axes differ)

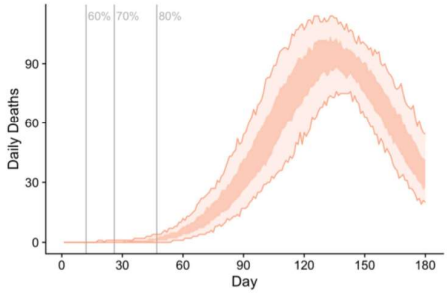
50% coverage, Oldest first



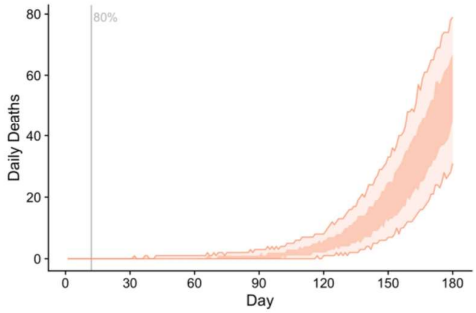
70% coverage, Oldest first



50% coverage, All adults



70% coverage, All adults



Health impacts by age group and vaccine status

Central estimates of these health impacts over the first 180 days following established community transmission are provided in the tables below, for ease of comparison across coverage thresholds, allocation strategies, vaccination status and age group. Note that given epidemic stochasticity and uncertainty, these estimates are drawn from a broader range of possible values as demonstrated by the Figures above. **All scenarios assume only baseline restrictions and 'partial' TTIQ effectiveness.**

Table 5.1 Cumulative outcomes of interest over the first 180 days by achieved coverage threshold prior to transmission, for the 'Oldest first' vaccine allocation strategy

	Vaccine Coverage			
	50%	**60%**	**70%**	**80%**
Symptomatic infections	1,174,450	900,431	617,291	471,107
Ward admissions	48,002	36,113	22,379	16,130
ICU admissions*	11,465	8,523	5,002	3,494
Deaths	10,311	7,276	3,563	2,309

**ICU admissions are reported here and below assuming unconstrained capacity, even when national thresholds are anticipated to be reached or exceeded, so reflect 'true' requirements*

Table 5.2 As for Table 5.1, for the 'All adults' allocation strategy

	Vaccine Coverage			
	50%	**60%**	**70%**	**80%**
Symptomatic infections	964,153	737,971	393,515	279,001
Ward admissions	42,567	29,960	14,130	9,669
ICU admissions	10,302	6,947	3,084	2,075
Deaths	8,894	5,294	1,984	1,281

Table 5.3: Cumulative symptomatic infections, ward admissions, ICU admissions and deaths over the first 180 days for coverage thresholds of 50%, 60%, 70% and 80% achieved by the 'Oldest first' and 'All adults' strategies, broken down by vaccination status[#]

	Oldest First		**All Adults**	
Achieved eligible population coverage	**Vaccinated**	**Unvaccinated**	**Vaccinated**	**Unvaccinated**
50%				
Symptomatic infections	222,193	952,257	171,467	792,686
Ward admissions	15,575	32,427	13,092	29,475
ICU admissions	4,082	7,384	3,446	6,856
Deaths	3,765	6,546	3,089	5,805
60%				
Symptomatic infections	148,992	751,440	120,173	617,798
Ward admissions	11,449	24,665	9,115	20,845
ICU admissions	2,978	5,545	2,313	4,634
Deaths	2,633	4,643	1,851	3,443

Table 5.3 (cont)

	Oldest First		All Adults	
Achieved eligible population coverage	**Vaccinated**	**Unvaccinated**	**Vaccinated**	**Unvaccinated**
70%				
Symptomatic infections	93,398	523,893	58,165	335,350
Ward admissions	6,870	15,509	4,144	9,986
ICU admissions	1,693	3,309	993	2,091
Deaths	1,278	2,285	685	1,298
80%				
Symptomatic infections	67,946	403,162	40,010	238,991
Ward admissions	4,860	11,270	2,817	6,852
ICU admissions	1,163	2,331	666	1,409
Deaths	819	1,490	439	842

 # Note that in the case of emergence of a 'vaccine escape' variant, both the total number of infections and the proportion of severe cases occurring in fully immunised individuals would increase dramatically.

As can be seen from Tables 5.4 and 5.5, the enhanced indirect protection achieved by the 'All adults' strategy results in a substantial reduction in symptomatic infections and severe outcomes across all age groups, including unvaccinated children.

Table 5.4: Cumulative symptomatic infections, ward admissions, ICU admissions and deaths over the first 180 days for the coverage threshold of 70% achieved by the 'Oldest first' strategy, broken down by vaccination status and age

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	**Unvac**	**Vacc'd**	**Unvac**	**Vacc'd**	**Unvac**	**Vacc'd**	**Unvac**	**Vacc'd**	**Unvac**
Denominator population*	0	5,075,816	3,539,772	4,989,859	5,859,393	3,196,468	5,199,031	468,491	2,835,618	125,031
Symptomatic infections	0	355,505	34,390	103,350	33,166	54,710	20,283	8,626	5,559	1,703
Ward admissions	0	3,305	738	3,167	1,933	4,956	2,919	3,039	1,280	1,043
ICU admissions	0	286	133	563	581	1,474	748	808	231	178
Deaths	0	86	21	141	160	608	703	992	394	459

**Note that 'denominator population' refers to numbers of persons at the time the 70% threshold coverage is achieved – vaccination continues during the simulations to the 80% coverage threshold values*

Table 5.5: As for table 5.4, for the 'All adults' allocation strategy

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac
Denominator population*	0	5,075,816	5,062,890	3,466,741	4,606,867	3,354,501	4,887,948	779,933	2,613,873	346,776
Symptomatic infections	0	227,251	19,890	62,845	22,440	38,565	12,462	5,586	3,374	1,103
Ward admissions	0	1,993	468	2,099	1,202	3,343	1,726	1,897	748	654
ICU admissions	0	168	82	367	349	961	431	487	131	108
Deaths	0	45	13	84	92	361	373	552	207	257

**Note that 'denominator population' refers to numbers of persons at the time the 70% threshold coverage is achieved – vaccination continues during the simulations to the 80% coverage threshold values*

Table 5.6 Cumulative symptomatic infections, ward admissions, ICU admissions and deaths over the first 180 days for the coverage threshold of 80% achieved by the 'Oldest first' strategy, broken down by vaccination status and age

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac
Denominator population	0	5,075,816	5,709,467	2,820,164	5,862,689	3,193,172	5,320,048	347,833	2,837,516	123,133
Symptomatic infections	0	276,576	25,005	77,813	24,135	41,190	14,705	6,324	4,051	1,260
Ward admissions	0	2,420	523	2,327	1,362	3,601	2,066	2,170	910	752
ICU admissions	0	206	92	404	399	1,036	513	561	160	124
Deaths	0	57	13	92	101	396	451	644	254	302

Table 5.7: As for table 5.6, for the 'All adults' allocation strategy

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac
Denominator population	0	5,075,816	6,387,623	2,142,008	5,295,963	3,265,813	5,180,499	487,382	2,743,990	216,659
Symptomatic infections	0	163,282	13,695	44,046	15,467	27,074	8,523	3,833	2,326	757
Ward admissions	0	1,379	318	1,453	819	2,295	1,171	1,285	509	440
ICU admissions	0	113	55	252	235	648	288	325	88	71
Deaths	0	29	8	54	59	232	239	357	133	168

Ongoing work and next steps

Next steps are still under discussion but may include some or all of the following:

- Further exploration of dynamic scenarios showing the interplay between epidemic growth for different levels of achieved vaccine coverage, overlaid with social measures to limit transmission;
- Further reporting of outcomes for 'vaccine escape' variants;
- Extension of this work to state and territory level, focusing on key subpopulations including First Nations Australians and also more realistic delivery allocations given workforce constraints;
- Potential to consider reactive outbreak immunisation approaches, including in closed and special population settings;
- Potential to consider future allocation strategies including booster doses.

TECHNICAL APPENDIX

Virus assumptions

Given recent emergence of Delta variants, there is presently very limited evidence of their severity relevant to antecedent strains. While early reports from Scotland and Canada suggest clinical outcomes might be worse than for Alpha variants, it is important to note that infections in these settings are skewed towards unvaccinated population groups in whom other risk determinants may also differ, potentially confounding and inflating early estimates of severity.

On this basis we will assume that the severity of Delta strains approximates Alpha strains. Again, given the limited evidence of clinical outcomes for Alpha relative to the much more extensive literature on original 'wild-type' strains we draw our starting assumptions regarding disease progression from wild-type. We then apply age-based risk multipliers as indicated based on observations of the Alpha variant.

Table S1. Disease severity assumptions

Parameter	Description	Source		Value(s)
Wildtype severity parameters				
Pr(symptoms|wt)	Probability of symptomatic disease given wildtype infection	Davies et al. Nature Medicine (2020) [1] Clinical fractions estimated for 10-year age groups.	Age group	Symptomatic fraction
			0-9	0.28
			10-19	0.20
			20-29	0.26
			30-39	0.33
			40-49	0.40
			50-59	0.49
			60-69	0.63
			70+	0.69
Pr(hosp| symptoms)	Probability of hospital admission given symptomatic wildtype infection	Knock et al. Pre-print [2]. Prepared for UK roadmap modelling by Imperial group. UK data first wave.		Age-specific. See Tables S6 and S8 of Knock et al.
Pr(ICU|hosp)	Probability of ICU admission given hospital admission	Same as above.		Same as above.
Pr(death|ward)	Probability of death for ward patients (no ICU stay)	Same as above.		Same as above.

Pr(death|ICU)	Probability of death for ICU patients	Same as above.	Same as above.
Pr(death|post-ICU ward)	Probability of death for post-ICU patients	Same as above.	Same as above.
Alpha severity parameters			
Pr(symptoms|alpha)	Probability of symptomatic disease given Alpha infection	A number of studies using UK data suggest that the probability of reporting symptoms is consistent for wildtype and Alpha Walker et al. Pre-print [3]. Graham et al. Lancet Public Health (2021) [4].	RR=1
Pr(hosp|alpha)	Probability of hospitalisation given Alpha infection	Bager et al. Lancet Infect Dis (2021) [5]. Denmark data.	OR=1.42
Pr(ICU|alpha)	Probability of ICU admission given Alpha infection	Patone et al. Pre-print [6]. UK data.	HR=1.99
Pr(death|alpha)	Probability of death given Alpha infection	Davies et al. Nature (2021) [7]. UK data.	HR=1.61

Vaccine effectiveness assumptions

1. ATAGI advice on parameters to be used in the modelling

Table S2.1. Vaccine effectiveness estimates (%) against overall (asymptomatic and symptomatic) infection of SARS-CoV-2 Delta variant (based on Shiek et al 2021 [8])

Vaccine	Dose 1*			Dose 2†		
	Lower limit	**Point estimate**	Upper limit	Lower limit	**Point estimate**	Upper limit
AstraZeneca	9	**18**	25	53	**60**	66
Pfizer BNT	17	**30**	41	75	**79**	82

*estimates in study for ≥28days post dose 1 and pre dose 2
†estimates in study for ≥14days post dose 2

Table S2.2. Vaccine effectiveness estimates (%) reasonable to use as against onward transmission to household members in case of breakthrough infections in vaccine recipients for the Delta variant (Based on Harris et al 2021 [9])

Vaccine	Dose 1			Dose 2
	Lower limit	**Point estimate**	Upper limit	**Point estimate**
AstraZeneca	38	**48**	57	**65**
Pfizer BNT	38	**46**	53	**65**

Note: these estimates obtained from the published version of Harris et al study are marginally different to those in the May 2021 advice which were from the pre-print that was available at the time

Table S2.3. Combined vaccine effectiveness assumptions on transmission for the Delta variant

Vaccine	Reduction in infection *(E_i)*	Reduction in onward transmission *(E_t)*	Calculated overall reduction in transmission*
AstraZeneca Dose 1	18%	48%	57%
AstraZeneca Dose 2	60%	65%	86%
Pfizer BNT Dose 1	30%	46%	62%
Pfizer BNT Dose 2	79%	65%	93%

**Calculated overall reduction in transmission = $1-(1-E_i)*(1-E_t)$*

Table S2.4. Combined vaccine effectiveness assumptions on transmission for a hypothetical vaccine escape variant with 50% reduction in both E_i and E_t

Vaccine	Reduction in infection *(E_i)*	Reduction in onward transmission *(E_t)*	Calculated overall reduction in transmission*
AstraZeneca Dose 1	9%	24%	31%
AstraZeneca Dose 2	30%	33%	53%
Pfizer BNT Dose 1	15%	23%	35%
Pfizer BNT Dose 2	40%	33%	59%

Table S2.5. Vaccine effectiveness estimates (% reduction) against symptomatic disease, hospitalisation, ICU admission and death for the Delta variant.

Outcome	Vaccine effectiveness			
	Pfizer BNT		AstraZeneca	
	1 dose	2 doses	1 dose	2 doses
Symptomatic infection[a]	33%	83%	33%	61%
Hospitalisation[b]	71%	87%	69%	86%
ICU admission[c]	71%	87%	69%	86%
Mortality[b]	71%	92%	69%	90%

[a] Sheik et al [8]. Study cited in ATAGI advice informing VE against any infection. Estimates of VE against symptomatic infection from the Appendix table.

[b] LSHTM central estimates used for UK roadmap modelling on 9 June 2021 for Alpha [10]. Estimates are based on a range of studies and in line with Public Health England's COVID-19 vaccine surveillance report for pre-Alpha and Alpha (week 22) [11] except for mortality (informed by Dagan et al [12] and Lopez Bernal et al [13]). For Delta, VE for hospitalisation and mortality is reduced by half of the relative reductions by dose and product as estimated by Lopez Bernal et al. See LSHTM roadmap report from 9 June for details.

[c] Few studies report VE against ICU admission. ATAGI Appendix table refers to single study conducted in India (Victor et al [14]) which reports 95% and 94% reductions in ICU admission after dose 1 and dose 2 of AstraZeneca, respectively. The findings from this study are unlikely to be directly transferable to the Australian setting due to health system differences. As per previous work, we assume the same reductions in ICU admission given vaccination as for hospitalisation.

2. Model parameters incorporated in UK roadmap modelling

Table S2.6. Central scenarios used by UK SPI-M-O modelling groups on 9 June for Delta [10]. Imperial/LSHTM/Warwick.

Vaccine	**% Reduction in infection**	**% Reduction in onward transmission**
1 dose		
AstraZeneca	33/43/34	33/24/45
Comirnaty	33/47/34	33/33/45
2 doses		
AstraZeneca	55/62/71	33/45/45
Comirnaty	85/80/73	33/56/45

Table S2.7. Central vaccine effectiveness scenarios used for UK SPI-M-O modelling groups on 9 June 2021 [10], incorporating evidence from Public Health England and Public Health Scotland on vaccine effectiveness against Delta. Imperial/LSHTM/Warwick.

Outcome	Vaccine effectiveness (% reduction)			
	Pfizer BNT		AstraZeneca	
	1 dose	2 doses	1 dose	2 doses
Symptomatic disease	33/47/34	85/84/83	33/43/34	55/71/82
Hospitalisation	73/71/64	89/87/91	73/69/64	85/86/90
Mortality	73/71/60	89/92/96	73/69/60	85/90/96

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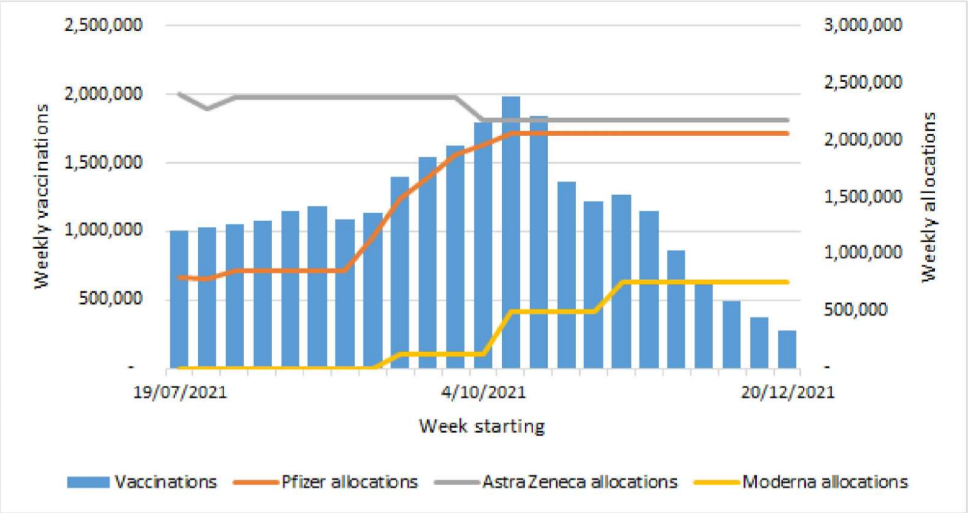
Vaccine allocation scenarios

Scenario vaccination rates are determined using an agent-based simulation model utilising location and allocation data on vaccination sites and location data for the Australian population. Each week, a subset of the population seeks vaccination at available sites within their respective area. Sites receive deliveries of vaccines and administer vaccinations to the seeking population up to their level of stock.

Site allocations to Primary Care channels and State and Territory channels are based on planned allocations approved by the Health Minister as of 15 July 2021, weighted by assumptions about maximum capacities and geographical coverage provided by the National COVID Vaccine Taskforce Planning Team. Figure S1 shows total weekly allocations by vaccine.

Figure S1: Weekly allocations and modelled vaccinations for oldest first, AZ 12 weeks dose interval and AZ 60+ years strategy.



Note: Weekly vaccination rates taper towards the end of the rollout due to potential allocation constraints by geography, which means some areas reach completion before others. Further, modelled vaccination rates in an area may taper before completion because not all individuals seek a vaccination every week.

Locations for known existing and known planned Primary Care sites are provided by the Department of Health Primary Care Response Team. Sites are assumed to order and have the capacity to fulfil 78% of their planned allocations based on recent calculated vaccine utilisation rates by vaccination sites, as of 15 July 2021. Sites are also assumed to prioritise second doses over first doses, and any unused doses are assumed to be able to be used for future weeks.

Australian population is based on 2016 ABS Census data, scaled to 2021 Estimated Resident Populations (ERPs). Individuals are assumed to be willing to drive up to 30, 60 or 120 minutes to sites depending on their remoteness. Individuals are also assumed to seek vaccination once every 4 weeks on average, with each seeking individual assumed to be willing to try up to 5 sites to receive vaccination. The vaccinations are modelled from a starting point of existing administrations up to and including 11 July 2021, with coverage of at least 1 or 2 vaccine doses at 33.2% and 11.4% respectively based on AIR data as of 15 July 2021 (Table S3). Note that dose 1 coverage includes individuals who go on to receive dose 2.

Table S3.1: Distribution of vaccination coverage within each age band up to and including 11 July 2021 based on Australian Immunisation Register (AIR) data as of 15 July 2021.

Age band	Pfizer dose 1	Pfizer dose 2	Astra Zeneca dose 1	Astra Zeneca dose 2	Total dose 1	Total dose 2
16-19	2.9%	1.6%	0.9%	0.5%	3.8%	2.1%
20-29	8.5%	6.0%	2.1%	1.5%	10.6%	7.5%
30-39	11.4%	8.1%	2.6%	1.8%	13.9%	9.9%
40-49	26.4%	20.2%	3.5%	2.4%	29.9%	22.6%
50-59	12.2%	7.3%	29.5%	5.0%	41.8%	12.3%
60-69	5.2%	4.2%	53.0%	8.0%	58.2%	12.2%
70-79	4.5%	3.0%	72.5%	27.2%	77.0%	30.2%
80+	16.2%	11.8%	65.3%	22.0%	81.5%	33.8%
Total	**11.4%**	**6.7%**	**21.8%**	**4.8%**	**33.2%**	**11.4%**

Figures represent vaccinations as a percentage of total eligible population (age 16+).

Scenario parameters are implemented in the model as follows:

- Vaccine age prioritisation: Age prioritisation occurs independently within each local region (mixture of non-overlapping ABS Mesh Blocks, Statistical Area Level 1 and Statistical Area Level 2). Individuals within the same region are vaccinated in the order of the respective prioritisation strategy. For example, under the 'oldest first' strategy, each region will vaccinate their 80+ age band first and can move on to their 70-79 age band as soon as they've completed their 80+ age band. This means vaccination timing for each age band differs for each region and is dependent on the region's age distribution. Note that timing is also dependent on the vaccination rate of each region (determined by nearby site allocations).
- Astra Zeneca dosing interval: Under the current dose interval of 12-weeks, individuals are only able to begin seeking their second dose 12-weeks after their first dose. Reducing the dosing interval to 8-weeks or 4-weeks allows individuals to seek their second dose earlier.
- Astra Zeneca age recommendation: Under the current age recommendation of 60+, we assume for simplicity half of the remaining 60+ population to be vaccinated will seek Astra Zeneca while the other half will seek Pfizer. Similar logic follows under a recommendation of 40+, resulting in an increased number of individuals seeking Astra Zeneca.

Under these implementation assumptions, the age distribution of achieved vaccine coverage varies by age cohort by achievement of the 80% coverage target (Table S3.2). Of particular note, the uptake for the 16-39 age bands is highest in the 'random' strategy (6.4m people) out of the three scenarios explored (5.7m people for either of the other two strategies).

**Note that these allocation scenarios are artificial by design, to demonstrate the impacts of alternative immunisation approaches. Further modelling is required to map observed benefits to deliverable allocation strategies given the current stage of the national COVID-19 vaccine rollout.*

Table S3.2: Distribution of vaccination coverage by age band by achievement of the 70% vaccination coverage threshold (1st November) for standard AZ dosing indications (60+, 12 week interval between doses) and the three age-based allocation strategies.

		Proportion of age band eligible pop fully vaccinated		
Age band	Eligible pop	Oldest first	40+ years first	All adults
16-19	1190616	4.2%	86.1%	57.1%
20-29	3577491	18.9%	52.6%	58.8%
30-39	3761524	74.8%	16.6%	60.6%
40-49	3295699	90.4%	90.6%	69.0%
50-59	3127124	92.1%	92.0%	74.6%
60-69	2707232	87.3%	93.8%	84.0%
70-79	1897838	96.1%	93.3%	89.4%
80+	1062811	95.2%	83.0%	86.3%

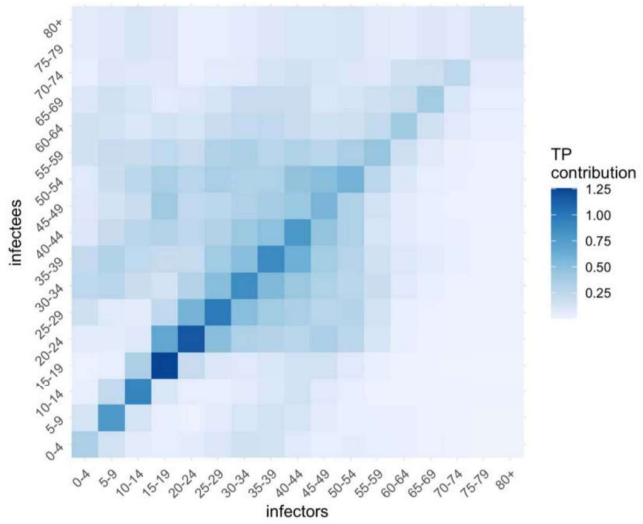
Table S3.3: Distribution of vaccination coverage by age band by achievement of the 80% vaccination coverage threshold (22nd November) for standard AZ dosing indications (60+, 12 week interval between doses) and the three age-based allocation strategies.

		Proportion of age band eligible pop fully vaccinated		
Age band	Eligible pop	Oldest first	40+ years first	All adults
16-19	1190616	8.6%	86.9%	73.5%
20-29	3577491	64.1%	87.1%	74.6%
30-39	3761524	88.1%	41.4%	75.6%
40-49	3295699	90.5%	90.6%	80.8%
50-59	3127124	92.1%	92.0%	84.2%
60-69	2707232	91.7%	94.2%	90.0%
70-79	1897838	96.2%	95.9%	93.4%
80+	1062811	95.2%	89.2%	91.4%

Population mixing assumptions

Population mixing within and between age groups is configured based on widely accepted social contact matrices published by Prem et al (PLoS Computational Biology 2017)(Figure S2.1). It has been expanded to include an 80+ age class (assumed to have the same mixing rates as 75-79 years). Age-specific susceptibility and transmissibility estimates from Davies et al. (Nature Medicine 2020) are used and transmission rates have been calibrated to our baseline population-wide TP (here denoted R) of 3.6. Of note, the greatest mixing intensities are anticipated between individuals aged from 15-24 years, remaining high through adults of working age. While intense school-based mixing is anticipated between children aged 5-14, the transmission matrix accounts for the relatively low observed infectiousness of this age group, associated with a high proportion of asymptomatic infections.

Figure S2.1: Age-based transmission matrix derived from Prem et al (2017)



The key message of Figure S2.1 is that in the absence of vaccination, individuals of different ages do not contribute equally to the spread of infection in the population.

The impact of vaccination on overall transmission will therefore be substantially influenced by the rate of vaccine uptake achieved **within distinct population age cohorts.** Table S3.2 shows the range of values for achieved coverage by age group underpinning 80% 'age eligible coverage' for our three hypothetical vaccine allocation strategies.

Figures S2.2-S2.5 provide a visual demonstration of the reduction in transmission achieved for each age band depending on the rollout scenario. Light grey bars show the contribution of each age group to transmission potential given different numbers of contacts and age differences in both susceptibility and infectiousness, in the absence of vaccination. Dark grey bars show the contribution of each age group to transmission potential for that vaccine allocation strategy and coverage. The 'all ages' strategy consistently produces the greatest proportional reductions in infectiousness across peak transmitting age groups.

Figure S2.2: Impact of the three different allocation strategies on TP by age category, resulting in the overall TP achieved by 50% age eligible population coverage

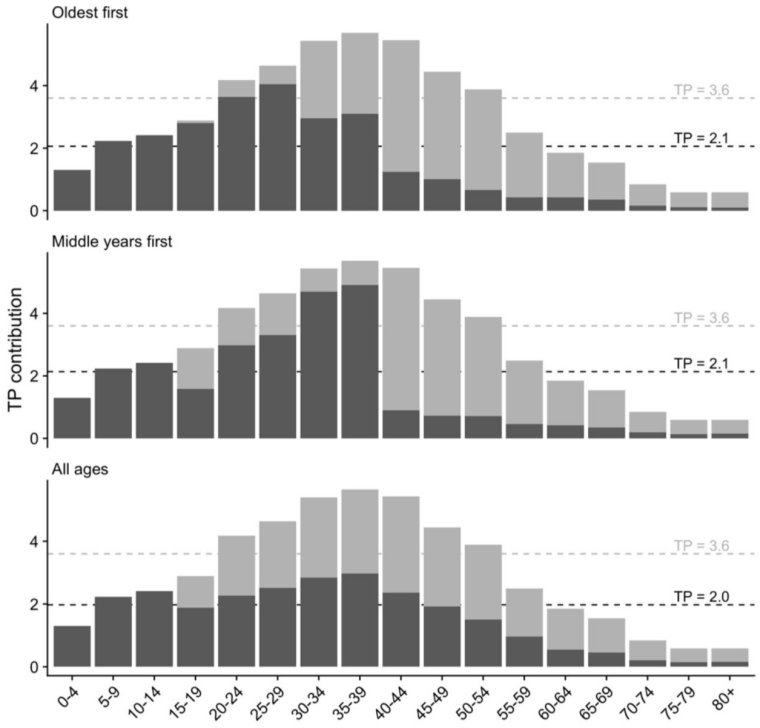


Figure S2.3: As for Figure S2.2, but for 60% age eligible population coverage

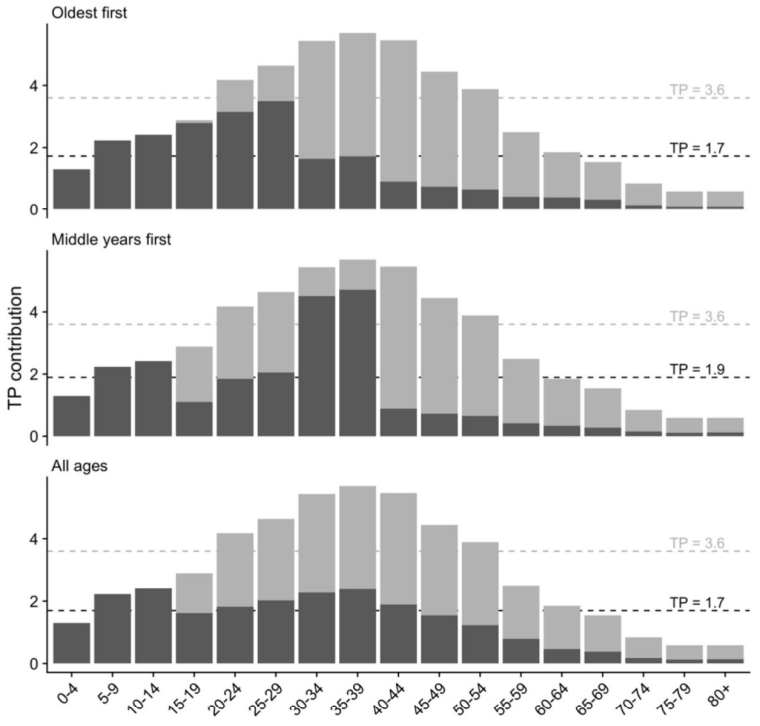


Figure S2.4: As for Figure S2.2, but for 70% age eligible population coverage

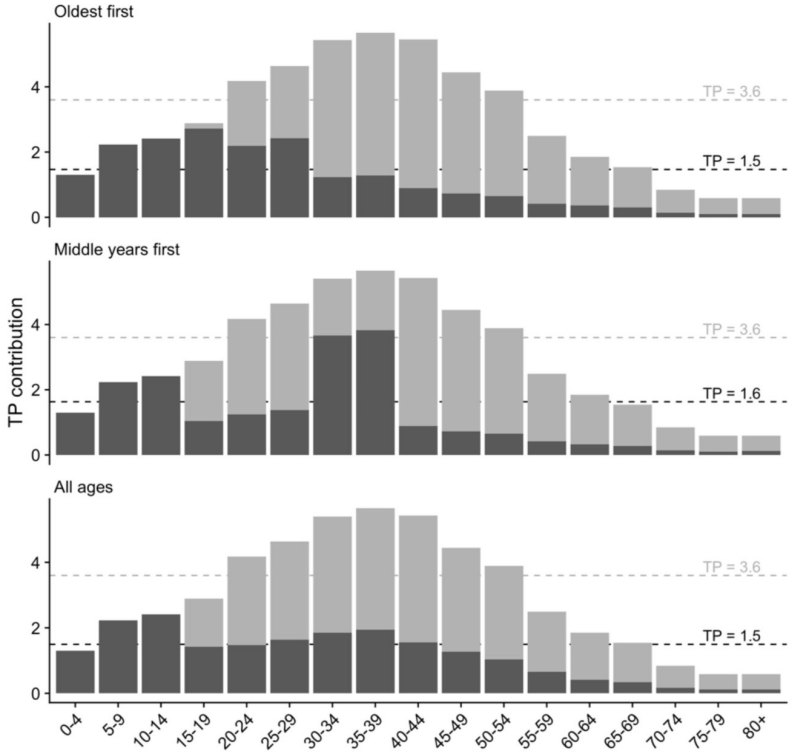
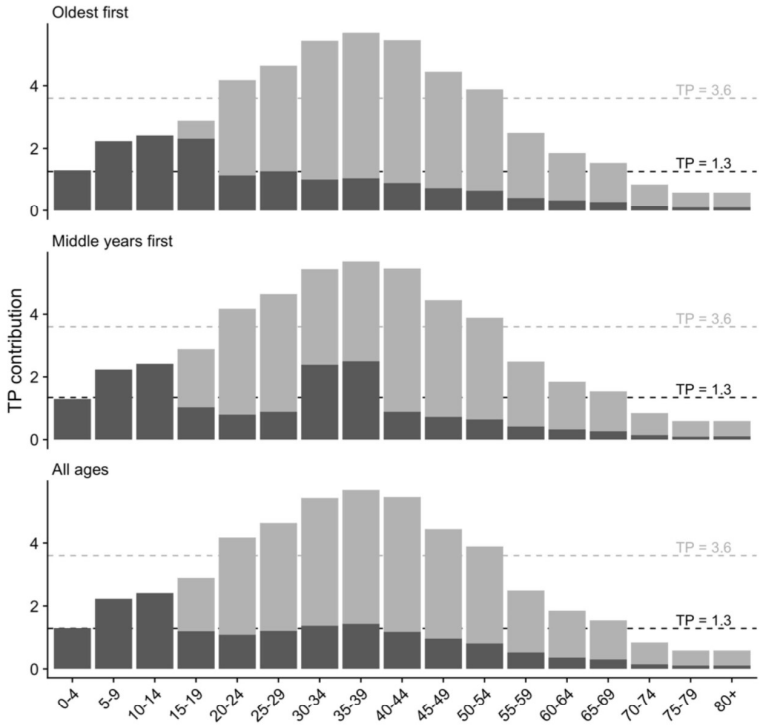


Figure S2.5: As for Figure S2.2, but for 80% age eligible population coverage



Impact of public health response and bundled social measures on TP

We estimated TP over time in each Australian state and territory using the same Bayesian semi-mechanistic model that has been used for situational awareness throughout the pandemic. This model incorporates data on case counts, mobility metrics, behavioural survey data, and delays between symptom onset and case detection to quantify the statewide averaged reproduction number that could be expected during widespread transmission. This model is described in technical detail elsewhere (https://www.doherty.edu.au/uploads/content_doc/Technical_Report_15_March_2021_RELEASED_VERSION.pdf). Subsequent to this description, the model has been updated to account for increased transmission probabilities associated with Delta (calculated via the same method as for previous variants of concern).

Impact of vaccination on TP

We estimated the percentage reduction in TP that could be expected under different vaccination coverages and distributions by age, vaccine type, and number of doses received via static analysis of the age-based transmission matrix shown in figure S2.1. For each vaccination scenario, the reduction in transmission by age group was calculated from the average vaccination efficacy against transmission (accounting for the fractions of each vaccine type and number of doses in that age group) and the age group coverage. The reductions in transmission were then applied to the columns of the transmission matrix, and the dominant eigenvalue (population-wide reproduction number) was compared between the vaccinated transmission matrix and the baseline matrix top compute a percentage reduction in TP.

PHSM bundles

PHSM bundles described in the main text represent periods when a variety of different restrictions were in place. Table S4.1 (provided by Treasury) lists restrictions corresponding to these periods. We emphasise that the TPs associated with these PHSM bundles reflect state wide population behaviours (numbers of household contacts and adherence to hygiene advice) estimated at these times, which differs substantially over time and between states, even within similar restrictions. These periods are therefore intended to reflect achievable levels of reduction in TP via PHSMs, rather than inference about the particular impacts of these sets of restrictions.

TTIQ assumptions

Recognising that the TTIQ public health response will be less effective at high caseloads, we adapted this model to include an explicit effect of reducing the time to case isolation that can be achieved through intensive contact tracing. This is in addition to the time to case detection effect already included. The empirical distribution of times to case isolation under recent, 'optimal' TTIQ capacity was estimated using a limited timeseries of case data from NSW between July 2020 and January 2021. This distribution was then calibrated to estimate the distribution of times to isolation in other times and states by assuming improvements in TTIQ are proportional to improvements in times to detection. This provided a distribution of times to case isolation under partially efficacious TTIQ (calibrated against VIC 4 August 2020 – the peak of daily locally-acquired COVID-19 cases in Australia) for use in the dynamic simulation model and estimates of the effect of partial TTIQ on transmission potential to estimate a baseline TP under community transmission.

Table S4.1: Description of measures implemented under PHSM 'bundles'

	High PHSM	Medium PHSM	Low PHSM	Baseline PHSM
Reference period	VIC 23 August 2020	NSW 1 July 2021	NSW 23 August 2020	NSW March 2021
Stay at home orders	• Stay-at-home except essential purposes	• Stay-at-home except for work, study and essential purposes	• No stay-at-home orders	• No stay-at-home orders
Density restrictions	• 4 sqm rule	• 2 sqm rule	• 2 sqm rule	• 2 sqm rule
Retail trade	• Non-essential retailers and venues closed to public. • Take away and home delivery only.	• Increased retail activity, subject to density restrictions • Seated dining for small groups at cafes/restaurants	• Social distancing rules apply • Larger groups allowed	• Social distancing rules apply •
Work	• Only workplaces categorised as permitted work allowed to operate on-site and subject to restrictions	• Work from home if possible, capacity limits and restrictions on office space apply	• Return to work, but social distancing and capacity restrictions on office space apply	• 1.5 sqm rule
Schools and childcare	• Closed – remote learning only	• Closed or graduated return	• Open	• Open
Capacity restrictions	• No gatherings - Non-essential venues etc closed.	• Indoor venues closed. • Capacity limits restricted to small groups outdoors	• Recreational activities allowed and venues open but social distancing and capacity limits apply	• Large sporting venues to operate at 70 per cent capacity
Travel restrictions	• Essential movements only within 5 or 10 km radius • No intra- or inter-state travel	• Non-essential travel limited – no intra or inter-state travel •	• No travel restrictions • Interstate travel allowed	• No travel restrictions • Interstate travel allowed
Other	• Curfew • No household visitors and 2-person limit on exercise	• 5 visitors to household and limited outdoor gatherings e.g., 10 people	• Requirements for record keeping, COVID-safe plans etc	•

Fraction of time under restrictions

Where a vaccination scenario leads to either a $TP_1 > 1$ with one PHSM bundle, or $TP_2 < 1$ with a more stringent bundle, the long-term average TP can be maintained at 1 (and therefore daily case counts neither growing nor shrinking over the long term) by alternating between the two PHSM bundle states. Whilst the first PHSM bundle is in place cases will grow, and whilst the more stringent bundle is in place cases will shrink, leading to an oscillation of case counts around some average level. This reflects a strategy that might be used to keep cases below a health sector capacity limit in the event that there is long-term community transmission and under the necessary simplifying assumption that vaccination coverage is static. The fraction can be computed as:

$$\text{fraction} = -\log(TP_1) / (\log(TP_2) - \log(TP_1))$$

where $TP_1 < 1$ the fraction is zero (TP_2 is not needed) and when $TP_2 > 1$ no fraction exists, because even the more stringent PHSM bundle could not control transmission.

Tables 4.2 and 4.3 demonstrate the importance of the TTIQ response to constrain transmission, by comparing requirements for PHSMs for the same vaccine coverage thresholds, under the alternative allocation scenarios and in the context of:

- 'Optimal' TTIQ response, deemed achievable when active case numbers can be contained in the order of 10s or 100s;
- 'Partial' TTIQ response, deemed more likely when established community transmission leads to rapid escalation of caseloads in the 1,000s or beyond.

Table 4.2 shows that light or moderate restrictions will likely be insufficient to regain control of epidemics even at 70% coverage for only a partially effective TTIQ response. Prolonged lockdowns would likely be needed to limit infection numbers and caseloads. The proportion of time during which the community would experience imposition of these stringent measures logically declines as vaccine coverage increases.

In contrast, Table S4.3 shows that if optimal TTIQ can be maintained the requirement for strict lockdowns as part of the incursion response diminishes with increasing vaccine coverage. In many instances, moderate or even light restrictions may be sufficient to curb epidemic growth. Note that the share of time under restrictions will be overestimated if there are sustained periods with no new outbreaks, due to effective border control.

As shown in Figure 1.2 in the main text, ongoing application of light social restrictions is anticipated to constrain epidemic growth over and above vaccination. Assuming population co-operation these restrictions will support maintenance of optimal TTIQ response capacity, which is critical to avoidance of stringent social measures.

Table S4.2: Proportion of time lockdowns are needed to constrain transmission when the TTIQ public health response is only *partially effective,* due to high caseloads

Vaccine coverage	Allocation scenario	Light restrictions only	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	89%
	40+ years first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	93%
	All adults	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	84%
60%	Oldest first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	67%
	40+ years first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	78%
	All adults	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	65%
70%	Oldest first	Not possible to constrain outbreak with light restrictions	77%	47%
	40+ years first	Not possible to constrain outbreak with light restrictions	99%	60%
	All adults	Not possible to constrain outbreak with light restrictions	81%	49%
80%	Oldest first	82%	47%	29%
	40+ years first	Not possible to constrain outbreak with light restrictions	59%	36%
	All adults	89%	51%	31%

Table S4.3: As for Table S4.2, but for an *optimally effective* TTIQ response

Vaccine coverage	Allocation scenario	Light restrictions only	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	63%
	40+ years first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	67%
	All adults	Not possible to constrain outbreak with light restrictions	94%	58%
60%	Oldest first	Not possible to constrain outbreak with light restrictions	67%	41%
	40+ years first	Not possible to constrain outbreak with light restrictions	86%	52%
	All adults	Not possible to constrain outbreak with light restrictions	64%	39%
70%	Oldest first	60%	34%	21%
	40+ years first	97%	56%	34%
	All adults	67%	38%	23%
80%	Oldest first	7%	4%	3%
	40+ years first	29%	17%	10%
	All adults	15%	8%	5%

Table S4.4: Proportion of time lockdowns are needed to constrain transmission when the TTIQ public health response is only *partially effective,* due to high caseloads, and where light restrictions are always in place.

Vaccine coverage	Allocation scenario	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with moderate lockdown	82%
	40+ years first	Not possible to constrain outbreak with moderate lockdown	89%
	All adults	Not possible to constrain outbreak with moderate lockdown	75%
60%	Oldest first	Not possible to constrain outbreak with moderate lockdown	49%
	40+ years first	Not possible to constrain outbreak with moderate lockdown	67%
	All adults	Not possible to constrain outbreak with moderate lockdown	46%
70%	Oldest first	46%	18%
	40+ years first	97%	39%
	All adults	55%	22%
80%	Oldest first	0%	0%
	40+ years first	4%	2%
	All adults	0%	0%

Table S4.5: As for Table S4.4, but for an *optimally effective* TTIQ response

Vaccine coverage	Allocation scenario	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with moderate lockdown	42%
	40+ years first	Not possible to constrain outbreak with moderate lockdown	49%
	All adults	87%	35%
60%	Oldest first	23%	9%
	40+ years first	66%	27%
	All adults	15%	6%
70%	Oldest first	0%	0%
	40+ years first	0%	0%
	All adults	0%	**0**%
80%	Oldest first	0%	0%
	40+ years first	0%	0%
	All adults	0%	0%

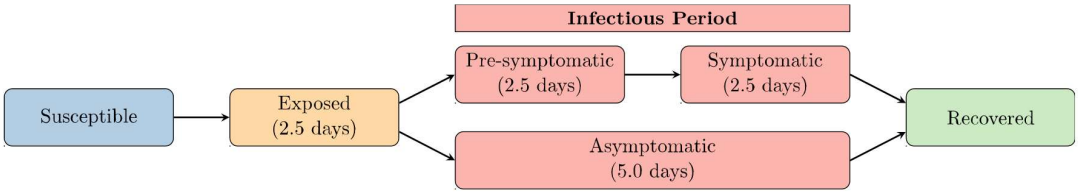
Transmission model description

We implement an individual-based model to estimate COVID-19 spread under various vaccination allocation and coverage scenarios. We use an individual-based framework because it allows us to specify arbitrary vaccine schedules and to efficiently implement case-finding, case isolation and contact quarantine in the model.

The model defines a population, where every individual has an age, corresponding to an input age-structure. Infected individuals contact others in the population at random, modified by an input age-structured contact matrix. based on 2016 ABS Census data, scaled to 2021 Estimated Resident Populations (ERPs) and we assume mixing between age groups as estimated by Prem et al. (PLoS Computational Biology 2017). When a susceptible individual contacts an infectious individual, there is a probability that they will contract the virus.

When infected, an individual transitions into an exposed class, before moving into an infectious class, where they can be either asymptomatic or symptomatic, and finally they move into a recovered class (Figure S3).

Figure S3: Transitions between states in the individual based model



The model incorporates age-specific susceptibilities to infection and probabilities of developing symptoms given infection (according to Davies et al Nature Medicine 2020).

Vaccine assumptions

COVID-19 vaccines act on multiple elements of transmission and disease. We assume that vaccination reduces susceptibility to infection (according to Table S2.1) and the probability of developing symptomatic disease given infection (according to Table S2.5). The latter impacts transmission since we assume that asymptomatic individuals are 50% less infectious. We further assume that infected vaccinated individuals are less infectious by a factor calculated to match combined vaccine effectiveness assumptions on transmission (Table S2.3).

Model initialisation and simulations

For the scenarios presented in the main report, we use a population of approximately 24 million individuals and an initial basic reproduction number (R_0) of 6.32 which corresponds to our baseline population-wide TP minus the effects of TTIQ or surveillance. We note that the effective reproduction number is below 6.32 due to the incorporation of TTIQ and vaccination in the simulation.

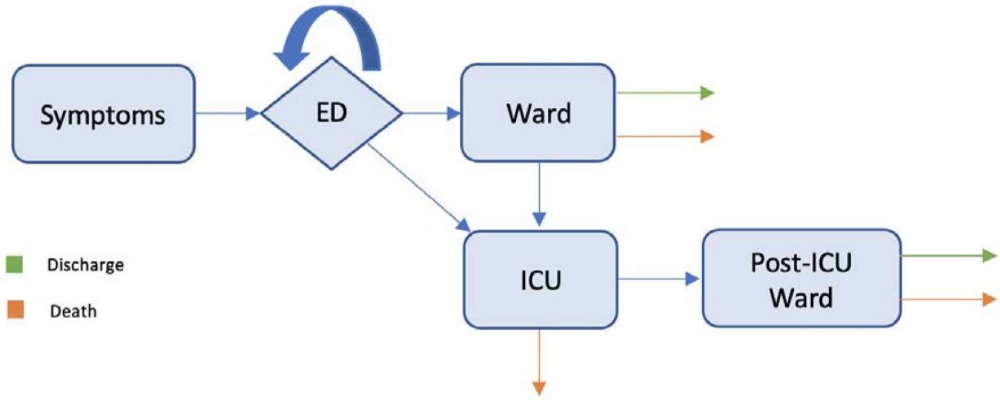
Individuals are vaccinated dynamically in the model, according to an age-specific schedule of doses per day (Figure S1). Second doses are given at a set time from the first dose, which is 3 weeks for mRNA Pfizer/Moderna and 12 weeks for AstraZeneca.

Once the predefined vaccination threshold is reached (50%, 60%, 70% or 80%), we expose 30 unvaccinated individuals, triggering the start of disease transmission. For all scenarios, we assume partial TTIQ effectiveness which isolates each individual according to a known distribution estimated from Victorian data at the height of the 'second wave' in 2020 as our best estimate of public health response performance under high caseloads. As the virus is spreading through the community, we continue the dynamic vaccination of individuals.

Each simulation outputs a line list of infections by age, vaccination status (dose number and product), and symptom status (symptomatic or asymptomatic), from which we can generate our daily case numbers.

Clinical pathways model

Figure S4: Schematic representation of states captured in the clinical pathways model



The clinical pathways model takes inputs of daily symptomatic individuals, stratified by age and vaccination status, from the epidemic model. There is a delay between the onset of symptoms and presentation to ED. Upon arrival to ED individuals are either admitted to ward immediately, admitted to ICU immediately, or if ED is at capacity, individuals are not admitted and may re-present the next day. For this phase of the work, we assume the only symptomatic cases requiring hospitalisation present to ED. Individuals who are admitted to ward will either die, be discharged from ward or eventually require ICU care. Individuals in ICU will either die in ICU or return to ward, from here they will either die or be discharged.

The lengths of stay in each compartment/clinical setting depends on the eventual clinical pathway of individuals. For example, lengths of stay in ward will typically be shorter for individuals who later require ICU care. The pathways of individuals through the health system are dependent on both their age and vaccination status. All length of stay distributions and age stratified probabilities of transitions between compartments are taken from [2], which are scaled for the Delta variant according to Table S1 and vaccination status according to Table S2.5. The model accounts for uncertainty by using stochastic inputs from the epidemic model, generating stochastic trajectories/pathways through the hospital system and sampling from the posterior length of stay distributions from [2].

Workforce participation assumptions

Table S5: Workforce participation proportions, by age. Source: Treasury

10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+
0.27006	0.83684	0.862148	0.863779	0.799347	0.46397	0.115252	0.02064

Estimates of available clinical capacity for management of COVID-19 cases

National health care capacities were defined based on current operations and envisaged sustainable capacity under an ongoing community transmission scenario. It should be noted that these figures are substantially lower than peak surge estimates in early 2020 when a single epidemic wave was considered a likely scenario.

Appendix Table S6: Estimated national and per-jurisdiction healthcare capacities for ward beds, ED and GP consultations based on AIHW data, under the assumption that 50% of total capacity in each healthcare setting could possibly be devoted to COVID-19 patients*. Estimates of ICU capacity are taken directly from the National COVID-19 Common Operating Picture#.

Healthcare resource	National	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
COP ICU beds	1,964	37	737	24	298	197	39	515	117
Ward beds	25,756	448	8,832	276	5,099	1,915	557	6,158	2,471
ED consultations	10,935	202	3,945	172	2,071	694	222	2,456	1,173
GP consultations	202,999	2,607	66,616	1,582	43,627	14,005	3,935	51,338	19,289

*ED and GP capacities reflect maximum number of daily consultations.
https://www.health.gov.au/sites/default/files/documents/2021/07/coronavirus-covid-19-common-operating-picture-8-july-2021.pdf

Addendum to Doherty Modelling Report for National Cabinet 30 July 2021

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TECHNICAL APPENDIX

Executive summary

- Models of COVID-19 infection and vaccination were used to define a target level of vaccine coverage for transition to Phase B of the National Plan. The model was based on the simplifying assumption of a single national epidemic, with COVID-19 transmission, severity and vaccine effectiveness as for the Delta variant.
- Our report for 30th July 2021 National Cabinet considered hypothetical age-based vaccine allocation scenarios underpinning coverage targets of 50, 60, 70 and 80%, to explore the population level impacts of strategies focused either primarily on direct protection or transmission reduction.
- From the starting point of age-based coverage in Australia as of 12 July 2021, an 'All adults' allocation strategy that achieved high coverage in key transmitting populations (20-39 years) resulted in greatest reductions in harms across all age groups, regardless of vaccination status.
    - This hypothetical scenario was mapped to an *implementable strategy consistent with the national COVID-19 immunisation programme*, under which vaccines would be opened up to 30-39 year olds on 31 August 2021, and 16-29 years olds from 11 October, called 'Transmission reducing';
    - This strategy captured the benefits achieved under the previous preferred strategy, achieving a slightly lower TP by 70% coverage, and equivalence at 80%;
    - Epidemic dynamics assuming baseline restrictions and partial TTIQ were very similar to the 'all adults' strategy;
    - Corresponding clinical outcomes were similar or improved at coverage of 60% or above.

- Our main report highlighted the importance of maintaining optimal TTIQ responses in the context of ongoing 'low' public health and social measures to minimise rapid epidemic growth and escalation of severe disease outcomes, even in a highly immunised population;
    - This report compared epidemic dynamics and clinical outcomes for the 'Transmission reducing' strategy assuming either 'baseline measures with partial TTIQ' or 'low PHSMs with optimal TTIQ';
    - Infections and corresponding adverse consequences were reduced by several orders of magnitude, assuming ongoing light restrictions and sustained highly effective public health response capacity;
    - The ability to deliver this capacity is greatly assisted by the more even distribution of reported cases over the 6 months time window of reporting, given an absence of rapid epidemic escalation.

- *As in our previous report, the contingency of these outcomes on population behaviours including vaccine acceptance, co-operation with behavioural restrictions and active engagement and compliance with public health responses is critically important for achieving programmatic outcomes.*

- *Our models assume a point source outbreak as the key initiating event for transmission. Given the low caseloads achieved under the 'optimal TTIQ' scenario and considered desirable in Phase B, the influence of imported infections on local epidemic dynamics merits further exploration in the next phase of modelling.*

Exploring vaccine thresholds for transition to Phase B of the National Plan

Our report for 30th July 2021 National Cabinet considered hypothetical age-based vaccine allocation scenarios underpinning coverage targets of 50, 60, 70 and 80%, to explore the population level impacts of strategies focused either primarily on direct protection or transmission reduction. From the starting point of age-based coverage in Australia as of 12 July 2021, an 'All adults' allocation strategy that achieved high coverage in key transmitting populations (20-39 years) resulted in greatest reductions in harms across all age groups, regardless of vaccination status. This hypothetical scenario was mapped to an *implementable strategy consistent with the national COVID-19 immunisation programme*, under which vaccines would be opened up to 30-39 year olds on 31 August 2021, and 16-29 years olds from 11 October, called 'Transmission reducing'.

Defining the transmission reducing strategy

The 'transmission reducing' strategy is defined in relation to previously modelled vaccination allocation scenarios in Table 1.1.

Table 1.1: Vaccine allocation strategies by age, assuming current recommendations for Astra Zeneca vaccine age eligibility (60+ years) and dosing interval (12 weeks)

Strategy	Allocation sequence
Oldest first	Vaccinations are prioritised from oldest to youngest. Specifically, prioritization occurs in the following order: 80+, 70-79, 60-69, 50-59, 40-49, 30-39, 20-29, 16-19
40+ years first	Vaccinations are prioritised from 40+ upwards, then 16+. Specifically, prioritization occurs in the following order: 40-49, 50-59, 60-69, 70-79, 80+, 16-19, 20-29, 30-39
All adults	Vaccinations are not prioritised in any particular order by age
Transmission reducing	As for national program, under which all individuals 40+ are currently eligible. Within the simulation timeframe, the 30-39 years cohort becomes eligible from 30 August, and 16-29 year olds on 11 October.

Timeliness of achieving coverage targets by vaccine allocation scenario

The indicative dates of achieving differing coverage thresholds for the 'transmission reducing' strategy are shown relative to the previously explored scenarios in Table 1.2. Under the revised scenario, there is an anticipated one week delay to achieving the 70% coverage threshold, but all other target dates are unchanged. Not that achievement of any of these thresholds by the given date is contingent on population acceptance.

Table 1.2: Date of achieving a given vaccine coverage threshold by allocation strategy, assuming a start date and population completed doses (AIR) as of 12th July 2021, assuming Astra Zeneca is recommended only for 60+ years and delivered at a 12 week interval

	Coverage threshold			
Strategy	**50%**	**60%**	**70%**	**80%**
Oldest/40+ first and All ages	4 October	18 October	1 November	22 November
Transmission reducing	4 October	18 October	**8 November**	22 November

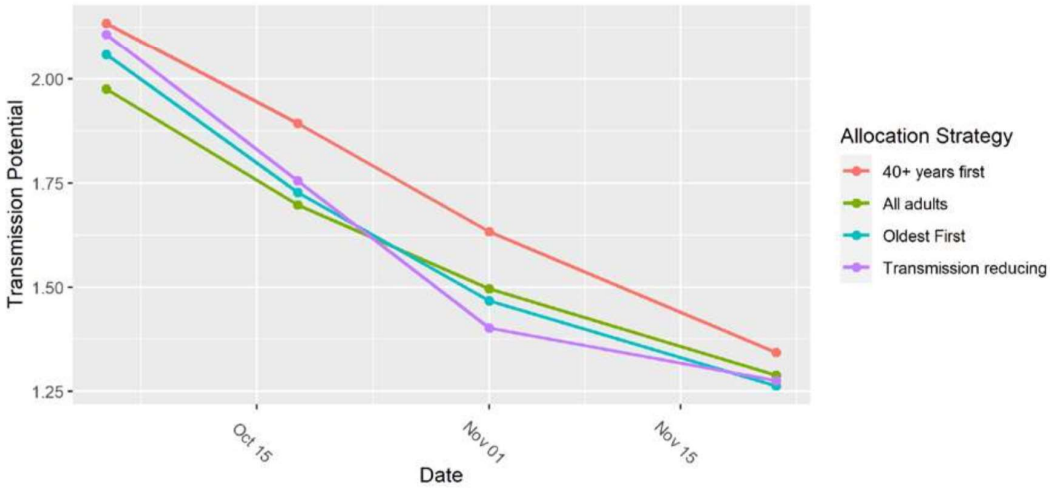
Transmission potential (TP) by vaccine coverage and allocation strategy

The reduction in TP achieved for each strategy by the coverage threshold is shown in Table 2.1 and Figure 1. As shown in the static table, the greatest gains of the transmission reducing strategy relative to others is demonstrable at the 70% coverage threshold, by which point it outperforms the 'all adults' strategy.

Table 2.1: Scaled values of Delta variant transmission potential (TP) for 50%, 60%, 70% and 80% population coverage for each allocation strategy, assuming AZ is delivered to individuals aged 60+ years, with a 12-week dosing interval. We use a starting TP of 3.6.

	Eligible population coverage (16+)			
Allocation Strategy	**50%**	**60%**	**70%**	**80%**
Oldest first	2.1	1.7	1.5	1.3
40+ years first	2.1	1.9	1.6	1.3
All adults	2	1.7	1.5	1.3
Transmission reducing	2.1	1.8	1.4	1.3

Figure 1: Rate of change in TP over time, by vaccine allocation strategy



Impact of public health response and bundled social measures on TP

Figure 2.1: Combined effects of vaccination and PHSM scenarios on COVID-19 transmission potential under the 'Transmission reducing' vaccination scenario assuming only *partial TTIQ effectiveness*, due to high caseloads. Standard age (60+) and dosing interval (12 weeks) recommendations are assumed for the AZ vaccine.

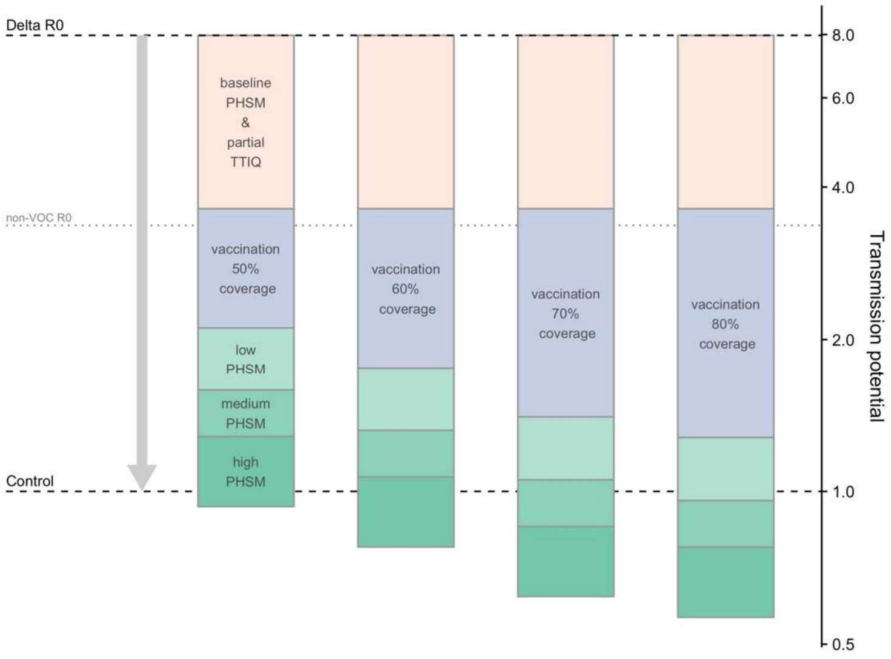
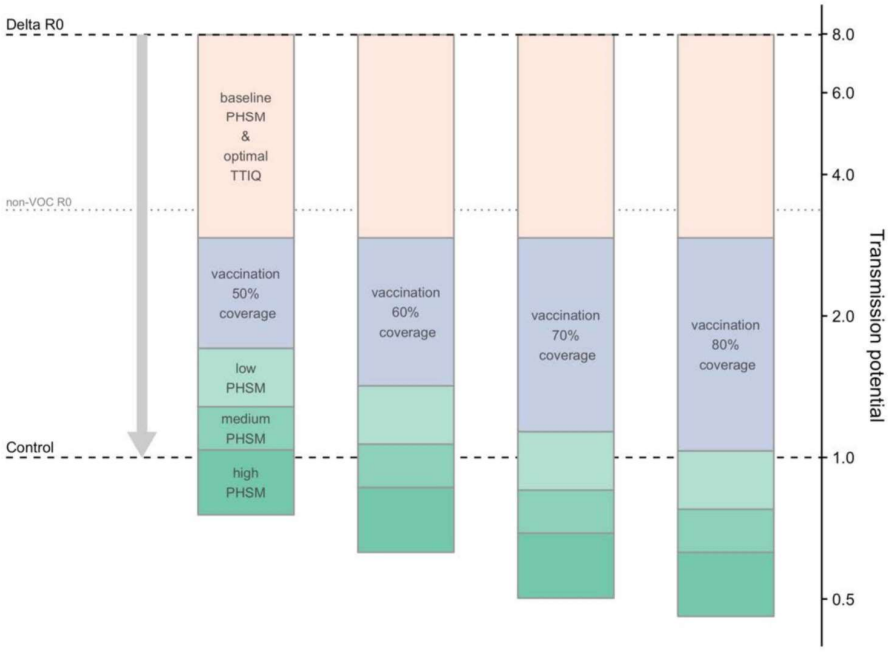


Figure 2.2: As for Figure 2.1 but assuming *optimal TTIQ effectiveness*



Anticipated requirements for social measures, by coverage scenario

Table 3.1: Percentage of time high PHSM would need to be in place for long-term control, with reversion to low PHSM at other times, for 50%, 60%, 70% and 80% population coverage achieved under the three age-based allocation strategies. These scenarios assume *partial* TTIQ effectiveness, under high caseloads. Standard age (60+) and dosing interval (12 weeks) recommendations are assumed for AZ vaccine.

Strategy	Eligible population coverage (16+)			
	50%	60%	70%	80%
Oldest first	82%	49%	18%	0%
Middle years first	89%	67%	39%	2%
All adults	75%	46%	22%	0%
Transmission reducing	87%	52%	10%	0%

Table 3.2: As for Table 4.1 but assuming *optimal* TTIQ effectiveness, given low caseloads

Strategy	Eligible population coverage (16+)			
	50%	60%	70%	80%
Oldest first	42%	9%	0%	0%
Middle years first	49%	27%	0%	0%
All adults	35%	6%	0%	0%
Transmission reducing	47%	12%	0%	0%

More detailed breakdowns of the level of time likely required under differing degrees of social restrictions for the various coverage thresholds and allocation strategies are shown in Tables S2.2 and 2.3 (assuming partial/optimal TTIQ), and S2.4 and 2.5 (for both levels of TTIQ in the context of ongoing 'light' restrictions).

Dynamics and consequences given timing of transition to Phase B

Epidemic simulations assume a population size of 24 million. Infection outputs reflect the range of results observed across 20 separate model runs for each scenario. We assume that a single outbreak involving 30 individuals initiates community transmission at the time of transition to Phase B once target vaccine coverage is achieved. Each simulation is run for 180 days after this initiating date. As immunisation rollout is ongoing, achievement of future vaccine targets is indicated as relevant, in relation to evolving epidemics. Outputs are compared for partial and optimal TTIQ.

Early epidemic growth given established transmission, for Transmission reducing strategy

Figures 3.1-3.2 demonstrate the rate of increase in all infections over time, including those which are asymptomatic and regardless of subsequent clinical severity for the symptomatic proportion.

Figure 3.1: Epidemic growth to 180 days given transition to Phase B leading to established community transmission for the threshold coverage targets of 50, 60, 70 and 80%, assuming partial TTIQ (*note different y axes)

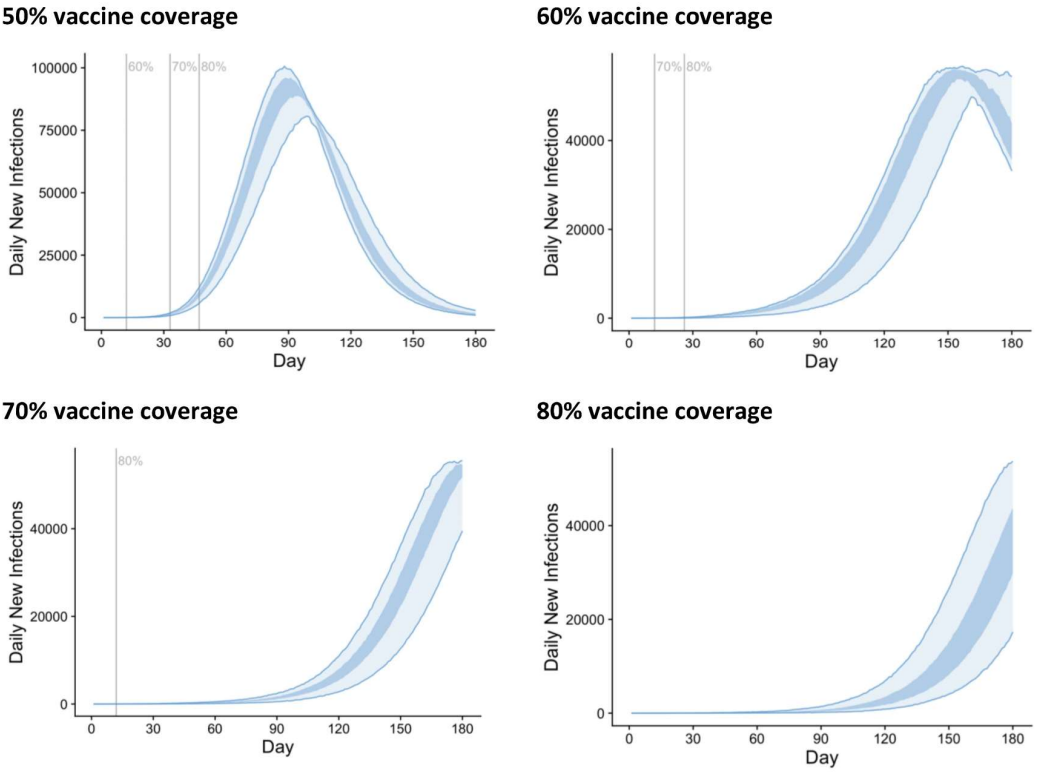
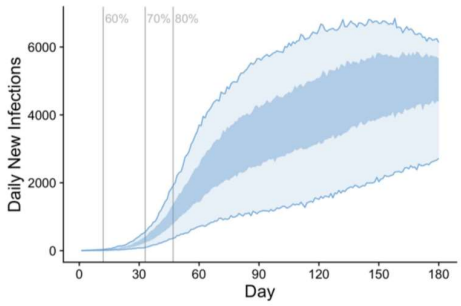
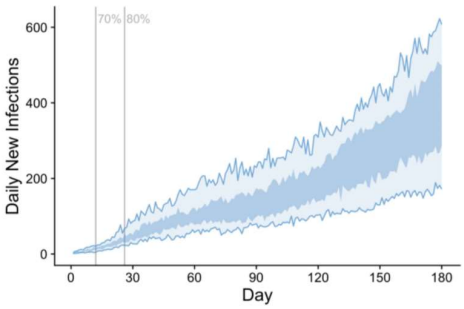


Figure 3.2: As for Figure 3.1, but for optimal TTIQ

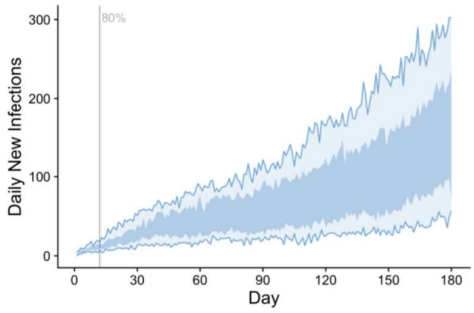
50% vaccine coverage



60% vaccine coverage



70% vaccine coverage



80% vaccine coverage

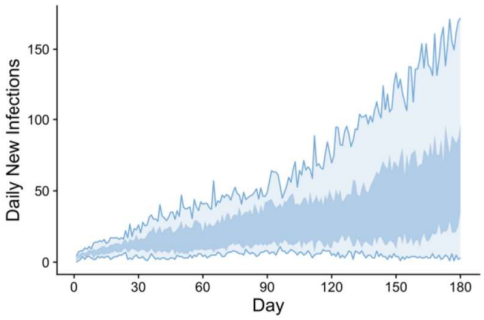
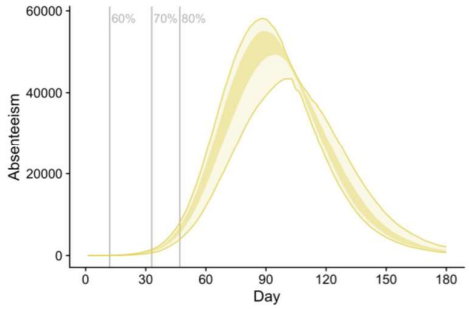
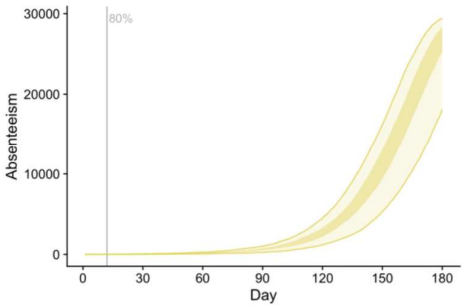


Figure 3.3: Prevalence of individuals absent from the workforce due to symptomatic infection and mandatory isolation (10 days) for the 50 and 70% coverage scenarios (*note y axes differ)

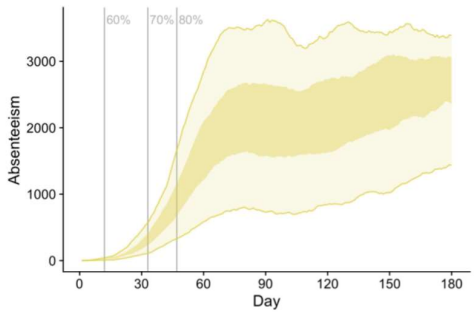
50% coverage, partial TTIQ



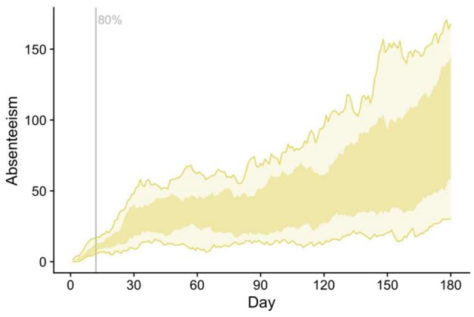
70% coverage, partial TTIQ



50% coverage, optimal TTIQ



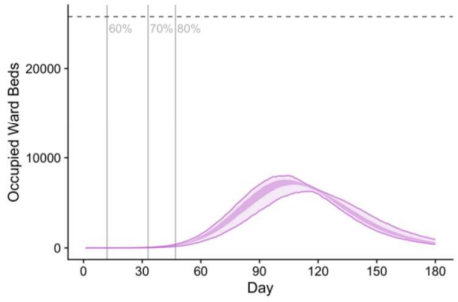
70% coverage, optimal TTIQ



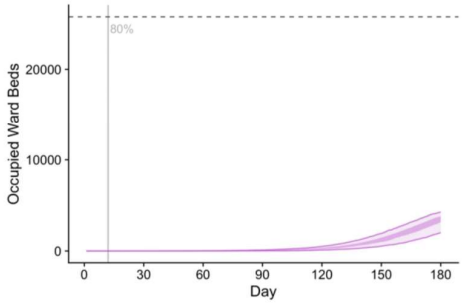
Associated health impacts of transmission, relative to health sector capacity

Figure 4.1: Occupied hospital ward beds over the course of the epidemic, in relation to stated national capacity, which represents 50% of the total. Scenarios shown are for 50% achieved coverage at epidemic onset

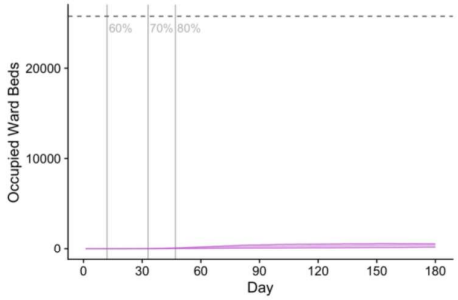
50% coverage, partial TTIQ



70% coverage, partial TTIQ



50% coverage, optimal TTIQ



70% coverage, optimal TTIQ

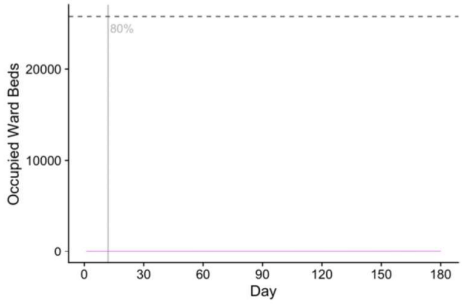
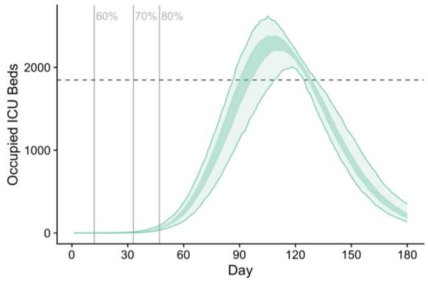
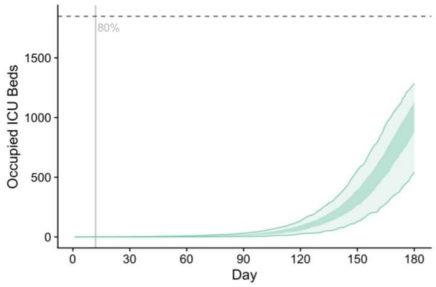


Figure 4.2: As for Figure 3.1 but for occupied ICU beds in relation to national capacity

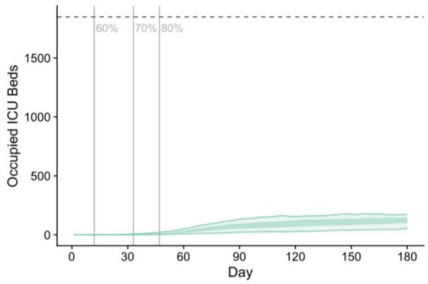
50% coverage, partial TTIQ



70% coverage, partial TTIQ



50% coverage, optimal TTIQ



70% coverage, optimal TTIQ

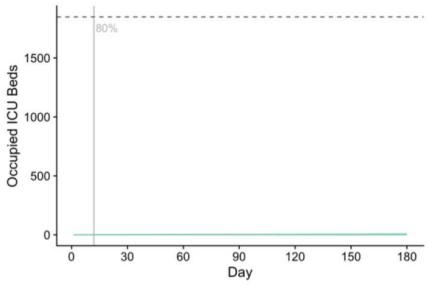
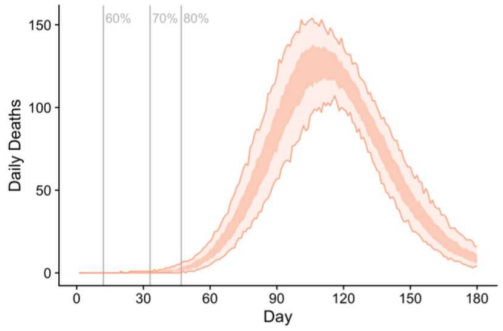
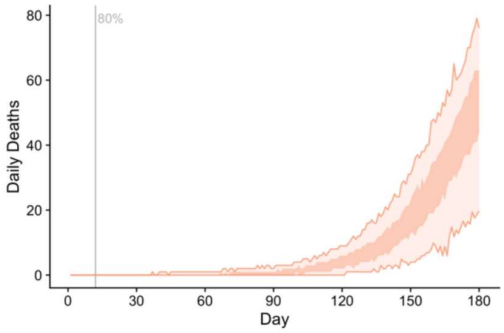


Figure 4.3: As for Figure 3.1 but reporting daily deaths (*note y axes differ)

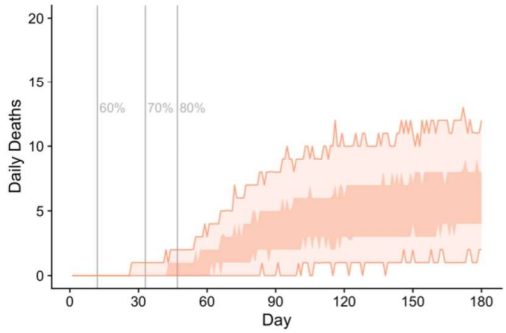
50% coverage, partial TTIQ



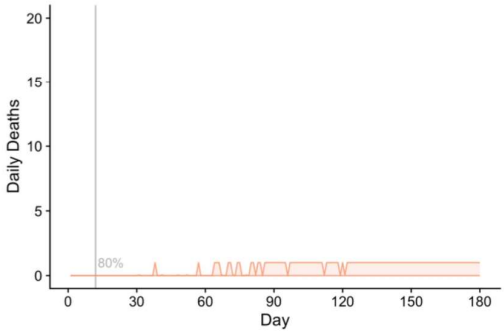
70% coverage, partial TTIQ



50% coverage, optimal TTIQ



70% coverage, optimal TTIQ



Health impacts by age group and vaccine status

Central estimates of these health impacts over the first 180 days following established community transmission are provided in the tables below, for ease of comparison across coverage thresholds, vaccination status and age group. Note that given epidemic stochasticity and uncertainty, these estimates are drawn from a broader range of possible values as demonstrated by the Figures above. **All scenarios assume only baseline restrictions and 'partial' TTIQ effectiveness.**

Table 4.1 Cumulative outcomes of interest over the first 180 days by achieved coverage threshold prior to transmission, for the 'Transmission reducing vaccine allocation strategy with partial TTIQ

	Vaccine Coverage			
	50%	**60%**	**70%**	**80%**
Symptomatic infections	1,124,136	703,688	309,362	230,164
Ward admissions	49,242	27,542	13,698	7,699
ICU admissions*	11,844	6,295	2,966	1,629
Deaths	10,443	4,702	1,908	996

**ICU admissions are reported here and below assuming unconstrained capacity, even when national thresholds are anticipated to be reached or exceeded, so reflect 'true' requirements*

Table 4.2 As for Table 4.1 but for optimal TTIQ

	Vaccine Coverage			
	50%	**60%**	**70%**	**80%**
Symptomatic infections	113,553	6,551	2,762	1,160
Ward admissions	4,132	227	96	40
ICU admissions*	953	52	22	9
Deaths	726	39	17	7

Table 4.3: Cumulative symptomatic infections, ward admissions, ICU admissions and deaths over the first 180 days for coverage thresholds of 50%, 60%, 70% and 80% achieved assuming partial or optimal TTIQ, broken down by vaccination status#

	Partial TTIQ		Optimal TTIQ*	
Achieved eligible population coverage	**Vaccinated**	**Unvaccinated**	**Vaccinated**	**Unvaccinated**
50%				
Symptomatic infections	215,541	908,594	17,112	96,441
Ward admissions	15,386	33,856	1,169	2,963
ICU admissions	4,053	7,791	297	656
Deaths	3,708	6,735	246	480
60%				
Symptomatic infections	112,488	591,119	914	5,637
Ward admissions	8,410	19,132	62	165
ICU admissions	2,112	4,183	16	36
Deaths	1,656	3,046	13	26
70%				
Symptomatic infections	57,319	333,044	380	2,382
Ward admissions	4,063	9,635	27	70
ICU admissions	969	1,997	7	15
Deaths	672	1,237	6	11
80%				
Symptomatic infections	32,403	197,761	151	1,008
Ward admissions	2,245	5,454	11	29
ICU admissions	523	1,106	3	6
Deaths	347	649	2	5

**At high caseloads as anticipated in the 50% scenario, consistent maintenance of 'optimal TTIQ' is deemed highly unlikely*

 # Note that in the case of emergence of a 'vaccine escape' variant, both the total number of infections and the proportion of severe cases occurring in fully immunised individuals would increase dramatically.

As can be seen from Tables 4.4 and 4.5 (and the corresponding pair 4.6 and 4.7), the transmission reducing strategy's effectiveness at reducing symptomatic infections and severe outcomes across all age groups is markedly enhanced by maintenance of optimal TTIQ in the presence of ongoing 'low' restrictions.

Table 4.4: Cumulative symptomatic infections, ward admissions, ICU admissions and deaths over the first 180 days for the coverage threshold of 70% assuming partial TTIQ, broken down by vaccination status and age

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac
Denominator population*	0	5,075,816	4,599,519	3,930,112	5,505,295	3,237,854	5,161,851	506,030	2,736,171	224,478
Symptomatic infections	0	226,084	21,032	64,770	20,775	35,837	12,175	5,309	3,337	1,043
Ward admissions	0	1,983	478	2,125	1,151	3,108	1,691	1,801	743	618
ICU admissions	0	164	85	369	333	896	420	465	131	103
Deaths	0	46	13	84	86	338	365	524	207	245

**Note that 'denominator population' refers to numbers of persons at the time when 70% threshold coverage is achieved – vaccination continues during the simulations to 80% threshold values*

Table 4.5: As for table 4.4, assuming optimal TTIQ

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac
Denominator population*	0	5,075,816	4,599,519	3,930,112	5,505,295	3,237,854	5,161,851	506,030	2,736,171	224,478
Symptomatic infections	0	1,606	149	487	137	250	75	33	19	6
Ward admissions	0	14	3	17	8	23	11	12	4	4
ICU admissions	0	1	1	3	3	7	3	3	1	1
Deaths	0	0	0	1	1	3	3	4	2	2

**Note that 'denominator population' refers to numbers of persons at the time when 70% threshold coverage is achieved – vaccination continues during the simulations to 80% threshold values*

Table 4.6 Cumulative symptomatic infections, ward admissions, ICU admissions and deaths over the first 180 days for the coverage threshold of 80% assuming partial TTIQ, broken down by vaccination status and age

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac
Denominator population	0	5,075,816	5,847,392	2,682,239	5,656,653	3,217,835	5,269,008	398,730	2,783,769	176,800
Symptomatic infections	0	135,408	11,943	37,803	11,724	20,931	6,861	3,031	1,875	587
Ward admissions	0	1,128	265	1,218	634	1,762	937	1,006	408	340
ICU admissions	0	93	46	208	180	496	228	255	70	54
Deaths	0	25	6	45	44	176	190	276	107	128

Table 4.7: As for table 4.6, assuming optimal TTIQ

	<16 yrs		16-39 yrs		40-59 yrs		60+ yrs		70+ yrs	
	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac	Vacc'd	Unvac
Denominator population	0	5,075,816	5,847,392	2,682,239	5,656,653	3,217,835	5,269,008	398,730	2,783,769	176,800
Symptomatic infections	0	687	57	199	56	105	31	14	8	3
Ward admissions	0	6	1	7	3	10	4	5	2	2
ICU admissions	0	1	0	1	1	3	1	1	0	0
Deaths	0	0	0	0	0	1	1	2	1	1

TECHNICAL APPENDIX

Vaccine allocation scenario

Table S1.1: Distribution of vaccination coverage by age band by achievement of the 70% vaccination coverage threshold (1st November) for standard AZ dosing indications (60+, 12 week interval between doses) and the three age-based allocation strategies.

Age band	Eligible population	Oldest first	40+ years first	All adults	Transmission reducing
16-19	1190616	4.2%	86.1%	57.1%	34.3%
20-29	3577491	18.9%	52.6%	58.8%	38.4%
30-39	3761524	74.8%	16.6%	60.6%	74.9%
40-49	3295699	90.4%	90.6%	69.0%	84.4%
50-59	3127124	92.1%	92.0%	74.6%	87.1%
60-69	2707232	87.3%	93.8%	84.0%	89.6%
70-79	1897838	96.1%	93.3%	89.4%	93.1%
80+	1062811	95.2%	83.0%	86.3%	91.2%

**Note that for the first three allocation scenarios, the date on which 70% coverage is achieved in the simulation is 1st November, compared with the 'transmission reducing' strategy for which that date is 8th November*

Table S1.2: As for Table S3.1 but for an 80% achieved coverage threshold (16+ years population)

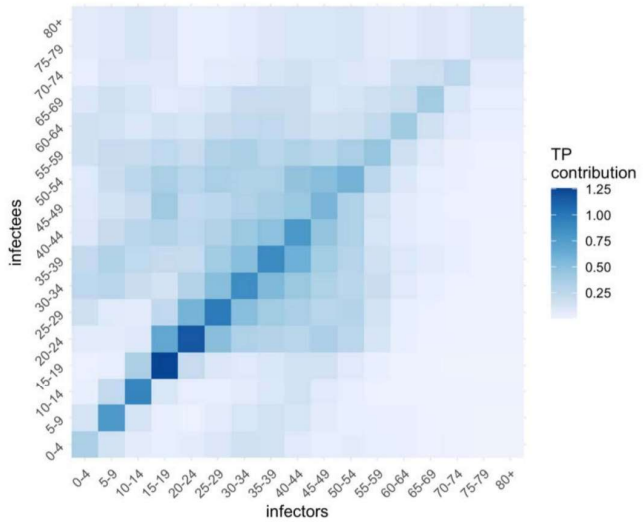
Age band	Eligible population	Oldest first	40+ years first	All adults	Transmission reducing
16-19	1190616	8.6%	86.9%	73.5%	57.1%
20-29	3577491	64.1%	87.1%	74.6%	59.7%
30-39	3761524	88.1%	41.4%	75.6%	80.6%
40-49	3295699	90.5%	90.6%	80.8%	87.0%
50-59	3127124	92.1%	92.0%	84.2%	89.2%
60-69	2707232	91.7%	94.2%	90.0%	91.8%
70-79	1897838	96.2%	95.9%	93.4%	94.6%
80+	1062811	95.2%	89.2%	91.4%	93.0%

**This coverage threshold is achieved by 22 November across all allocation strategies*

Population mixing assumptions

Population mixing within and between age groups is configured based on widely accepted social contact matrices published by Prem et al (PLoS Computational Biology 2017)(Figure S2.1). It has been expanded to include an 80+ age class (assumed to have the same mixing rates as 75-79 years). Age-specific susceptibility and transmissibility estimates from Davies et al. (Nature Medicine 2020) are used and transmission rates have been calibrated to our baseline population-wide TP (here denoted R) of 3.6. Of note, the greatest mixing intensities are anticipated between individuals aged from 15-24 years, remaining high through adults of working age. While intense school-based mixing is anticipated between children aged 5-14, the transmission matrix accounts for the relatively low observed infectiousness of this age group, associated with a high proportion of asymptomatic infections.

Figure S1.1: Age-based transmission matrix derived from Prem et al (2017)



The key message of Figure S2.1 is that in the absence of vaccination, individuals of different ages do not contribute equally to the spread of infection in the population.

The impact of vaccination on overall transmission will therefore be substantially influenced by the rate of vaccine uptake achieved **within distinct population age cohorts.** Table S3.2 shows the range of values for achieved coverage by age group underpinning 80% 'age eligible coverage' for our three hypothetical vaccine allocation strategies.

Figures S1.2-S1.5 provide a visual demonstration of the reduction in transmission achieved for each age band depending on the rollout scenario. Light grey bars show the contribution of each age group to transmission potential given different numbers of contacts and age differences in both susceptibility and infectiousness, in the absence of vaccination. Dark grey bars show the contribution of each age group to transmission potential for that vaccine allocation strategy and coverage. The 'all ages' strategy consistently produces the greatest proportional reductions in infectiousness across peak transmitting age groups.

Figure S1.2: Impact of the four different allocation strategies on TP by age category, resulting in the overall TP achieved by 50% age eligible population coverage

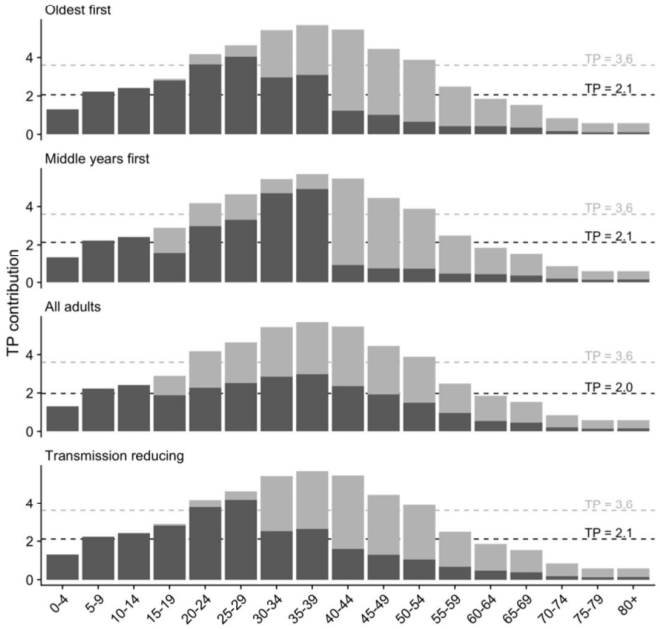


Figure S1.3: As for Figure S1.2, but for 60% age eligible population coverage

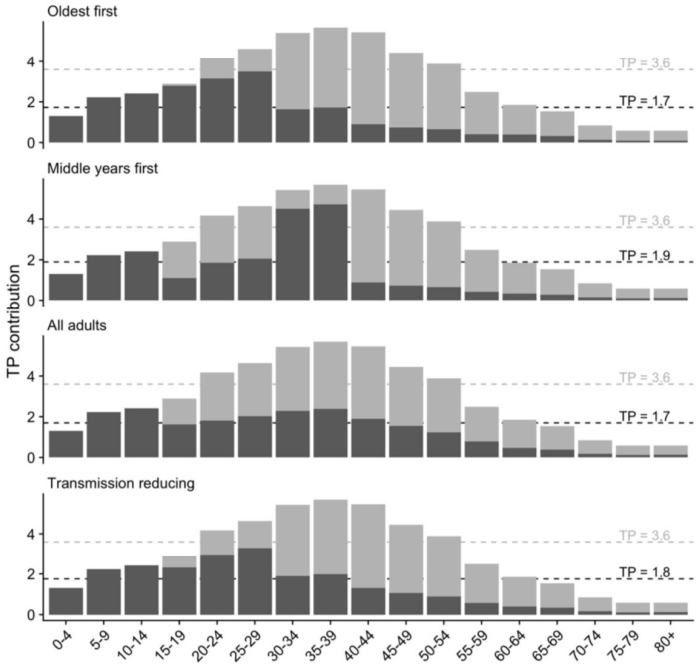


Figure S1.4: As for Figure S1.2, but for 70% age eligible population coverage

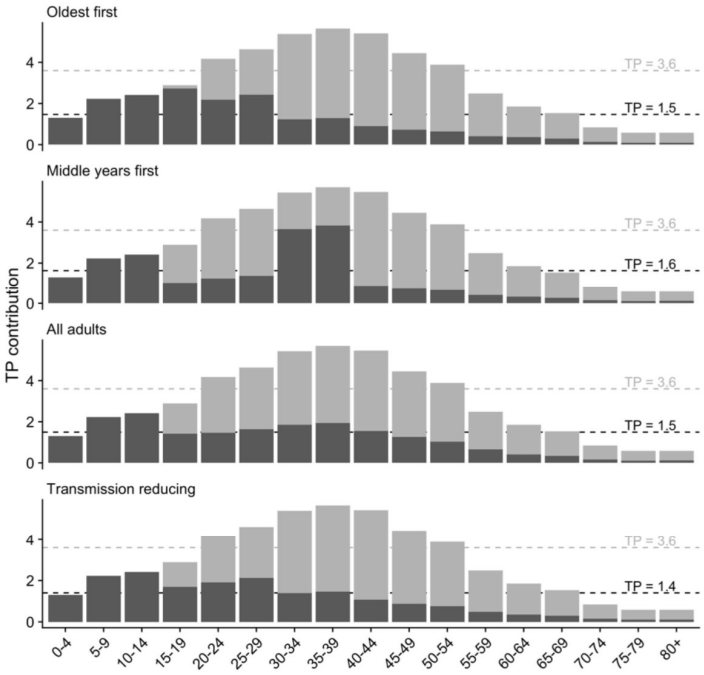
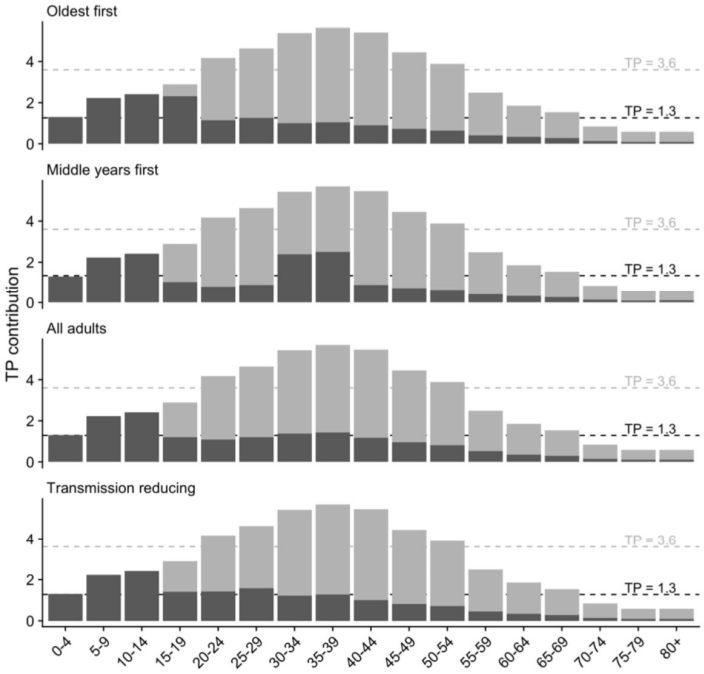


Figure S1.5: As for Figure S1.2, but for 80% age eligible population coverage



Impact of public health response and bundled social measures on TP

Table S2.2: Proportion of time lockdowns are needed to constrain transmission when the TTIQ public health response is only *partially effective,* due to high caseloads

Vaccine coverage	Allocation scenario	Light restrictions only	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	89%
	40+ years first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	93%
	All adults	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	84%
	Transmission reducing	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	92%
60%	Oldest first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	67%
	40+ years first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	78%
	All adults	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	65%
	Transmission reducing	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	69%
70%	Oldest first	Not possible to constrain outbreak with light restrictions	77%	47%
	40+ years first	Not possible to constrain outbreak with light restrictions	99%	60%
	All adults	Not possible to constrain outbreak with light restrictions	81%	49%
	Transmission reducing	Not possible to constrain outbreak with light restrictions	68%	41%

80%	Oldest first	82%	47%	29%
	40+ years first	Not possible to constrain outbreak with light restrictions	59%	36%
	All adults	89%	51%	31%
	Transmission reducing	85%	49%	30%

Table S2.3: As for Table S2.2, but for an *optimally effective* TTIQ response

Vaccine coverage	Allocation scenario	Light restrictions only	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	63%
	40+ years first	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	67%
	All adults	Not possible to constrain outbreak with light restrictions	94%	58%
	Transmission reducing	Not possible to constrain outbreak with light restrictions	Not possible to constrain outbreak with moderate lockdown	66%
60%	Oldest first	Not possible to constrain outbreak with light restrictions	67%	41%
	40+ years first	Not possible to constrain outbreak with light restrictions	86%	52%
	All adults	Not possible to constrain outbreak with light restrictions	64%	39%
	Transmission reducing	Not possible to constrain outbreak with light restrictions	71%	43%
70%	Oldest first	60%	34%	21%
	40+ years first	97%	56%	34%
	All adults	67%	38%	23%
	Transmission reducing	44%	25%	15%

80%	Oldest first	7%	4%	3%
	40+ years first	29%	17%	10%
	All adults	15%	8%	5%
	Transmission reducing	11%	6%	4%

Table S2.4: Proportion of time lockdowns are needed to constrain transmission when the TTIQ public health response is only *partially effective,* due to high caseloads, and where light restrictions are always in place.

Vaccine coverage	Allocation scenario	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with moderate lockdown	82%
	40+ years first	Not possible to constrain outbreak with moderate lockdown	89%
	All adults	Not possible to constrain outbreak with moderate lockdown	75%
	Transmission reducing	Not possible to constrain outbreak with moderate lockdown	87%
60%	Oldest first	Not possible to constrain outbreak with moderate lockdown	49%
	40+ years first	Not possible to constrain outbreak with moderate lockdown	67%
	All adults	Not possible to constrain outbreak with moderate lockdown	46%
	Transmission reducing	Not possible to constrain outbreak with moderate lockdown	52%
70%	Oldest first	46%	18%
	40+ years first	97%	39%
	All adults	55%	22%
	Transmission reducing	25%	10%
80%	Oldest first	0%	0%
	40+ years first	4%	2%
	All adults	0%	0%
	Transmission reducing	0%	0%

Table S2.5: As for Table S2.4, but for an *optimally effective* TTIQ response

Vaccine coverage	Allocation scenario	Moderate lockdowns only	Strict lockdowns only
50%	Oldest first	Not possible to constrain outbreak with moderate lockdown	42%
	40+ years first	Not possible to constrain outbreak with moderate lockdown	49%
	All adults	87%	35%
	Transmission reducing	Not possible to constrain outbreak with moderate lockdown	47%
60%	Oldest first	23%	9%
	40+ years first	66%	27%
	All adults	15%	6%
	Transmission reducing	31%	12%
70%	Oldest first	0%	0%
	40+ years first	0%	0%
	All adults	0%	0%
	Transmission reducing	0%	0%
80%	Oldest first	0%	0%
	40+ years first	0%	0%
	All adults	0%	0%
	Transmission reducing	0%	0%

Attachment E - APHCC Statement on Omicron Public Health Implications

30 March 2022 – Coronavirus (COVID-19) health alert

30 March 2022 – Japanese encephalitis virus (JEV) health alert

Australian Government
Department of Health

AHPPC statement on the Omicron public health implications and response options

Australian Health Protection Principal Committee (AHPPC) statement on the public health implications of the Omicron variant and response options.

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Refining Australia's public health strategy

Australia is undergoing a period of transition as we move from a national strategy of suppression with a goal of no community transmission, to a 'living with COVID-19' context, where the community is able to function more normally and disruptions to society and the community are minimised. When living with COVID-19, our health goals shift to controlling transmission in order to prevent serious illness,

hospitalisation and death. This will protect health system capacity and ensure sustained capability to manage the demands of COVID-19, whilst maintaining access for the community to the full range of health care including prevention services, and aiming to achieve broader societal, economic and educational goals.

The COVID-19 response transition continues to require close monitoring of the epidemiological situation and health system metrics, and integrating learnings from the international and local experience. This will guide implementation of proportionate public health measures. Consistent with the Doherty modelling for National Cabinet, case numbers are expected to increase across the country as restrictions ease and borders reopen, public health measures will aim to limit transmission, 'flatten the curve' and prevent serious illness, and protect vulnerable populations.

What we know about Omicron

The impact of Omicron on the progress of the pandemic is not yet clear although the signs of another epidemic wave are being seen in many countries, including Australia. While the variant has a large number of genetic mutations the impact of these mutations on key epidemiological characteristics is uncertain. Information on intrinsic transmissibility of the variant, disease severity and the effectiveness of current vaccines and treatments against transmission and clinical severity is emerging. The Department of Health is developing regular situation assessments and reviewing evidence as it becomes available. Evidence indicates that Omicron is substantially more transmissible than Delta in populations with a high previous exposure to COVID-19 and/or high vaccination coverage, with most recent estimates demonstrating that the number of cases doubles every 2-3 days. This suggests escape from vaccine and/or naturally derived immunity. Recent small studies indicate a reduction in laboratory indicators of vaccine protection compared to the ancestral and Delta variants and limited real world studies are also consistent with this finding. The efficacy of current vaccines to prevent serious disease from Omicron following a primary course is not yet known and requires further investigation. The combination of high transmissibility and vaccine escape may lead to rapidly escalating transmission in the context of high vaccine coverage and a significant caseload with the potential to strain health system capacity, even if disease severity is intrinsically reduced compared with previous strains.

Public health implications

Within a 'living with COVID' context, it is a priority to continue to slow transmission of Omicron into the community until more is known about the virus, and existing plans and public health responses can be adjusted accordingly. Given the emerging evidence on boosters, continuing to slow transmission is also important while the vaccine booster program is rolling out in line with ATAGI's recent recommendation to bring the booster dose interval forward from 6 to 5 months. Australia is in a good position with one of the highest fully vaccinated populations in the world. The timing to provide optimal protection for Omicron remains uncertain and only a small proportion of the fully vaccinated population has recently become eligible to receive a booster dose to date. Small sections of the population also remain unprotected (e.g. vaccine hesitant) or under-protected (e.g. single dose vaccinated, immune compromised). The 5 – 11 year old vaccination program is to commence on 10 January 2022.

We have been successfully moving through the National Plan to transition Australia's National COVID-19 Response (National Transition Plan), with surge responses limited to communities with lower vaccination coverage, and no instances of demand overwhelming health system capacity thus far. However, a rapid increase in cases and/or potential changes in disease severity associated with Omicron – including

amongst vaccinated individuals may impact on anticipated health system demand which has flow on effects to timely health care for all conditions. Proportionate measures are needed to prepare Australia to manage Omicron whilst continuing to safely progress the National Transition Plan.

Omicron is anticipated to become the dominant variant in Australia soon. There remains considerable community transmission of the Delta variant. Due to the increased transmissibility of Omicron and anticipated high case numbers in the short to medium term, the combined impacts of Delta and Omicron could cause increased demands on the health system including primary care. A particular impact is more likely to occur in sensitive settings such as aged care, disability care, correctional facilities, culturally and linguistically diverse communities and remote Aboriginal and Torres Strait Islander communities.

Response options

A proportionate and measured application of public health levers will slow transmission of Omicron into the Australian community. This delay will allow time to learn more about the variant to inform future management, to increase uptake of booster doses, achieve good vaccine coverage of those aged 5 – 11 years, and encourage those who are unvaccinated or not yet fully vaccinated to access the program. A combination of measures is intended to control transmission without significantly restricting Australia's freedoms. Implementing some of these measures now is intended to reduce the risk of requiring more restrictive measures in the longer term if the combination of Delta and Omicron variants were to result in a significant surge of cases with clinical illness requiring hospitalisation and other clinical care.

AHPPC recommended response options

The AHPPC, having considered the current context with the need to await further evidence regarding the impacts of Omicron, have agreed on several interim response options:

- **Recommending indoor face masks** – the AHPPC has agreed a recommendation for wearing of facemasks in indoor settings, noting that this is a particularly important in high risk settings. Face masks have a minimal impact on individuals and the economy, provide confidence to the community, and have shown to be beneficial in reducing transmission of disease. Masks should be mandated in all indoor settings including retail, hospitality when not eating or drinking, and entertainment facilities. Implementation of mask wearing measures should occur prior to Omicron case escalation to have maximum benefit.
- **Increase vaccination coverage including boosters** – the AHPPC has reiterated the need to ensure those who are partially vaccinated complete their courses and those who remain unvaccinated are encouraged to undergo vaccination. The AHPPC has agreed that booster doses will play an important role in reducing transmission and severity of the Omicron variant, based on currently available evidence. Public communications will need to reflect the importance and urgency of receiving booster doses once eligible. The AHPPC notes the updated booster advice reducing the dose interval to 5 months and notes ATAGI will continue to monitor the evidence and update its advice accordingly. AHPPC understands that ATAGI will consider whether a three-dose rather than a two-dose course meets requirements for full vaccination status, noting that there will be significant considerations for implementation if this definition changes
- **Maintaining test, trace, isolate and quarantine (TTIQ**) – the AHPPC has requested that the Communicable Diseases Network Australia (CDNA) consider current TTIQ requirements for Omicron particularly within sensitive settings. It is important to note that while TTIQ has been demonstrated to be effective, it is limited by operational factors and the community's willingness to be tested and comply with public health recommendations where required. Therefore, the overall contribution of

TTIQ to limiting transmission will decrease with higher case numbers. This may lead to a requirement in the future to rely more heavily on other levers, including indoor mask wearing and strategic use of rapid antigen testing, to control transmission and impacts, particularly in high-risk settings.

- **Adjusting the international current travel ban** – the AHPPC has noted that Omicron has now spread beyond those countries initially included in the current travel ban. The AHPPC has recommended not extending this travel ban as the number of countries where Omicron is present is rapidly increasing, and instead removing the initial travel ban and considering maintaining some universal international border measures such as post arrival testing and/or quarantine (see Table 1 for detail). Any measure that is implemented should be continuously reviewed against the local context and particularly local rates of transmission to ensure it is proportionate to risk.
- **Developing specific strategies to protect vulnerable settings and individuals** – the AHPPC recognises that in the context of community transmission specific strategies will be needed to protect vulnerable settings and those who work or visit these. These may include increasing or expanding use of rapid antigen testing (RAT) in settings such as aged care facilities, clear messaging to individuals at higher risk of severe disease to ensure they are fully vaccinated and have accessed a booster dose and ensuring access to therapeutics.

As local transmission increases, border measures become less important and other measures will need to be adjusted to ensure they are proportionate to the current context, whilst also maintaining health system capacity. The AHPPC will continue to consider other available response options as further evidence on Omicron emerges. Careful communications with the public will be needed to support engagement and compliance during this period of transition.

Table 1: Response options and recommendations

Levers of control	Recommendations	Considerations
Public health and social measures	**Require universal use of facemasks indoors** • Implement recommendations/requirements for universal indoor mask wearing over the coming months. **This needs to be implemented prior to Omicron case escalation to have maximum benefit.**	• Requires careful communications to government and the public to emphasise masks are easily implemented, provide confidence and are used universally in the spirit of community wellbeing. • Restriction fatigue, and resistance to facemasks may occur. • Consider only mandating for public settings (particularly high risk settings) and not in domestic indoor settings (although still recommended where in contact with vulnerable individuals in a private setting).

	Introduce and/or maintain minimal to moderate public health and social measures to decrease contact rates in the population
	• If appropriate and tailored to local circumstances introduction of temporary social measures to prevent transmission of Omicron in the community. This may include:
	  ◦ If able to, recommendations to work from home.
	  ◦ Re-introduction or increasing density restrictions.
	  ◦ Increased use of Rapid Antigen Tests (RATs), particularly in high risk settings for transmission and for essential workers.
	  ◦ Continued use of vaccine certificates. .
	  ◦ Additional measures in high risk and high transmission settings to prevent transmission (e.g. visitor restrictions, vaccine mandates).
	  ◦ Encourage gatherings in well ventilated and outdoor settings where possible.
		• Restriction fatigue, particularly in jurisdictions that have experienced outbreaks in 2021.
		• Density restrictions may impact on small businesses.
		• Note that the economy is also impacted by individual's behaviour, and spending behaviours may decrease in response to disease levels, regardless of restrictions.

Test, trace isolate and quarantine	**Maintain effective TTIQ** • Aligning with requirements for Delta. Where operationally feasible, a minimum 7 day quarantine period should remain for vaccinated close contacts of Omicron to slow transmission. TTIQ requirements will be reviewed on an ongoing basis including specific responses to Omicron in particular high risk settings and for individuals who work in or visit high risk settings.	• While TTIQ has been demonstrated to be very effective in controlling transmission, its effectiveness is limited by operational factors and the community's willingness to test and comply with public health recommendations. Therefore, the overall contribution of TTIQ to limiting transmission is likely to decrease with higher case numbers. • CDNA has been asked to review TTIQ recommendations, and adjustments may be required over time and depending on the status of states and territories. • Consideration should be given to more widespread use of RATs as part of TTIQ.

Vaccines	**Maximise uptake of booster doses in the eligible population** • Clear messaging is needed to maximise uptake of booster doses, including if ATAGI recommends accelerating shortening the duration between the second dose of vaccine and booster dose. • Early evidence suggests boosting markedly improves protection against Omicron.	• Emerging evidence indicates boosters will be an important lever in slowing the spread of Omicron and preventing severe disease. • Public acceptance of booster immunisation is likely to shift in the context of Omicron should it be demonstrated that a third dose is needed for protection and to maintain social freedoms.
	Bring forward booster doses • ATAGI has recommended bringing forward booster doses from 6 months to 5 months. ATAGI will continue to review this advice based on emerging evidence.	• Continued strong partnership between the Commonwealth, states and territories, GPs, pharmacies, the Aboriginal Community Controlled sector and other providers will be required in the coming weeks to ensure a smooth and rapid rollout of boosters.
Border	**Continue pre-departure testing** • Continuing requirement for international travellers to have a negative COVID-19 PCR test in the three days prior to departure for Australia.	• Moving the timing requirement to 24 hours pre-departure may increase the logistic difficulty without commensurately decreasing the risk

Continue and ensure compliance with arrival testing • Testing international travellers for COVID-19 upon arrival would support early detection and isolation of cases, thereby reducing the rate of importation into the community. This could include testing on airlines (e.g. using pooled saliva samples to minimise transmission risk) or at the airport, where feasible. • High levels of compliance are necessary for this to be effective. • A 72 hour isolation period is being used in three jurisdictions to allow collection, compliance and test return of the initial test (note the day 6 test falls outside of this time frame).	• Currently there is low compliance with testing after international arrival. • Systems will be required to support follow up and management. In particular, the need to ensure all travellers have local contact information recorded through the Australian Traveller Declaration (ATD) and a level of compliance monitoring. • Traveller data from ATD will be required to be efficiently and directly communicated to receiving jurisdictions electronic systems to facilitate automation of management.
Adjust current travel ban countries • The utility of the current travel bans and feasibility of implementation decreases overtime, as Omicron becomes established in many other countries.	• Travel bans negatively impact the community and the economy and provide a false confidence in the ability to prevent importation of Omicron. Omicron has now been detected in many countries globally and there are other measures (such as pre-departure and post arrival testing) that decrease the risk of importation.

	Maintain temporary quarantine requirements for international travellers • Quarantine is intended to identify individuals who may be incubating the virus and is different from the 72 hour isolation period imposed whilst awaiting the day 1 test result, currently in place in NSW, ACT and VIC. • Jurisdictions have different quarantine requirements in place (ranging from no quarantine to 14 days quarantine). Jurisdictions with less stringent quarantine requirements may consider short term adjustments. Time in quarantine may depend on vaccination status. • Measures will need continuous review whilst evidence on Omicron continues to emerge	• States and territories currently have different requirements for quarantine for international travellers. There is currently no restriction of onward domestic travel for international arrivals, in some jurisdictions. • As traveller numbers increase, monitoring quarantine and ensuring safe quarantine arrangements becomes a complex task. Managed hotel quarantine stock has significantly reduced in some jurisdictions. • Whilst international travellers currently have a higher likelihood of infection, this may change as Omicron spreads within the community. Need to continuously review the benefit of this measure.

Tags:

Communicable diseases | Immunisation | Travel health | Coronavirus (COVID-19)

← **All news**

Attachment F – Escalation Management Planning

Escalation Management Planning

Regional COVID-19 Escalation Management Plans (EMPs) were developed early in the pandemic response, with the first iteration approved by the DoH Secretary on 3 April 2020. Prior to the development and approval of the EMPs, COVID-19 escalations levels were in line with the State Special Emergency Management Plan: COVID-19 (SSEMP: COVID-19) which was rapidly developed by DoH (based on the existing SSEMP: Pandemic Influenza 2019) in response to the COVID-19 pandemic, and formally approved by the State Controller on 17 March 2020.

The EMPs have been integral in guiding the operational response of Tasmania's major public hospitals and facilities to meet both COVID and non-COVID related demand throughout the pandemic.

Having these EMPs already in place provided a strong framework to help guide decision-making and actions at the local level to help ensure Tasmania's health system was in a strong position to respond effectively to increased case numbers following the re-opening of the state's borders on 15 December 2021.

There are three THS EMPs; one for each of the three major regions (THS-North, THS-NW and THS-South). Each regional plan is supported by a District Hospital Response Plan. These EMPs were in place well in advance of decision-making related to timing for reopening, to support the health system's capacity to continue to provide safe and effective care to the community throughout the pandemic response.

The EMPs:

- document regional command, control and coordination arrangements for COVID-19;
- outline the actions that the regions will undertake to prevent disease transmission between staff, patients and visitors;
- clarify the roles and responsibilities across the regions and partners for the response to, and recovery from, a COVID-19 pandemic;
- assist all sites and campuses of the regions to manage COVID-19 effectively, including management of outbreaks; and
- outline surge capacity and response of the THS in the event of an escalation.

Minor adjustments have been made to EMPs by the relevant Regional Health Emergency Management Teams (RHEMT) in response to new and emerging information and risks, including variants of concern and the borders re-opening. The current iterations of the EMPs were endorsed by the DoH Secretary, as State Health Commander, in December 2021.

Escalation levels and triggers

Each EMP sets out escalation levels and triggers points and actions for escalation levels. The EMP trigger points are designed to allow the RHEMT and/or the THS EOC to consider the need to recommend escalation. There are four escalation levels within the EMPS, namely:

- Level 1 is the Preparation Phase, which involves maintaining business continuity whilst plans are made for the region to prepare for an escalation to Level 2. The THS has been at Level 1 for most of the pandemic.
- Level 2 is the Response Activation Phase, involving an operationalisation of some plans and actions in preparation for an escalation to Level 3.
- Level 3 is the Response Phase, involving activation of strategies and actions to respond to an increase in COVID-19 presentations and inpatients that require treatment.
- Level 4 is a heightened Response Phase, where Level 3 capacity has been exceeded and a statewide system response is necessary to manage the number of presentations or patients with COVID-19.

Each EMP outlines the trigger points and actions for each escalation level. Any escalation or de-escalation between Levels 1 to 3 must be approved by the THS EOC Commander in consultation with the Chief Executive and Regional Commander at each site. The Emergency Coordination Centre and State Health Commander are also notified. Escalation or de-escalation between Levels 3 and 4 must be approved by the Secretary, as State Health Commander.

EMP Trigger points in isolation do not mean an automatic change in the level of response. The triggers that drive consideration of movement between escalation levels are:

- the number of patients admitted with COVID-19,
- the number of patients admitted requiring ICU-level care,
- the level of community transmission, and
- the level of service delivery compromise due to impact on staffing levels.

Measures taken under EMPs in response to increased case numbers

Following the re-opening of the state's borders the rapid increase in case numbers due to the emergence of Omicron as the dominant variant meant the health system had to quicky adapt and respond to this challenge. DoH was able to adapt its management strategies quickly and effectively guided by the EMPs. The THS regions and/or major hospitals escalated and de-escalated consistent with the escalation management plan triggers, and implemented operational responses consistent with the escalation level in place as the time.

As noted above, these EMPs are part of the broader COVID-19 emergency management planning that has helped guide Tasmania's health system response throughout the pandemic.

Some key measures undertaken as part of the EMPs escalation framework following the reopening of Tasmania's borders included (but were not limited to):

- standing up of external triage areas at emergency departments;
- the use of P2(N95) masks and protective eyewear for clinical areas;
- restrictions for unvaccinated visitors to THS hospitals;
- enhanced visitor screening and restrictions;

- testing of staff working in COVID-19 designated areas;
- the commencement of rapid antigen testing for emergency department patients and PCR testing of all patients admitted overnight;
- the establishment of a staff hotline to provide support to staff identified as close contacts or COVID positive; and
- increased testing of staff in high-risk setting or scenarios (e.g. staff with exemptions as discussed further below).

Health Screening

As part of the broader COVID-19 response DoH also has in place (implemented as part of Level I escalation measures) health screening for people entering DoH health services facilities (including staff, visitors, patients, students, contractors and volunteers).

Health screening aims to assess and manage the risk posed by staff members, patients, and visitors to health services facilities of spreading COVID-19 into and within a facility. This is undertaken via a Health Screening Questionnaire (HSQ), which contains both health screening and contact tracing capability. The questions within HSQ are adapted from time to time to capture current public health Directions and other legislative and policy requirements.

Elective Surgery

The increase in COVID-19 cases in January 2022 following the re-opening of the state borders presented some challenges for the state's elective surgery program. However, strategies were put in place, in line with the escalation stages within the EMPs, to ensure urgent elective surgery continued to be delivered. These strategies included, for example:

- moving outpatient services to Telehealth where clinically appropriate;
- reduction in outpatient activity to ensure the continuation of emergency and inpatient care;
- review of surgical services to ensure maintenance of emergency surgery and inpatient services; and
- continuation of existing outsourcing arrangements with private hospitals.

As a result, there were only 79 fewer surgeries performed in January 2022 compared to January 2021 (noting January is always a lower throughput month for elective surgery).

Tasmania was the last jurisdiction in Australia to apply elective surgery restrictions and the first to lift the restrictions. Tasmania has delivered more elective surgeries in February this year than last February, despite managing changing COVID-19 escalation levels in our hospitals.

Importantly, elective surgeries continued at all of the State's major hospitals, with only minor impacts on waiting list targets in January and February at the RHH, LGH and the North West Regional Hospital. The Mersey Community Hospital, in fact managed to continue to reduce their elective wait lists during January and February, which is no small feat.

Tasmania is on track to deliver more surgeries this year, than in 2020-21. Importantly, DoH have improved the public elective wait list by over 2,200 patients compared to this time last

year, and over boundary lists have reduced by 1,746, indicating we are targeting over boundary patients.

DoH remains on track to deliver the goal of the Four Year Elective Surgery Plan, ensuring most Tasmanians are treated within clinically recommended timeframes by June 2025.

Workforce

The COVID-19 response has required many areas to draw on the same workforce pool to deliver a variety of services and initiatives. For example, the State's clinical workforce has been widely used across COVID-19 testing clinics, the COVID-19 vaccination program, COVID@home, hospital and other health services (both in terms of the COVID-19 response and 'business as usual' services).

The EMPs include strategies designed to free up workforce capacity where required, to address workforce shortages relating to the COVID-19 pandemic. This include shortages due to increased demand for hospital services; furlough of staff who are positive COVID-19 cases or as close contacts; and/or need to make alternative work arrangements to protect vulnerable staff (i.e. those staff identified as being at higher risk of severe illness if they were to contract COVID-19).

Such strategies include:

- DoH Register of Health Professionals Agency (Medical, Nursing, Allied Health);
- utilising the student workforce across all disciplines;
- accessing the recently retired workforce, including via the national Australian Health Practitioners Regulation Agencies pandemic sub-register arrangements. (The sub register was implemented to support access to surge workforce where required in the pandemic response, and includes recently retired doctors, nurses, midwives, pharmacists, Aboriginal and Torres Strait Islander Health Practitioners, and allied health professionals);
- redeploying staff (including options for clinical staff in non-clinical roles); and
- identifying staff with previous ICU experience.

The EMP also include guidance regarding protecting vulnerable staff, including identification and appropriate management of such staff, in accordance with state and national guidance. For example, vulnerable staff not entering COVID-19 isolation areas, consideration of alternative duties, and/or working from home arrangements.

In addition to the strategies and guidance provided in the EMPs, DoH has implemented strategies to support staffing capacity during the COVID-19 response. These have included (but are not limited to):

- increasing staffing by 840 FTE (as time of borders re-opening, now by 872 FTE) since July 2020;
- upskilling workforce to free up clinical capacity (such as introduction of the expanded specimen collection workforce) and to help ensure clinical staff can be allocated to areas that enable them to best use their full scope of practice;

- broadening scope of practice (for example, enabling paramedics to provide COVID-19 vaccinations);
- redeployment of clinical staff (for example Child Health and Parenting Services nurses were seconded to support the COVID-19 vaccination roll-out to children aged 5 to 11 years); and
- enabling critical workers who are close contacts to apply for exemption from the Regional Health Commander to return to work (if granted, the exemption only applies for the purpose of travelling to and from work and while at work).
- DoH has, and continues to, support its workforce during the pandemic, and recognises the invaluable work and dedication of its workforce through-out the pandemic response. Supports to workers include (but are not limited to):
- access to COVID-19 leave for a number of situations (including where the employee has contracted COVID-19 and has exhausted their personal leave entitlements; or the employee is required to provide care or support to a relative or a member of their household who has contracted COVID-19);
- staff wellbeing programs;
- access via the DoH intranet to a range of health and wellbeing information;
- flexible working arrangements;
- implementation of COVID-19 Safe Workplace Plans across DoH, which include strategies to help minimise risk of COVID-19 exposure and transmission for DoH staff (and others entering DoH work environments); and
- access via the DoH Employee Assistance Program to free confidential, independent, and professional counselling services, through a number of providers for staff and/or their immediate family members.

Intensive Care Unit (ICU) Capacity

As previously outlined, modelling based on the Delta variant (as the dominant variant at the time) was used to help inform hospital capacity planning ahead of the re-opening of the state border. As such, DoH's preparedness included planning and investment to ensure significant ICU surge capacity was available. This included surge capacity of up to 114 ICU beds (as noted earlier in this section) and 367 ventilators.

A statewide COVID-19 ICU Surge Capacity Plan (the ICU Plan) was also developed, which aligns with other service-level EMPs. In accordance with the Australian and New Zealand Intensive Care Society COVID-19 Guidelines, the ICU Plan provides for a phased and tiered response based on the impact of COVID-19. It includes strategies to reduce routine demand, and increase capacity infrastructure, increase associated equipment and consumables including ventilators, and increase staffing and workforce requirements.

The emergence of the more highly transmissible, but generally less severe Omicron variant coincided with the opening of Tasmania's borders. While the different epidemiology of Omicron has resulted in less demand for ICU beds than predicted (as at 24 March 2022, Tasmania has the lowest rate per capita of ICU admissions compared to other states and territories) the planning and investment in hospital capacity, along with DoH's ability to be

flexible and quicky adapt to emerging situations, has positioned the Tasmanian health system to continue to respond effectively to challenges posed by the pandemic.

Pharmaceuticals stockpiles

Ahead of the re-opening, Tasmania's hospitals held $13.4 million worth of medications; an increase from $5.8 million prior to the pandemic. This meant that for the majority of medications, hospitals would be able to continue to provide acute care, including keeping the state's ICUs running for two to three months, even if supply chains were interrupted.

Attachment G - National Framework for Managing COVID-19 in Schools and Early Childhood Education and Care

National Framework for Managing COVID-19 in Schools and Early Childhood Education and Care

January 2022

In 2019, Australian Governments set out our shared vision for Australia's education system in the Alice Springs (Mparntwe) Education Declaration. Our vision is for a world class education system that encourages and supports every student to be the very best they can be, no matter where they live or what kind of learning challenges they may face. Since Term 1 2020, our children have experienced unprecedented challenges, as they live and learn in a world with COVID-19.

Evidence throughout the COVID-19 pandemic continues to demonstrate the vast majority of children who develop COVID-19 experience mild disease of short duration. This National Framework for Managing COVID-19 in Schools and Early Childhood Education and Care (ECEC) aims to ensure children can return in Term 1 2022 and continue to attend ECEC, primary and secondary school, and outside of school hours care in the context of COVID-19. The Framework also complements ongoing workforce participation at a time of workforce pressure in many sectors.

Framework Objectives

Keeping ECEC and schools open is important to children's learning, social and emotional development, wellbeing, physical and mental health. Children benefit most from face-to-face learning and further interruptions should be avoided, where possible. ECEC and school closures also often come with significant societal and economic costs, including hidden impacts on the mental health of families, the safety of children and the ability of families to participate in the workforce. Australian businesses and industry are affected in instances where families are unable to attend work due to ECEC and school closures, which can create ongoing disruptions to Australia's ability to respond to and recover from the COVID-19 pandemic.

With high levels of community transmission, COVID-19 transmission will occur in education settings and contribute to overall levels of community transmission. While this will present challenges for both staff and students, the National Cabinet agreed ECEC and schools are essential services and their ability to operate and remain open should be prioritised above other community settings where disease transmission occurs.

The objectives of this Framework are to:

- Protect vulnerable children and staff at higher risk of severe disease within ECEC and schools, including those with disability or severe chronic health conditions.
- Minimise disruption to face-to-face learning from COVID-19 transmission in ECEC and schools, because of the mental and physical health, and social development advantages from ECEC and school participation.
- Minimise broader community transmission and keep it within the capacity of the health system.
- Minimise the broader workforce disruptions for parents and carers.

Framework Approach

While the Framework's objectives and guiding principles are predominantly aimed at ensuring national consistency, specific measures will be implemented through individual State and Territory operational plans and through localised arrangements within ECEC services and schools. These measures will be updated on an ongoing basis as local and international evidence and operational research on Omicron and other variants of concern increases.

Australia's Omicron epidemic is expected to peak in individual jurisdictions at different times in the first weeks and months of 2022. State and Territory operational plans will consider local outbreak trajectories and local health system capacity. While the timing and specific implementation arrangements of jurisdictions may differ, the principles agreed to in this Framework form a consistent basis for State and Territory operational planning and support continuity of education in Term 1 2022 and beyond.

Early childhood learners have experienced similar disruption to school-aged students, noting some childcare and preschool services are co-located with schools. Ongoing access to quality early childhood education and outside of school hours care is necessary for the best start to learning and for many families to participate in the workforce. It is expected the application of these principles will need to be tailored for this sector. The Commonwealth will undertake further work with States and Territories to address the unique circumstances of the ECEC sector, for example guidance on workforce and regulatory requirements that maintain the primacy of child safety.

The principles in this Framework recognise different education settings are impacted differently by COVID-19:

- Children aged 0 to 4 years are not currently eligible for COVID-19 vaccination, reinforcing the need to prioritise prevention strategies in ECEC settings. It is acknowledged that depending on both eligibility for vaccination and vaccination rates, there may be a mix of vaccinated and unvaccinated children in any given education setting.
- For most of Term 1 2022, the difference between primary and secondary school settings will be more marked as it will take time to build strong vaccination coverage of children aged 5 to 11 years.
- In secondary schools, the majority of the student and teacher population is already double vaccinated. This means secondary school environments are currently more comparable to other community settings and workplaces, noting that boosters are progressively becoming available for ages 18 and over but are not yet approved for any groups under 18.
- In every education setting, there will be some subsets of the population, like in the broader community, who are at higher risk of severe disease. A proportionate response in individual State and Territory operational plans and

through localised arrangements within ECEC services and schools will see additional supports provided in these settings and population groups.

National Guiding Principles for Managing COVID-19 in Schools and Early Childhood Education and Care

 **Principle 1** **ECEC services and schools are essential and should be the first to open and last to close wherever possible in outbreak situations, with face-to-face learning prioritised***	 **Principle 2** **Baseline public health measures continue to apply**	 **Principle 3** **No vulnerable child or child of an essential worker is turned away**	 **Principle 4** **Responses to be proportionate and health risk-based**	 **Principle 5** **Equip ECEC services and schools to respond on the basis of public health advice and with support from public health authorities where required**	 **Principle 6** **Wellbeing of children and education staff to be supported**
Children are entitled to an education. ECEC and schools are essential and should remain open wherever possible to maximise their wide-ranging benefits for children, the community and the economy. By the start of Term 1 2022, school and ECEC workers will be designated as essential workers in jurisdictions. Education systems should support schools to ensure individual student learning can continue through periods of isolation-related absenteeism Arrangements should seek to maintain a reasonable workload for teachers and educators, particularly when balancing face-to-face and remote learning environments. Remote learning should be considered as a time-limited last resort within schools experiencing widespread COVID-19 infections or staff absenteeism that impacts the school's operations.	ECEC services and schools should practice and promote evidence-based COVID-Safe behaviours at all times, irrespective of the level of COVID-19 community transmission. While recognising the exact combination and nature of COVID-Safe behaviours – such as hand washing, face masks, physical distancing and ventilation – in ECEC may look different to school settings, it is important for all education settings to adopt a multi-layered prevention strategy and, in all cases, persons must stay at home if experiencing COVID-19 symptoms or if required to isolate in line with the jurisdiction's health advice. Vaccination of all eligible persons is strongly encouraged.	Localised school planning must ensure a minimum offering of on-campus supervised learning is available at all times in the school term to the children of parents and carers who need to work and cannot support remote learning at the same time (e.g. frontline and essential workers), and for vulnerable children and young people. While ECEC services may sometimes close, during times of reduced service levels ECEC services should similarly prioritise children using these criteria. Provision for this has been standard practice throughout the COVID-19 pandemic.	All responses to COVID-19 outbreaks in ECEC and schools should be proportionate and informed by the latest health advice, practical implementation requirements and the individual risk profile of different education settings. Responses will need to evolve to adapt to the changing nature of the pandemic. Response settings may need to be more stringent in those ECEC services and schools where there are more children at high risk of severe disease, including children with disability or severe chronic health conditions, or unvaccinated, and public health authorities will prioritise these settings in line with a proportionate and health risk-based approach. Clear and timely communication to members of the ECEC service or school community should explain these considerations when responses are implemented, for example, school or class-based notifications to families.	Education systems will continue to support ECEC services and schools as appropriate to implement State and Territory operational plans, which will be informed by public health authorities and updated to reflect the changing nature of COVID-19 as required. Plans will consider any additional training or capacity building needed. Public health authorities may intervene where an outbreak is beyond an ECEC service or schools' capacity to respond. Data collection and sharing will be critical. Communication between ECEC services or schools and public health authorities, and data collection and sharing at the local level, will enable States and Territories to ensure local consistency, and determine the relationship between transmission of COVID-19 in ECEC services or schools and broader community transmission, and adjust jurisdictional plans accordingly.	The health, safety and wellbeing of children, teachers and their families is critical to the successful operation of ECEC and school systems and the delivery of quality education. ECEC and schools should continue to meet regulatory requirements, including through addressing workforce shortages, wherever possible, and noting the Commonwealth will undertake further work with States and Territories on ECEC workforce requirements. Staff and student wellbeing will continue to require close attention and support. Clear, consistent and timely communication should continue to be a priority, particularly about the step-change that likely transmission of Omicron in ECEC services and schools requires, giving certainty and confidence to children, students, staff and their families about the COVID-19 response measures outlined in State and Territory operational plans.

** The Queensland and South Australian Governments have delayed the start of their school years by two weeks due to the forecast peaks of the virus in the states. These schools will still be open for the children of essential workers.*

Attachment H - School Reopening 20 January 2022

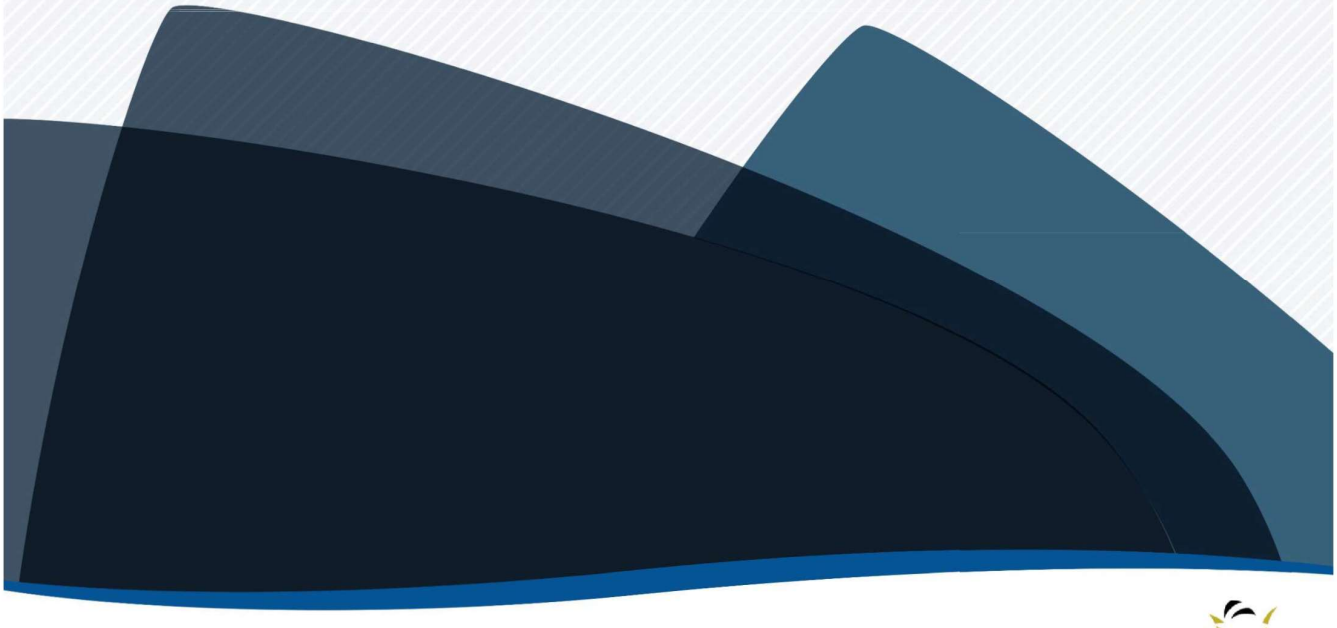
ASPIRATION GROWTH COURAGE RESPECT

DEPARTMENT OF EDUCATION
learners first

Tasmania's Operational Plan for Managing COVID-19 in Early Childhood Education and Care

To be in place for the first 5 weeks of Term 1*

* Plan to be regularly reviewed to ensure it remains contemporary, complies with Public Health advice and continues to provide the best protection for children.



Tasmanian Government

Principle 1 - ECEC Services and schools are essential and should be the first to open and last to close wherever possible in outbreak situations, with face-to-face learning prioritised

Services remain open unless it is unsafe to do so or they are directed by Public Health or other regulatory body to close.

Where possible, partial closure for ECEC is preferred over full closure.

Where the service, or a part of the service, has closed, it is because educator to child ratios cannot be safely met. Services are encouraged to explore all options to remain open.

Educators are essential workers and can continue to work unless they are symptomatic, a positive case or a close contact.

To support this, services will have their COVID-19-Safety Plans and case and outbreak management plans in place.

COVID safe behaviours are clearly communicated and encouraged for all staff and families.

Services will conduct COVID safe risk assessments before undertaking excursions.

Mandated vaccination for all staff will continue, and boosters are encouraged.

The Australian Government has allowed ECEC services to waive gap fees for families who access the Child Care Subsidy (CCS) in the event that the area they are in is declared a COVID-19 hotspot by the Commonwealth for more than seven days.

ECEC services have business continuity plans in place.

Long Day Care may provide remote learning for 4-5 year-olds depending on the services' individual capacity.

Outside School Hours services that are co-located in schools are to be aware of the school's COVID Safety plan and outbreak management plan.

An Outside School Hours Care service that operates on a school campus will be required to close if the school is directed to close.

Family Day Care (FDC) services and educators have risk assessments in place and COVID Safe Plans. FDC educators minimise contact with family members/visitors during operational hours. An FDC educator cannot provide their usual service if they, or a member of their immediate household, is quarantining or isolating.

In Home Care (IHC) educators cannot provide their usual service if they, or a member of their immediate household, is quarantining or isolating.

Principle 2 – Baseline public health measures continue to apply

COVID Safe measures will be in place across all services, in line with public health advice.

All services have a range of complementary health measures in place and actively encourage COVID Safe behaviour.

Stay Home if Unwell

Children, staff and families must stay home if unwell or if they have symptoms of COVID-19.

Children, staff and families must stay home if isolating if they have COVID symptoms or quarantining as a household or household-like close contact.

If a child becomes symptomatic while in education and care, isolate the child and contact families to collect them as soon as possible.

If a staff member is symptomatic, they must leave the service immediately, get tested and follow Public Health advice.

Handwashing and Hygiene

Increased hygiene and handwashing:

- Regular handwashing is promoted, and handwashing and sanitising products are available in all services.

Cleaning

Increased COVID-19 safe cleaning is in place at all services; including

- Additional disinfecting of high touch point surfaces.

Physical Distancing

Physical distancing and density requirements help to reduce the spread of Covid-19.

- All staff and families entering the service must stay 1.5 metres apart and abide by density requirements, such as maximum room capacity advice.
- Minimise cross contact where possible:
    - Keep children within their cohorts
    - Keep educators with the same cohorts of children

Facemasks

Facemasks are required to be worn indoors by all staff and families entering the service.

Each service has a supply of surgical masks on reserve.

Rapid Antigen Tests (RATs)

ACOVID Care Package for ECEC services will include an initial supply of RATs for use by ECEC staff if they are symptomatic.

Ventilation

Opening windows and doors to increase natural airflow. Education and care will happen outdoors where possible.

Vaccination

Vaccination is the best way to reduce the severity of COVID-19 symptoms and the likelihood of contracting the virus.

- Vaccination is mandatory for all workers in the ECEC sector.
- Children under 5 years old are not vaccinated. Evidence says that their symptoms are milder and they are less likely to develop severe illness.
- Children over 5 years old are strongly encouraged to be vaccinated.

Parent, Carer and Visitor Access

Minimising the number of people who come inside buildings helps to minimise transmission.

- Use the Check-in TAS app.
- Parents and carers may enter buildings where necessary, but must wear a mask
- Drop-off and pick up times are based on risk assessment and taking into consideration individual context/s.

Excursions

Services will conduct COVID-19 safe risk assessments before undertaking excursions.

Communications

Communication strategies are in place for contacting close contacts.

Principle 3 - No vulnerable child or child of an essential worker is turned away

Children who are vulnerable, or children of essential workers, have priority for education and care.

Medical management plans and risk minimisation plans are in place for children with specific health care needs.

Risk minimisation plans are in place for educators with medical exemptions and other health conditions.

Principle 4 - Responses to be proportionate and health-risk based

All responses to COVID-19 outbreaks will be guided by the latest advice from Public Health.

ECEC services are continuing to communicate regularly with families.

Stay Home if Unwell

Children, staff and families must stay home if they have symptoms of COVID-19 and follow Public Health advice.

ECEC services will be provided with two Rapid Antigen Tests per educator to support testing of symptomatic educators during Feb/March.

Positive cases can return to their ECEC setting after 7 days if they have no symptoms, or 10 days if they still have symptoms. They must be symptom free prior to returning.

ECEC services must inform all parents, carers and staff where a positive case has attended and direct them to monitor for symptoms and follow Public Health advice.

Principle 5 - Schools and early childhood services will be equipped with public health advice

Equip ECEC services and schools to respond on the basis of public health advice and with support from public health authorities where required.

The Regulatory Authority (RA) will continue to work with Public Health to support ECEC services.

The RA will inform Public Health of daily notifications of positive cases. Public Health will support services if an outbreak happens.

ECEC services will consider any additional training and capacity building that is needed to support staff.

Principle 6 - Wellbeing of children and education staff to be supported

Services continue to prioritise staff and children's wellbeing.

Requirements under the *Education and Care Services National Law Act and Regulations* ensure that children's health, safety and well-being are met.

Work Heath and Safety regulations relating to a safe workplace continue to be met as a high priority.

Staff and families are provided with relevant and current information around COVID Safe requirements.

Workforce planning is ongoing, including communication between the State and Commonwealth on workforce initiatives and funding opportunities.

COVID Safety in Schools Plan

To be in place for the first 5 weeks of Term 1*

KEEP IT COVID safe

Tasmanian Government

Educators, School-based Staff and Early Childhood Education & Care Staff

- Leverage wider pool of educators (trained departmental and retired staff) to assist with teaching continuity, in the first instance and if required.
- Exemption from close contact quarantine protocols to attend work, unless symptomatic or a diagnosed case.
- Undertake Rapid Antigen Tests when symptomatic.
- Access to a supply of masks, which must be worn when teaching indoors, except if clear enunciation is required.

Schools and Early Childhood Education & Care

- Provided a supply of masks for educators and children/students.
- Supplied with Rapid Antigen Tests (enough for two per student, per week, should they be required).
- Virtual Learning approaches in place to support students required to isolate.
- Outbreak Management Plans in place. A class outbreak is determined when five or more cases occur in students and staff from a class within 7 days of each other, with Public Health to support if and when required. In most circumstances when this occurs, staff and students from that classroom would be tested immediately and then every 2 - 3 days, quarantining only if symptomatic or positive.
- Increased ventilation.
- Outdoor learning to be optimised.
- Breaks to be staggered where required.
- Increased COVID-19 safe cleaning is in place at all schools.
- **Dedicated education COVID liaison for schools, early childhood education & care to contact:**
  P: 1800 816 057 E: COVID19support@education.tas.gov.au
  W: www.education.tas.gov.au

School Sport, Activities and Excursions

- To progress as normal, with COVID safe practices in place.
- Masks are not worn when outdoors.
- Masks are not worn when undertaking vigorous physical activity indoors.

Vulnerable students

- Schools will prepare a personalised approach to support students with disability, complex health needs or who are medically vulnerable, prior to the student commencing school, in consultation with parents/carers.

	Early Childhood Education & Care	Primary School K - Year 6	Secondary School Year 7 - Year 12
Back to School COVID Care	Back to School COVID Care package provided to parents, with two tests to use if child/student develops symptoms.		
Face masks	Face masks are not required for children/students.	While not mandatory, masks will be available at schools for students who choose to wear them.	Masks are mandatory for students in indoor settings and will be supplied by the schools.
Ongoing testing	Ongoing tests (up to two per child/student, per week) to be supplied by schools to students to take home if symptomatic.		
Close contact definition	Children/students are not defined as close contacts in a classroom exposure unless advised by Public Health directly to the school or services.		
Case notifications	If a case is detected in the classroom or services, parents and carers will be notified and asked to monitor child/student for symptoms and test if symptoms develop.		
Quarantine requirements	Children/students who are close contacts of a household case, must follow the quarantine guidelines. Quarantine for 7 days and test on days 1 and 6.		
COVID-19 case	If a child/student tests positive, they must quarantine for at least 7 days and return to school once symptom free.		

Keep practising these **COVID safe behaviours**

wear masks where required

symptoms? get tested

stay home if sick

stay up to date

* Plan to be regularly reviewed to ensure it remains contemporary, complies with Public Health advice and continues to provide the best protection for children.

Version 1.0 | 20 January 2022

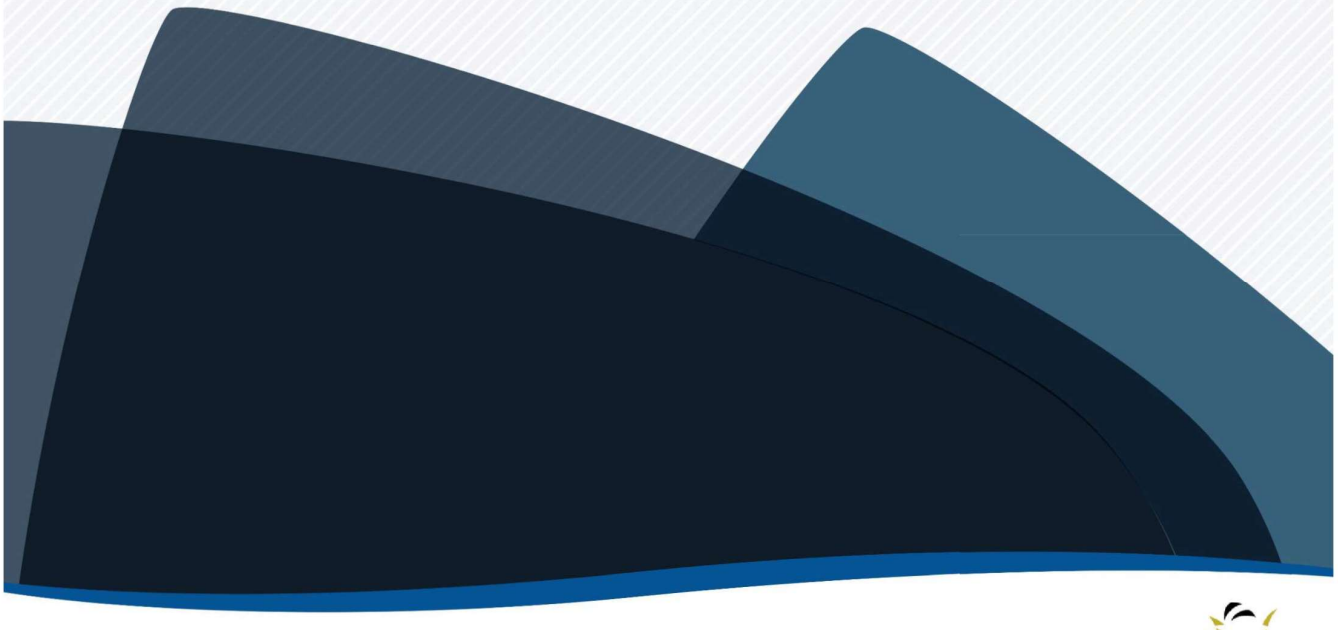
ASPIRATION GROWTH COURAGE RESPECT

DEPARTMENT OF EDUCATION
learners first

Tasmania's Operational Plan for Managing COVID-19 in Schools

To be in place for the first 5 weeks of Term 1*

* Plan to be regularly reviewed to ensure it remains contemporary, complies with Public Health advice and continues to provide the best protection for children.



Tasmanian Government

Principle 1 - ECEC services and schools are essential and should be the first to open and last to close wherever possible in outbreak situations, with face-to-face learning prioritised.

Learners

To keep our learners and staff as safe as possible, COVID Safe measures will be in place in our schools in line with public health advice. These measures build on what schools are already doing.

COVID Safe measures include:

- Hygiene and physical distancing;
- Vaccination;
- Ventilation and use of outdoor learning environments;
- Safe site management;
- Face masks; and
- Outbreak management plans.

All students should be at school unless they:

- are unwell or have symptoms of COVID-19;
- have medical advice which states they are unable to return to school due to an ongoing medical condition; or
- have been directed to stay home by Public Health.

Schools will continue to support students and young people with disability and those who are medically vulnerable on an individual basis, working closely with parents and carers. Schools will contact families of students with disability who have complex health needs within the first teaching week to discuss updating their individualised learning plan as a priority.

Parents can contact schools to discuss their child's individual learning plan.

Launching into Learning (LiL)

LiL will not occur for the first five weeks of Term 1 to enable LiL teachers to support teaching and learning across the school.

Staff

The Department of Education is proactively reviewing its workforce to identify pressure points and put in place strategies to cover expected absences. This includes:

- contacting recently retired school staff
- revisiting long leave requests
- deploying staff from non-school areas, including both registered teachers and general staff; and
- using relief staff.

The Department of Education, the Tasmanian Catholic Education Office and Independent Schools Tasmania will advise schools on strategies to manage workforce absences to ensure face-to-face learning continues.

Virtual Learning

- The DoE Virtual Learning Centre (VLC) is an online learning service accessible by families, principals, teachers and learners.
- Where possible, schools will support learners to come to school and learn under the supervision of their classroom teacher. When this is not possible, schools will communicate to parents about the resources to support learners and this may include the VLC.
- During Term 1, all learners needing access to VLC will be supported to access high quality online programs focussing on core areas of reading, writing, numbers, physical activity and wellbeing.
- All learners in Years 11 and 12 will have access to a wide range of courses through Virtual Learning Tasmania (VLT) and online tutorials in English and Maths.
- Essential communication will be provided to all staff regarding access to virtual learning resources prior to students returning.

The Department of Education is working with the Catholic and Independent school sectors to align the approach to virtual learning. A separate approach will be in place for Support Schools.

Principle 2 - Baseline public health measures continue to apply.

COVID Safe measures will be in place across all schools in line with public health advice, with all schools actively encouraging COVID Safe behaviour.

Attendance and Cleaning

Students, staff and visitors must stay home if unwell or if they have symptoms of COVID-19.

Students, staff and visitors must stay home if isolating if they have COVID or quarantining as a household or household-like close contact.

All schools will continue increased hygiene and handwashing. Hand washing and sanitising product are available in all schools.

All schools will continue increased COVID-19 safe cleaning including additional disinfecting of high touch point surfaces, increasing ventilation following a positive case.

Physical Distancing

Physical distancing and density requirements help reduce the spread of COVID-19.

- All staff and visitors must stay 1.5 metres apart and comply with density requirements such as maximum room capacity advice. Staff will limit unnecessary mixing.
- COVID-safe measures will be applied in staff rooms and offices, and students will be supported to physically distance *where possible*.
- Schools will limit unnecessary mixing between class groups where this is not required for learning.

Facemasks

Facemasks are required indoors by all staff, parents, visitors and students in secondary schools.

- Primary school students are not required to wear masks but they will be available at the school should they choose to wear them.
- Staff, parents and visitors to school sites are **required** to wear a mask indoors.
- Each school has a supply of surgical masks for staff and students.

Ventilation

Natural airflow will be increased by opening windows and doors and learning outdoors where possible.

- Windows in Government schools have been assessed and repaired where needed to ensure they can be opened.
- All Government schools have been provided with air purifiers to assist with increased ventilation where required.
- Periodic maintenance of air conditioners and air purifiers is ongoing, including the replacement of air filters.
- Work is occurring in Government schools to identify further opportunities for outdoor learning and to enhance existing outdoor learning areas.

Vaccination

Vaccination is the best way to reduce the severity of COVID-19 symptoms and the likelihood of contracting the virus.

- All DoE staff must be vaccinated and are supported to be vaccinated.
- A primary course involves two doses for most staff.
- All staff will be supported to receive booster doses.
- Students are strongly encouraged to be vaccinated.
- Contactors and volunteers must be vaccinated to work on Government school sites.
- Schools will not treat students differently based on their vaccination status.
- Non-government school sectors are responsible for setting their own vaccination requirements as informed by Public Health advice.

Outbreak Management

COVID safety plans are being updated. Specific outbreak management plans for the first 5 weeks of schools are being updated in accordance with Public Health advice and communicated to schools. A class outbreak is determined when five or more cases occur in students and staff from a class within 7 days of each other with Public Health to support if and when required. In most circumstances when this occurs, staff and students from that classroom would be tested immediately and then every 2 - 3 days, quarantining only is symptomatic or positive.

Parent, Carer and Visitor Access

Minimising the number of people who come inside school buildings helps minimise transmission.

Parents and carers must be vaccinated to attend government school sites and must wear a mask indoors and should only enter school buildings where necessary. All adults must continue to use the Check-in TAS app.

Drop off and / pick up for students will be streamlined - stop, drop and go - and schools will advise on meetings with teachers.

Assemblies and Performances

Restrictions may apply due to Public Health requirements such as density limits. This will include limiting assemblies in Government schools in the first five weeks of Term 1. Outside learning is encouraged where possible.

Mixing of Learner Groups

All schools are encouraged to limit mixing between different student groups where this is not required for learning purposes. Schools are encouraged to limit unnecessary mixing between staff where this is not required for learning.

Principle 3

No vulnerable child or child of an essential worker is turned away

Term 1 is commencing on time with all schools open for face-to-face learning.

The Government is coordinating efforts across agencies to ensure that all Tasmania's children and young people are safe, well and actively engaged in learning.

The Department of Education works closely with other agencies to support vulnerable students to access, participate and engage in their learning.

School Support and Wellbeing Teams will continue to support the wellbeing of all students, with a particular focus on those students with diverse and complex needs requiring coordinated support.

It is a priority that school sites across all sectors remain open for vulnerable children and children of essential workers to attend. However, they should not attend if they are feeling unwell, have medical advice which states they are unable to return to school due to an ongoing medical condition, or they have been directed to stay home by Public Health.

Ongoing guidance and advice will be provided to schools based on Public Health advice.

Principle 4 - Responses to be proportionate and health-risk based.

This plan applies for the first five weeks of Term 1. This will allow proportionate adjustments to be made in the second five weeks of Term 1 based on the extent of community transmission and increased vaccination rates of students.

The plan for weeks 1 to 5 of Term 1 will be communicated to learners, parents, families and staff in advance. It will include advice on when their school or learning may look different.

Communication with students and families will come from their school. For Government schools, this will be supported by DoE advice and messages.

Back to School COVID Care Package

All learners will receive a COVID-19 Care Package to support their return to school. This will include:

- an initial two Rapid Antigen Tests (RATs) per student, to be used if symptomatic
- masks; and
- important practical information for learners and parents/carers.

These will be provided to families through their child's school before school returns.

Schools will also be supplied with Rapid Antigen Tests for use by staff if they are symptomatic.

Schools will also be provided with additional supplies of RATs for use by students and staff if they are symptomatic.

Stay Home if Unwell

Students, staff and visitors must stay home if unwell or if they have symptoms of COVID-19.

Confirmed Cases and Outbreak Management

Parents/carers and staff will be informed if there is a case in a class and will be asked to monitor their child for symptoms, test if needed and stay home if unwell. Unless otherwise advised, the class will remain open for learning and students who are well should continue to attend.

Specific outbreak management plans for the first 5 weeks of schools are being updated in accordance with Public Health advice and communicated to schools. A class outbreak is determined when five or more cases occur in students and staff from a class within 7 days of each other with Public Health to support if and when required. In most circumstances when this occurs, staff and students from that classroom would be tested immediately and then every 2 - 3 days, quarantining only is symptomatic or positive. Notifications to families regarding cases and outbreaks will utilise existing communication channels used by schools.

The Department has continued to support a number of students and young people with disability to continue to learn throughout the COVID pandemic, including making adjustments to learning and implementing Medical Action Plans where appropriate.

Students with disability with complex health needs will continue to be supported on an individual basis, working closely with parents and carers as necessary. This could include additional medical advice within the student's medical action plan.

Principle 5 - Equip ECEC services and schools to respond on the basis of public health advice and with support from public health authorities where required

The Department of Education will support schools to revise their COVID plans, according to Public Health advice.

Staff, learners and their families will be provided with clear advice on what to do if they are considered a close contact in line with Public Health advice.

DoE will assist schools to distribute RATs for students for the first week of Term 1, and with further supplies for use when confirmed cases occur in a school.

A dedicated support team has been established in the Department of Health. Staff will assist DoE, CET and IST and schools to manage the distribution of RATs, testing and implementation of Outbreak Management Plans.

Confirmed cases in schools will be managed in accordance with Public Health advice.

Government schools will communicate with Early Childhood Education and Care providers who operate on school sites to ensure a co-ordinated approach to managing confirmed cases, in accordance with Public Health advice.

Principle 6 - Wellbeing of children and education staff to be supported

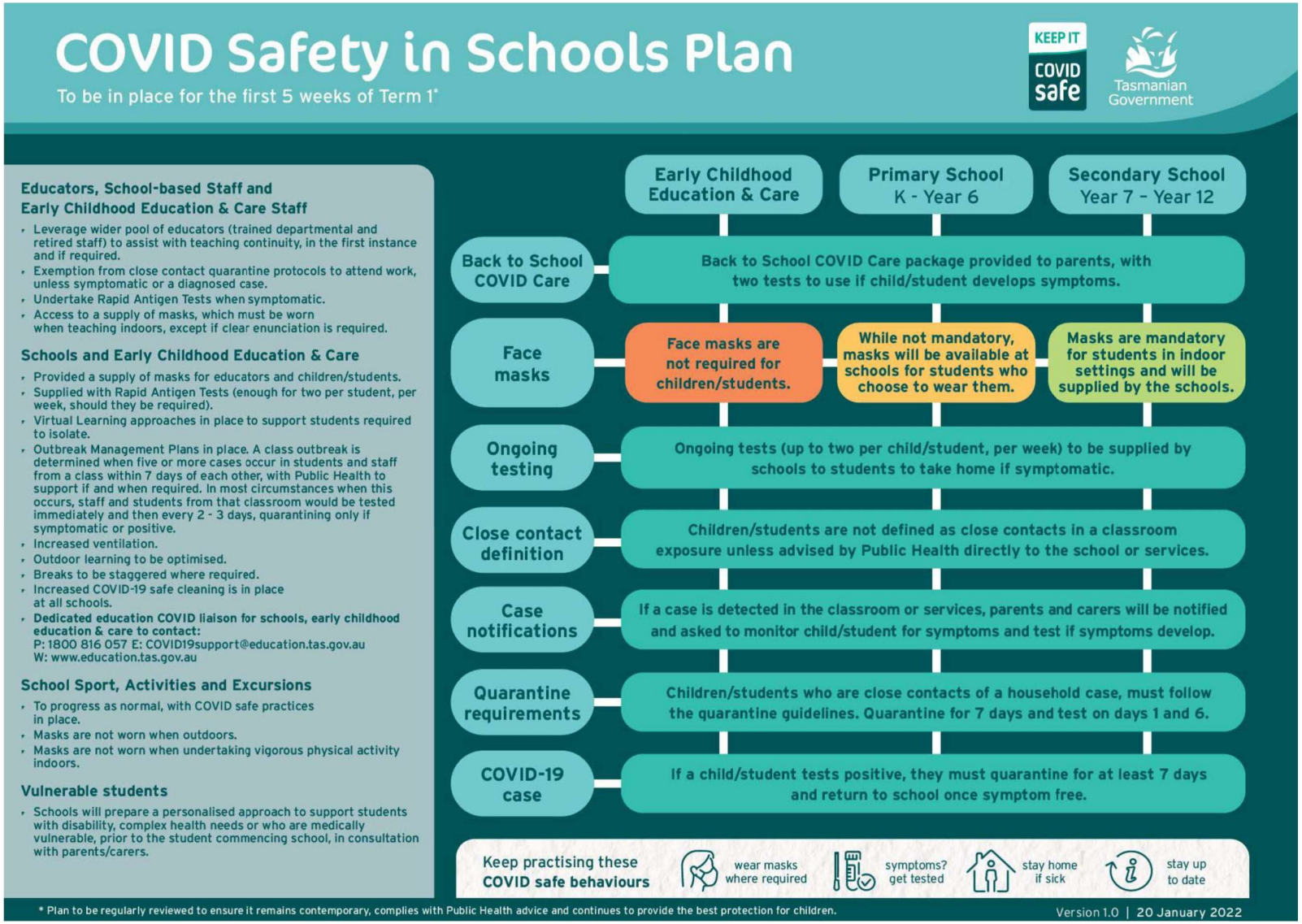
The wellbeing of learners in government schools will be supported by:

- each school's Support and Wellbeing Team monitoring students' wellbeing and determining the required supports to meet each student's individual needs.
- the online *Wellbeing Check-in*.
- the Department's Professional Support Staff teams, including school psychologists, social workers, speech and language pathologists and school nurses who will continue to provide both face-to-face and online support, for students learning on site and from home as required, and
- the Virtual Learning Centre where students and families will be able to access Wellbeing resources.

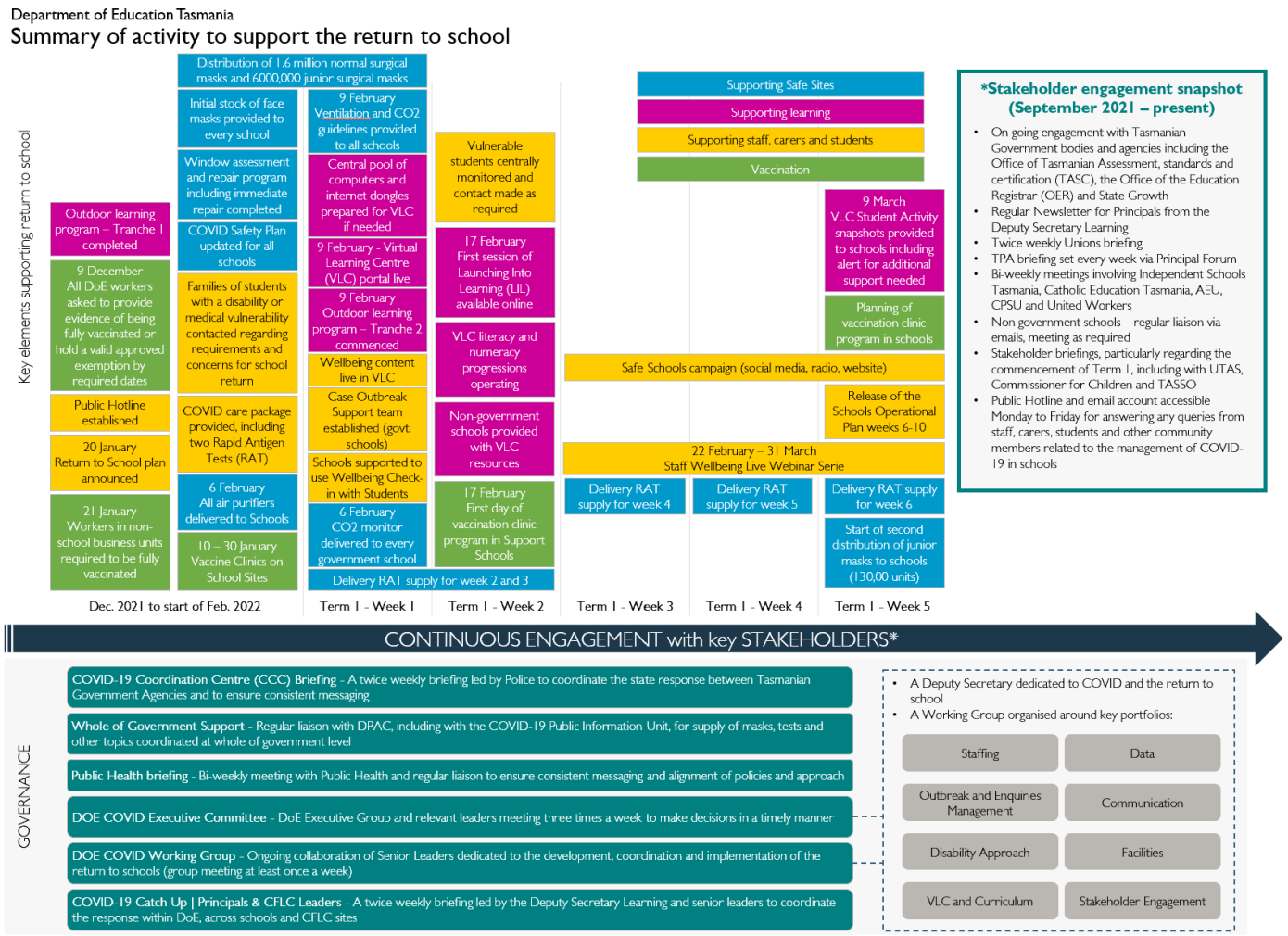
Catholic and independent school sectors also have in place approaches to support the wellbeing of their students and staff.

Staff Wellbeing/Workload

- DoE will provide clear guidance and supports for teaching and learning in different scenarios, with workload principles factored in (*Principle 1*).
- System level workforce planning will occur to support school planning to ensure we can continue to keep learners safe and learning throughout COVID-related staff shortages.
- DoE will communicate clearly with staff on expectations, processes, planning and resources related to COVID, including the resources available to support student learning and wellbeing.
- DoE will communicate leave available to support all staff through COVID-related absences.
- DoE will consistently promote staff mental health and wellbeing, with supports available. This includes guidance and strategies to support principals and line managers in schools to hold staff wellbeing check-ins/conversations and make referrals to supports as needed.


COVID Safety in Schools Plan
To be in place for the first 5 weeks of Term 1*
KEEP IT COVID safe
Tasmanian Government
Educators, School-based Staff and Early Childhood Education & Care Staff
Leverage wider pool of educators (trained departmental and retired staff) to assist with teaching continuity, in the first instance and if required.
Exemption from close contact quarantine protocols to attend work, unless symptomatic or a diagnosed case.
Undertake Rapid Antigen Tests when symptomatic.
Access to a supply of masks, which must be worn when teaching indoors, except if clear enunciation is required.
Schools and Early Childhood Education & Care
Provided a supply of masks for educators and children/students.
Supplied with Rapid Antigen Tests (enough for two per student, per week, should they be required).
Virtual Learning approaches in place to support students required to isolate.
Outbreak Management Plans in place. A class outbreak is determined when five or more cases occur in students and staff from a class within 7 days of each other, with Public Health to support if and when required. In most circumstances when this occurs, staff and students from that classroom would be tested immediately and then every 2 - 3 days, quarantining only if symptomatic or positive.
Increased ventilation.
Outdoor learning to be optimised.
Breaks to be staggered where required.
Increased COVID-19 safe cleaning is in place at all schools.
Dedicated education COVID liaison for schools, early childhood education & care to contact:
P: 1800 816 057 E: COVID19support@education.tas.gov.au
W: www.education.tas.gov.au
School Sport, Activities and Excursions
To progress as normal, with COVID safe practices in place.
Masks are not worn when outdoors.
Masks are not worn when undertaking vigorous physical activity indoors.
Vulnerable students
Schools will prepare a personalised approach to support students with disability, complex health needs or who are medically vulnerable, prior to the student commencing school, in consultation with parents/carers.
Early Childhood Education & Care
Primary School K - Year 6
Secondary School Year 7 - Year 12
Back to School COVID Care
Back to School COVID Care package provided to parents, with two tests to use if child/student develops symptoms.
Face masks
Face masks are not required for children/students.
While not mandatory, masks will be available at schools for students who choose to wear them.
Masks are mandatory for students in indoor settings and will be supplied by the schools.
Ongoing testing
Ongoing tests (up to two per child/student, per week) to be supplied by schools to students to take home if symptomatic.
Close contact definition
Children/students are not defined as close contacts in a classroom exposure unless advised by Public Health directly to the school or services.
Case notifications
If a case is detected in the classroom or services, parents and carers will be notified and asked to monitor child/student for symptoms and test if symptoms develop.
Quarantine requirements
Children/students who are close contacts of a household case, must follow the quarantine guidelines. Quarantine for 7 days and test on days 1 and 6.
COVID-19 case
If a child/student tests positive, they must quarantine for at least 7 days and return to school once symptom free.
Keep practising these COVID safe behaviours
wear masks where required
symptoms? get tested
stay home if sick
stay up to date
* Plan to be regularly reviewed to ensure it remains contemporary, complies with Public Health advice and continues to provide the best protection for children.
Version 1.0 | 20 January 2022

Attachment I – Education and Care and School Operational Plans



Attachment J - COVIDsafe Schools Plan (Wks 6 - 10)

COVID-safe schools plan

Weeks 6–10, Term 1, 2022

Being at school is the best place for our students. The first five weeks of school has shown us that when we work together and have COVID-safe measures in place, our schools can safely stay open and student learning thrives. This is our plan for Tasmanian Government schools for the rest of Term 1, 2022 – to keep our schools safe and make every day of learning count.

KEEP IT COVID safe

Commencing 15 March ▸ Week 6 ▸ Week 7 ▸ Week 8 ▸ Week 9 ▸ Week 10 ▸ **Review and continue future planning**

Early childhood services
(including childcare programs and Out of School Hours Care)

Primary schools
(including childcare programs and Out of School Hours Care)

Secondary schools
(including vocational placements and school-based apprenticeships)

Face-to-face learning will continue with COVID-safe measures in place.

Students with disability that have complex health needs will continue to be supported by their school with individual learning plans.

Regular school and learning activities will continue in a COVID-safe manner.

Testing for COVID-19 when you have symptoms will continue. Students and staff will have access to rapid antigen tests at their school, to use if they have symptoms. If there is a COVID-19 case in your child's classroom, your school will let you know and ask you to monitor for symptoms – you do not need to isolate and can continue going to school. If your child is unwell, please keep them home and get tested.

COVID-19 cases will be safely managed by Public Health. Every school has a dedicated COVID-19 support person, who works closely with Public Health if there are COVID-19 cases. Families will be contacted directly about any COVID-19 impacts at their school.

Learning at home via the Virtual Learning Centre with the support of an online teacher will continue if students need to isolate due to COVID-19. If your child is a household close contact, they can do online learning while isolating at home for seven days. If your child is a COVID-19 case, they can do online learning if they feel well, and return to school if they have no symptoms after seven days.

Workforce planning strategies are in place to ensure there are enough staff in schools.

education.tas.gov.au/COVID-19

▸ *We will continually monitor the situation, make changes as necessary and keep school communities informed.*

Tasmanian Government

Keeping up our COVID-safe measures (they're important)

Vaccination:

Children aged 5+ years will continue to be encouraged to be vaccinated – vaccination is not mandatory for a child to attend school. All Department of Education staff, including volunteers and contractors, are vaccinated.

Face masks:

All adults will continue to wear face masks, however, teachers may remove their masks if required to assist clear communication when teaching (for example, to meet the needs of a student with disability). Primary school students still do not need to wear face masks, but can if they choose. Secondary school students must continue to wear face masks. Medical exemptions apply. Face masks are available at school, if needed.

Ventilation:

Open windows and air purifiers will continue to be used in classrooms.

Outdoor learning:

Schools will continue to take advantage of outdoor learning opportunities.

Physical distancing:

All adults will continue to keep a physical distance of 1.5 metres from each other.

Hygiene practices:

Regular handwashing and sanitising will continue.

Cleaning:

Frequent cleaning will continue, particularly on high-touch surfaces.

Safe site management:

Non-essential visitors will continue to be limited, and schools will regularly review their COVID-19 safety plans.

Groups:

Mixing of students and staff will continue to be limited where possible.

Access the detailed operational plan at education.tas.gov.au/COVID-19

keep it **COVID safe.**

Tasmanian Government

Attachment K – Vaccination Rollout Campaigns

Why I'm Getting Vaccinated
More than 55 Tasmanians (including volunteer fire fighters, bicultural health workers, paramedics, business and tourism operators, general community members as well as educators, health professionals and local government Mayors) were featured in public communications to encourage Tasmanians to vaccinate.
The rolling campaign was run across numerous channels including social media, radio, TV, billboards, posters, print advertising (daily and community news) and promotion on buses.

Super Six
A six-week campaign which aimed to boost Tasmania's first dose vaccination levels past 60 per cent by mid-September 2021. From 23 August 2021, vaccinations were targeted for college students (aged 16 to 18 years old) with assistance from school nurses already familiar with student populations and in alignment with school examination schedules.
The Super Six campaign also targeted vaccination uptake in adults aged 30 to 59 years of age, in accordance with national modelling undertaken by the Doherty Institute at that time which had identified this age cohort (30 – 39 years) as a particular priority for vaccination.
Following the six-week campaign period (in early October 2021), Tasmania's vaccination rate was 61.4 per cent double vaccinated, which represented an almost 10 per cent increase from 20 September 2021 (with 52.9 per cent double vaccinated).

Spring into Summer
Aimed to achieve 80 per cent of eligible Tasmanians double vaccinated by 2 November 2021 and 90 per cent by 1 December 2021 (the first day of summer) and aligned to the requirement for states to achieve an average of 80 per cent of eligible people vaccinated before reopening. At 1 December 2021, 87.8 per cent of eligible Tasmanians had been double vaccinated.

Good Onya Jaydn
"Good Onya Jaydn" commenced on 29 October 2021 to boost vaccination rates among younger Tasmanians. The campaign ran until mid-January 2022 via social media platforms (Facebook, Instagram, YouTube, TikTok and Snapchat) and was supported by walk-in appointment availability in State Community Clinics.

5 to 11 years campaign
Vaccinations for Tasmanian children aged 5 to 11 years commenced on 10 January 2022. In an effort to provide every primary school aged child with the opportunity to have at least one dose of COVID-19 vaccine before going back to school, special children's clinics were established across Tasmania to administer the paediatric Pfizer dose.

These clinics are staffed with nurses trained in paediatric vaccination and accommodate longer appointment times. As the rollout for children aged 5 to 11 years progressed, State Community Clinic locations expanded, with some sites offering walk-in vaccinations.
Children living in regional and rural areas in Tasmania were able to access vaccinations through the Rural Flying Doctors Service mobile vaccination bus, which delivered mobile vaccination clinics to Strahan, Queenstown, Zeehan and Rosebery in early February 2022.

Attachment L – Targeted Business Support Programs

Support for Small Businesses since August 2021

In October 2021, The Government opened the first of two rounds of funding under the *COVID-19 Micro and Small Business Border Closure Critical Support Grant* program, which saw over 4 000 businesses share in more than $73 million in grants to assist with the impacts of COVID-19.

The Government also supported those Southern Tasmanian businesses who were required to go into lockdown as a result of the Lockdown Direction issued on 15 October 2021 for three days and provided almost $3.5 million in support.

It's not only financial support that the Tasmanian Government has provided, but crucial support was also increased through the Business Tasmania service and free business advice provided under the Enterprise Centres Tasmania Program. These services are ongoing and continue to provide assistance to businesses navigating the current operating environment.

Well before the border opening date was set (September 2021), the Tasmanian Government allocated $1.2 million through the *COVID 19 Small Business Advice and Financial Guidance Program* over four years to ensure the business community can access specialist advice and resources as businesses navigate the changing environment arising from COVID.

- Round one of this Program opened on 27 September 2021 and will remain open until 30 May 2022 (or when the annual funding has been fully allocated, whichever occurs first).
- To date more than 220 businesses have been awarded a total of more than $318 500.

Following the announcement of the border opening, the Department of State Growth organised a series of industry forums to give businesses the opportunity to be briefed on changes to settings and to have their questions answered on issues like how to respond to positive cases in their workplaces. Public Health and Worksafe attended all forums.

Business Tasmania also developed a series of short videos with Worksafe, which addressed a lot of the questions asked at these forums and supported Worksafe in developing updated COVID Safe planning guidelines to reflect the opening of the border.

The Business Tasmanian and Tourism Tasmania newsletter were also widely used to promote information from public health to businesses throughout this period. In addition, funding was provided to the Tasmanian Chamber of Commerce and Industry (TCCI) to provide a workplace relations hotline and counselling service, specifically to assist businesses navigate issues arising from the border reopening and vaccination requirements. The service was provided throughout December 2021 and January 2022.

In mid-January as the impacts of COVID became more significant for businesses, the Premier announced the *COVID-19 Business Impact Support Program* which was available to Tasmanian businesses whose business operations were impacted due to:

- critical staff being required to isolate or quarantine due to COVID-19, or
- being forced to close due to a Public Health Direction, or
- having suffered a significant reduction in demand.

In round one, applicants were required to demonstrate a minimum 30 per cent reduction in turnover between 15 December 2021 and 14 January 2022 inclusive, compared to the same period in the previous year (15 December 2020 and 14 January 2021). For newly established businesses the comparable period was 15 November to 14 December 2021. A total of 949 businesses have received funding of over $1.8 million.

A second round of the Program opened on 15 February and closed on 8 March 2022, and required businesses to demonstrate a minimum 30 per cent reduction in turnover between 15 January and 14 February 2022 inclusive, compared to the same period in the previous year (15 January and 14 February 2021). For newly established businesses the comparable period was 15 December 2021 to 14 January 2022.

To date more than 749 businesses have been approved for funding totalling more than $1 650 000.

Round three of the Program opened on 16 March and will close on 5 April 2022 and covers the period February 15 to March 14 2022. To date more than 345 businesses have applied for funding and the assessment process has now commenced.

Support for Major Businesses

Maintaining operational continuity has been a key risk for many of our major industrial, mining and mineral processing companies and State Growth has been liaising with the major industrial and mining companies in the State in order to feed information into Public Health during the period.

The key issues for these businesses were how they could maintain critical operations if and when key specialist staff became COVID positive or were quarantined as close contacts.

A key part of the Government's response to this was the introduction of the 'close contact' exemption processes allowing asymptomatic close contacts who were key workers essential to business continuity to still work if needed. This was done within the National Cabinet framework.

While this mechanism has been largely unused by these larger businesses, having it available for business planning has been critical.

Support for the Public Transport Sector

Throughout the COVID-19 pandemic period, a key objective has been to ensure that the community continues to have access to essential transport to support the functioning of the community and economy.

State Growth has worked proactively with bus and ferry operators during the transition period to "COVID normal" operations.

A key part of this has been working with operators on principles and planning for managing disruptions to the public transport network, should employee shortages from isolation or quarantine impact service delivery.

Other support for contracted public bus operators provided since the start of the pandemic has included:

- a fare amnesty in 2020 to prevent the need for drivers to handle cash on board when sanitizer was in short supply;
- additional payments to support an increased cleaning regime on school and general access buses; and
- a public information campaign to encourage passengers to be socially responsible when using buses, including checking in.
- supply of a stock of masks to be stored on vehicles, to support customers to complete their immediate travel following a mask mandate being issued at short notice.

Support for the wider bus industry included:

- deferral of accreditation audits due between 1 April and 30 September 2020 by six months;
- heavy vehicle fee relief for 12 months for businesses materially affected by the pandemic;
- a registration freeze for up to 12 months for business vehicles; and

- temporary suspension of Regular Passenger Service authorisations by the Transport Commission by agreement with the operator.

Support for Hire and Drive Sector

COVID-19 led to a short-term supply shortage in the hire and drive sector.

To seek to address this, in December 2020, the government supported the entry of peer-to-peer car rental platforms (Car Next Door and Evee platforms) into Tasmania, matching private vehicles with people wanting to hire motor vehicles.

The Government also provided several initiatives to support this sector including:

- Business Vehicle Registration Relief Package which permits operators to freeze the registration of a vehicle while it is not being used (approximately 1 400 vehicles at estimated cost $0.7m);
- Hire and Drive Reimbursement Program which provides $1,000 for each next vehicle registered by a Hire & Drive operator ($2m);
- Hire and Drive Premium Relief Package which was available prior to the commencement of the reimbursement program which waived the MAIB Premium ($0.03m);
- Cancellation of registration (approximately 3 000 vehicles) at no cost and re-registration if applicable also at no cost.

In the lead up to the border opening, State Growth also liaised with car rental companies to monitor their supply of vehicles and to encourage them to have adequate supply.

From 15 February 2022, in response to the issues arising from lack of taxi drivers, taxi networks and operators were able to apply for up to $600 per new driver to help offset some of the cost of recruiting new drivers. New eligible drivers were also given more time (until 1 May 2022) to submit a National Police Certificate and a Medical Clearance.

Events

There were already several support programs in place for Event organisers prior to the border opening.

In July 2021, The Government released a $1.5 million Regional Event Recovery Fund to support Tasmanian regional events to build organisational capability and event sustainability.

The Event Ready Grant Program (running since September 2020) also existed to support events with COVID-19 safety planning and helps event organisers meet the additional requirements and costs associated with planning and delivering COVID-19 safe events. More than $320 000 was provided in grants in round one, and an additional $500 000 is available in round two.

More than $1.25 million was provided from the Event Infrastructure and Critical Support Small Business Program which assisted small businesses provide vital event infrastructure and other services that are essential to the running of events whose operations had been substantially impacted by COVID-19 restrictions; and

Events Framework

The Safe Events and Activities Framework (Events Framework), guided by Public Health advice, came into effect on 1 December 2020. This provided a clear way forward for Tasmania's Sports, Arts and Events Industry and is supporting event organisers to plan for and host larger events in a COVID safe way.

In line with the Government's glide path to living with COVID, the Events Framework was updated with the revised framework coming into effect from 1 November 2021. This revised Events Framework provides clear and simple guidance to event organisers around the application process.

As at 8 March 2022, there have been 697 applications to the Events Framework.

Arts + Screen

The cultural and creative industries have received a comprehensive package of financial support from the Tasmanian Government in response to COVID-19. This package includes over $12 million in new and ongoing support measures – administered through Arts Tasmania since March 2020.

The Tasmanian Government's Cultural and Creative Industries stimulus package, announced on 26 March 2020, included new funding of $1.5 million and new operational measures of over $2 million.

The initiatives offered under this stimulus package included:

- The Arts and Screen Digital Production Fund ($500 000)
- The Tasmanian Contemporary Music Fund ($250 000)
- Additional Screen Development Fund ($250 000)
- Additional arts organisations funding ($500 000)

Operational measures included the extension of contracts for arts organisations in receipt of single year or final year funding through Arts Tasmania's Organisations program (approximately $2.3 million).

Loan repayments for both Arts Tasmania's COLLECT art purchase scheme and low-interest loan scheme were suspended for during the peak of COVID-19.

The Tasmanian Government announced an additional $4 million in the 2020-21 State Budget to support the arts.

This included:

- $2.5 million over two years for a new Arts and Cultural Support Fund
- $1 million over two years towards Community Arts and Cultural Development (CACD) activities
- $500 000 over two years additional funding to Screen Tasmania's Screen Innovation Fund

The Arts Recovery Support Initiative provided funds to artists, arts organisations and arts businesses that lost earnings because of COVID-19 restrictions.

The 2021 Election included new commitments for the arts to assist in sector recovery. These commitments included:

- $200 000 for a Creative Support Small Grants Fund to support Tasmanian artists;
- and an uplift of $1.2m per annum for arts organisations.

The $2 million Live Performance Support Program was launched in March 2021 to give the sector confidence to plan live performances in Tasmanian theatres and other venues throughout 2021. This program has been extended to support eligible arts activities until 30 September 2022.

In addition, the Live Performance Reactivation Program 2021-22 was a $1 million program announced on 16 March 2021 to support the delivery of new larger-scale professional live performance productions in Tasmania. This funding supported 12 organisations and artists to present a total of 205 performances around the State to a projected audience of more than 37,300 people, engaging 822 Tasmanian artists, arts workers, and technical staff.

Tourism

$8 million has been committed to a new Tourism Innovation and Development Grant Program which is open and currently accepting applications. The fund will provide grants to continue to enhance

Tasmania's world-class experience reputation and enable key projects across the state to be realised.

As noted above, In recognition of increasing visitation to the State requiring a greater supply of rental vehicles available for hire, the Hire and Drive Reimbursement Program was extended to support hire and drive operators impacted by COVID-19 to re-establish their vehicle fleets.

Funding of up to $2 million has been allocated to the program, and to date more than $1 626 000 has been provided to hire and drive operators and newly registered vehicles to accredited car sharing platforms.

Other support available to the Tasmanian tourism sector includes:

- $1 million towards a Mental Health Support Program with $125 000 and $60 000 allocated to the THA and TICT respectively to deliver industry-specific mental health programs.
- Additional support of $300 000 to small businesses in the Tourism and Hospitality sector was provided via a partnership between the Tasmanian Hospitality Association (THA), Tourism Industry Council Tasmania (TICT) and Collins SBA to deliver business continuity and cash flow advice.
- $500 000 was provided to extend the business planning support program, as well as $1 million to support Tasmanian travel agents in recognition of the significant and ongoing impact of the pandemic on their businesses.
- A new $50 million loan scheme was introduced to assist Tasmanian tourism operators to rebuild and regain visitors and customers as travel returns to normal, providing an opportunity to build resilience and innovate. The initiatives that are supported under this scheme will contribute to achieving the identified priorities of our T21 Visitor Economy Action Plan 2020-22.