

DOCCM-6873027

DOC risk assessment – transmission of COVID-19 in the workplace

Assumption highly transmissible variant and community transmission

This risk assessment (Appendices 1 and 2) assume community transmission occurs throughout New Zealand Aotearoa. The basis for treating border tasks as higher risk work (due to contact with incoming international passengers, crew, airport staff and other government agencies) remains valid when COVID-19 is still prevalent in many countries and any new variants would be likely to affect border workers first.

The risk assessment is undertaken on two bases:

- The risk of a DOC worker infected with COVID-19 transmitting COVID-19 to others during work activities.
- The risk of a DOC worker becoming infected with COVID-19 at work.

We have identified work tasks that involve contact with others, the most credible worst-case scenario associated with the risk of infection with COVID-19, and the likelihood of transmitted infection occurring and it leading to that consequence.

We have assessed inherent risk, residual risk with current controls, and what having all DOC staff vaccinated who work in that area would do to the risk rating.

Impact of Vaccination

Vaccination of DOC workers has the following impact:

- It reduces the likelihood of DOC workers transmitting COVID-19 at work from Almost-certain/Likely down to Possible
- It reduces the likelihood of DOC workers being infected with COVID-19 from Almost-certain/Likely down to Possible
- It reduces the consequence of DOC workers being infected with COVID-19 at work from Severe down to Moderate

Residual risk assessment – DOC vaccination

The residual consequence and residual risk ratings are presented as dual ratings for both vaccinated and non-vaccinated persons. This is because DOC workers during the course of their work may come into contact with other persons who are not vaccinated.

We have assessed the residual risk of a DOC worker positive for COVID-19 Delta variant passing this infection onto others at work is:

- **Extreme** for an unvaccinated DOC worker transmitting infection during work to an unvaccinated person
- **High** for an unvaccinated DOC worker transmitting infection during work to a vaccinated person
- **High** for a vaccinated DOC worker transmitting infection during work to an unvaccinated person
- **Medium** for a vaccinated DOC worker transmitting infection during work to a vaccinated person.

DOCCM-6873027

We have assessed the residual risk of a DOC worker being infected by the COVID-19 Delta variant at work is:

- **Extreme** for an unvaccinated DOC worker being infected during work by an unvaccinated person
- **High** for a vaccinated DOC worker being infected during work by an unvaccinated person
- **High** for an unvaccinated DOC worker being infected during work by a vaccinated person
- **Medium** for a vaccinated DOC worker being infected during work by a vaccinated person.

		Consequence				
		Insignificant	Minor	Moderate	Major	Severe
Likelihood	Almost certain	Medium	High	High	Extreme	Extreme
	Likely	Medium	Medium	High	High	Extreme
	Possible	Low	Medium	Medium	High	High
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Medium	Medium	High

Unvax to Unvax

Vax to DOC Unvax

Unvax to DOC vax

Vax to Vax

Where we identified a residual risk rating of high or above (for current controls without vaccination) we believe (based on WorkSafe guidance) that we need to consider the reasonably practicable nature of mandatory vaccination for roles unless other additional controls are reasonably practicable and would change the residual risk rating sufficiently.

Rapid antigen testing

Rapid antigen testing could further decrease the likelihood of DOC workers infected with COVID-19 transmitting infection to others by picking up the infection early. As this is currently being trialled in New Zealand and is not currently available to DOC, it has not been factored into this risk assessment.

DOCCM-6873027

Notes and assumptions

Vaccine efficacy

[Efficacy of vaccine MOH site](#) key points:

- 90-100% efficacy across all genders, ethnicity etc
- 100% efficacy in 12-15yo

[7 May science update – viral transmissions](#) [latest update]

- 54% reduction in cases of household members of healthcare workers in Scotland after 2 doses
- 38-49% less likely to transmit virus to household contacts after 1 dose
- 4-fold reduction in viral load after 1 dose (less infectiousness)

[Immunisation Advisory Centre](#)

- Israel's vax programme cut documented infection by 92%
- CDC: 90% effective in healthcare workers in protecting against infection

[IMAC Delta page](#)

- Delta patients 2x more likely to be hospitalised or need emergency care than Alpha variant (UK study)

[IMAC international vax page](#)

- 5.1 deaths/million for people with 2 doses, 47.3 deaths/million for unvaccinated (UK numbers)

Knowns

- People are infectious and asymptomatic for 48 hours after infection
- Infectious period continues until 72 hours after symptoms resolved
- Consequence is severe for all infections as potential outcome is death or severe illness (hospitalisation and/or long Covid).

Assumptions

- Delta variant is in community and there is some detected or undetected transmission, OR borders are open to some degree.
- Vaccination status of people we interact with is unknown.

Appendix 1 - Risk assessment of COVID-19 highly transmissible variants (assumption community transmission) DOCCM-6873027

LOW INFLUENCE AND CONTROL: Non-DOC worksites and/or interactions with the public

Work activity	Persons involved	Frequency and length of contact with others and environment	Inherent likelihood	Inherent consequence	Inherent risk	Controls (without vax)	Residual likelihood (controls no DOC vax)	Residual consequence for person/s infected (with controls & no DOC vax)	Residual risk (with controls & no vax)	Residual likelihood (with DOC controls & mandatory DOC vax)	Residual consequence for person/s infected (with controls & DOC vax)	Residual risk (with controls incl DOC vax)
Contact with customers at non-DOC sites: reception	DOC workers; Other PCBU workers; Public	Very frequent, short duration exposure, aircon	Almost certain	Severe	Extreme	Barriers, masks, handwashing, distancing	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe ¹ (no-vax) Others	High
Embedded on non-DOC sites eg vessels, helicopters	DOC workers; Other PCBU workers; Public	Very frequent, prolonged exposure, may include small internal spaces (vessels/helicopters), physical distancing may be difficult	Almost certain	Severe	Extreme	Masks, handwashing, distancing	Almost certain - Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Visit/attend non-DOC sites ² including outdoor areas ³	DOC workers; Other PCBU workers; Public	Very frequent, moderate exposure, indoor or outdoor, physical distancing may be difficult	Almost certain	Severe	Extreme	Masks, handwashing	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Outdoor large events, e.g. Kepler Challenge	DOC workers; Other PCBU workers; Public	Very frequent, prolonged exposure, outdoors, physical distancing may be difficult	Almost certain	Severe	Extreme	Masks, handwashing, distance (hard to maintain)	Likely-possible (outdoor)	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme-High		Severe (no-vax) Others	High
Indoor large events where DOC is not in control e.g. in-person conferences, meetings, some Te Pukenga Atawhai	DOC workers; Other PCBU workers	Very frequent, prolonged exposure, aircon, physical distancing may be difficult	Almost certain	Severe	Extreme	Masks, handwashing, distance (hard to maintain)	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Public meetings	DOC workers; Public	Frequent, moderate exposure	Likely	Severe	Extreme	Masks, handwashing, distance (speaker on platform away from people)	Likely-possible	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme-High		Severe (no-vax) Others	High

¹ Other persons DOC workers come into contact with may not be vaccinated.

² Includes visit/attendance at other agencies (e.g. court, tribunal)

³ Excludes the work activities undertaken by DOC workers captured by the vaccination mandates in [COVID-19 Public Health Response \(Vaccinations\) Amendment Order \(No 3\) 2021 \(LI 2021/325\) – New Zealand Legislation](#) (i.e. affected education services, health and disability sector such as fire services and SAR, prisons and borders where applicable)

International visits and postings	DOC workers; Other PCBU workers, Public	Frequent, variable vaccination coverage, community transmission	Almost certain	Severe	Extreme	Masks, handwashing, distancing	Almost certain - Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High

REQUIREMENTS SET BY OTHER ORGANISATIONS AND AUTHORITIES

Work activity	Persons involved	Frequency and length of contact with others and environment	Inherent likelihood	Inherent consequence	Inherent risk	Controls (without vax)	Residual likelihood (controls no DOC vax)	Residual consequence for person/s infected (with controls & no DOC vax)	Residual risk (with controls & no vax)	Residual likelihood (with DOC controls & mandatory DOC vax)	Residual consequence for person/s infected (with controls & DOC vax)	Residual risk (with controls incl DOC vax)
Travel international ⁴	DOC workers; Public	Very frequent, prolonged exposure, recirculated air	Almost certain	Severe	Extreme	Masks, handwashing	Almost certain	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Travel domestic (air, taxi, public transport)	DOC workers; Public	Very frequent, moderate exposure, recirculated air	Almost certain	Severe	Extreme	Masks, handwashing	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High

HIGH INFLUENCE AND CONTROL: DOC and other government agency worksites

Work activity	Persons involved	Frequency and length of contact with others and environment	Inherent likelihood	Inherent consequence	Inherent risk	Controls (without vax)	Residual likelihood (controls no DOC vax)	Residual consequence for person/s infected (with controls & no DOC vax)	Residual risk (with controls & no vax)	Residual likelihood (with DOC controls & mandatory DOC vax)	Residual consequence for person/s infected (with controls & DOC vax)	Residual risk (with controls incl DOC vax)
Contact with customers at DOC sites: reception/ visitor centres	DOC workers; Other PCBU workers; Public	Very frequent, short duration exposure, aircon	Almost certain	Severe	Extreme	Barriers, masks, handwashing, distancing	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme			
Work at a DOC office/ workshop in close contact with other workers	DOC workers; Other PCBU ⁵ workers; casual volunteers, Public	Very frequent, prolonged exposure, aircon	Almost certain	Severe	Extreme	Masks, handwashing, distancing, reduced % workers onsite, work bubbles	Almost certain - Likely	Moderate (vax)	Extreme	Possible	Severe ⁶ (no-vax) Others	High
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High

⁴ Full vaccination is likely to be required for international travel

⁵ PCBU worker includes volunteer workers and contractors

⁶ Other persons that DOC workers come into contact with may not be vaccinated.

Visit multiple DOC sites ⁷ and work in close contact with workers at those sites	DOC workers; Other PCBU workers, casual volunteers, Public	Frequent, moderate exposure, aircon	Almost certain	Severe	Extreme	Masks, handwashing, distancing, work bubbles	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Visit/attend outdoor areas (e.g. National Parks Great Walks tracks, other tracks on conservation land)	DOC workers; Other PCBU workers, Public	Frequent, moderate exposure	Likely	Severe	Extreme	Masks, handwashing, distancing	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Meeting other agencies	DOC workers; Other PCBU workers, public	Frequent, moderate exposure	Likely	Severe	Extreme	Masks, handwashing, distancing, digital meetings	Likely-possible	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Indoor large events where DOC is in control (e.g. some Te Pukenga Atawhai)	DOC workers; Other PCBU workers, Public	Very frequent, prolonged exposure, aircon	Almost certain	Severe	Extreme	Masks, handwashing, distance (hard to maintain)	Likely	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme		Severe (no-vax) Others	High
Working from home (e.g. Flexible Work, ⁸ during a government imposed lockdown)	DOC workers; Public	Living with others - Very frequent, short duration exposure, aircon	Almost certain - Likely	Severe	Extreme	Handwashing, distancing (hard to maintain), social isolation, home bubble, digital meetings	Likely - possible	Moderate (vax)	High	Possible	Moderate (vax) DOC	Medium
		Living on own – moderate exposure						Severe (no-vax)	Extreme		Severe (no-vax) Others	High

⁷ DOC sites includes DOC premises

⁸ Refer: <http://intranet/tools-and-services/hr-and-payroll/flexible-working/>

Appendix 2 - Risk assessment of border-related work tasks higher - risk DOC COVID-19 work DOCCM-6873027

Work activity	Persons involved	Frequency and length of contact with others and environment	Inherent likelihood	Inherent consequence	Inherent risk	Controls (without vax)	Residual likelihood (controls no DOC vax)	Residual consequence for person/s infected (with controls & no DOC vax)	Residual risk (with controls & no vax)	Residual likelihood (with DOC controls & mandatory DOC vax)	Residual consequence for person/s infected (with controls & DOC vax)	Residual risk (with controls incl DOC vax)
Administration of CITES (implemented through TIES Act) – airport, inspection of animal and plant species covered by CITES for import/export, seizure of items without CITES permits and removal / destruction	DOC workers; Other PCBU workers, Public	Frequent, moderate exposure	Likely	Severe	Extreme	Masks, handwashing, distance (speaker on platform away from people)	Possible	Moderate (vax)	High	Unlikely	Moderate (vax) DOC	Medium
								Severe (no-vax)	Extreme-High		Severe (no-vax) Others	High

Risk matrix

		Consequence				
		Insignificant	Minor	Moderate	Major	Severe
Likelihood	Almost certain	Medium	High	High	Extreme	Extreme
	Likely	Medium	Medium	High	High	Extreme
	Possible	Low	Medium	Medium	High	High
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Medium	Medium	High

Likelihood	Criteria
Almost certain	<ul style="list-style-type: none"> Expected to occur multiple times within the next 12 months >90% chance of occurring
Likely	<ul style="list-style-type: none"> Could occur within the next twelve months 61-89% chance of occurring
Possible	<ul style="list-style-type: none"> Expected to occur in the next two years 31-60% chance of occurring
Unlikely	<ul style="list-style-type: none"> Expected to occur once in the next two to five years 5-30% chance of occurring
Rare	<ul style="list-style-type: none"> Expected to occur in five years or more <5% chance of occurring

Term	Definition
Severe	Actual or potential for work-related notifiable event causing fatalities or life-changing/threatening injuries, illnesses or exposures to MORE THAN ONE person; OR multiple people requiring crisis or ongoing mental health care for significant exposure, e.g. PTSD. Notifiable to WorkSafe/regulator.
Major	Actual or potential for a work-related notifiable event affecting ONE person, including fatality, injury, illness or exposure that causes a life-changing/threatening event; OR severe irreversible incapacity or health effects, or disabling illness; OR a person receiving hospital-based crisis mental health treatment or ongoing mental health care for significant exposure, e.g. PTSD. Notifiable to WorkSafe/regulator.
Moderate	Actual or potential for work-related injury, illness or exposure (mental or physical) requiring in-patient medical treatment with reversible impairment; OR lost time injury; OR multiple medical treatment cases; OR a person receiving work-related crisis mental health treatment/counselling (not admitted to hospital). May be notifiable to WorkSafe/regulator.
Minor	Actual or potential for reversible work-related injuries, illnesses or exposures (mental or physical) requiring first aid or outpatient medical treatment, no long-term effects, may require restricted duties.
Minimal	Actual or potential for reversible work-related injuries or illnesses (mental or physical) requiring first aid at most, no long-term effects.