Risk Assessment and Categorisation of Healthcare Workers Exposed to COVID-19 at Work

Effective from 17 December 2021 / Next review 24 January 2022

This risk matrix provides a guide only.

In general, there are a number of controls in healthcare settings which mean the risk of COVID-19 transmission is considerably less than in general community settings.

There may be circumstances where the risk action is elevated to the next level e.g., when there have been multiple cases and/or evidence of transmission within the setting.

There may be circumstances where the risk action is downgraded to a lower level e.g., when a case is considered to have had low infectivity (e.g., high CT values and asymptomatic) or the space is very well ventilated.

Who will be involved in assessing and managing an exposure event will vary according to the healthcare setting. In DHB settings, where possible, each exposure event should be assessed and managed by a team that includes public health, occupational health, infectious diseases, clinical microbiology, infection prevention and control (IPC) and service leadership.

In non-DHB settings it is recommended that expectations for the responsibilities for the use of this guidance are established in advance with the local Public Health Unit (PHU). In general, this guidance should only be used by a registered health professional, who is nominated by their organisation to take the lead on managing COVID-19 exposure events in their setting. It is important that any exposure events and management of subsequent contacts are appropriately documented. Appendices have been developed to support use of this guidance in primary care and community home care settings and templates are provided for recording purposes. For other health care settings, please contact your local PHU or the National Investigation and Tracing Centre (NITC) to check you are using the appropriate supporting documentation.

Staff who are categorised as Level III or Level IV should be recorded as Close contacts in the National Contact Tracing Solution (NCTS). Follow protocols for your setting. (NB: NITC will suspend these records within NCTS as an interim measure, as the different management pathways are not available in NCTS.)

In DHB settings, responsibility for the frontline management of these staff, including their return to work, sits with occupational health teams.

Table 1: Factors to consider in risk assessment

Risk assessment should always take into account the community prevalence of COVID-19 as well as the following:				
Exposure details • Known in-hospital transmission provides a higher risk of further transmission • Exposure outside of work including when commuting to work • Exposure at work but with no known transmission	**Case details** • Case infectiousness (e.g., CT value where available) • Presence and type of symptoms, such as respiratory distress or delirium which increase the risk of transmission • Aerosol/droplet generating behaviours (AGB/DGB) by the case: such as shouting, coughing, respiratory distress, sneezing, vomiting, spitting or exercise • Aerosol generating procedures (AGPs) being performed on the case • Confirmed secondary cases • COVID-19 vaccination status	**Contact details** • Whether exposure is confirmed or only possible • Type of contact with case • Physical distance from case • Duration of exposure • Type of procedure performed (if relevant) e.g., aerosol-generating • COVID-19 vaccination status	**Infection prevention and control details** • Mask use and hand hygiene by patient • Use of medical mask, or where required P2/N95 respirator use (and whether fit tested), by HCW • Use of eye protection during AGP or AGB/DGB • Use of appropriate PPE and hand hygiene by staff member • Appropriate donning and doffing of PPE (i.e., no breaches)	**Environmental exposure details** • Use of shared equipment • Use of communal spaces (e.g., tea rooms, workstations, offices) • Ventilation • Room size

Table 2: Risk assessment and categorisation of healthcare worker

Note: All exposure category decisions are based on a local risk assessment. This matrix should be seen as guidance only. The highest risk duration or proximity parameter met should be used (e.g., face-to-face trumps <30min in the room and >1.5m) **Case =** confirmed positive case in a patient, staff member or other person in the health care environment. **No increased risk =** transient, not face-to-face, limited contact that does not meet the definition of face-to-face contact. **PPE** = Personal protective equipment	**Low Risk Exposure** • Shared indoor space: In general, more than 1.5m apart and under 30 minutes cumulative in 24 hours OR • Exposure outdoors: less than 1.5m for more than 30 minutes & no AGP/AGB	**Moderate Risk Exposure** • Any face-to-face contact/care within 1.5 metres and less than cumulative 15 minutes in 24 hours OR • In general, shared indoor space more than 1.5m away for greater than cumulative 30 mins in 24 hours OR • Based on agreed documented individual risk assessment including assessments of occupational exposures and of the physical environment	**High Risk Exposure** • Prolonged face-to-face contact within 1.5 metres and greater than cumulative 15 minutes in 24 hours OR • Contact with multiple COVID-19 confirmed cases/suspected cases/probable cases OR • Based on agreed documented individual risk assessment including assessments of occupational exposures and of the physical environment	**Highest Risk Exposure** • Aerosol generating behaviours (AGBs from the case e.g., uncontrolled coughing, singing, shouting, exercise) where the person is not able to adopt respiratory etiquette OR • Direct exposure to the mouth/nose/eyes with infectious body fluids (e.g., coughed, sneezed, vomited on) from the case[1] OR • Aerosol generating procedures (AGPs) during procedure or settle time

	Vaccination status of the healthcare worker							
	Partial or none	**Full[2]**	**Partial or none**	**Full**	**Partial or none**	**Full**	**Partial or none**	**Full**
No effective PPE worn by staff member or case (no PPE or PPE with major breaches such as mask below nose)	Level II / Level III Based on risk assessment	Level I / Level II Based on risk assessment	Level III	Level II	Level IV	Level III	Level IV	
Medical mask only worn by staff member • Case not wearing mask	Level II	Level I	Level II	Level I	Level III	Level II	Level IV	
Medical mask worn by staff member AND • Case wearing mask	Level I	Level I	Level I	Level I	Level II	Level I	Level IV	
Staff member in P2/N95 but no eye protection with no breaches	Level I	Level I	Level I	Level I	Level I	Level I	Level IV or Level III with individualised risk assessment[3]	
Staff member in P2/N95 and eye protection with no breaches	**No increased risk** over background – general surveillance testing where in place should continue							

Note: Eye protection may be recommended for IPC purposes to reduce transmission risk in the workplace, but not wearing eye protection does not constitute sufficient exposure risk to warrant inclusion in exposure event criteria EXCEPT when aerosol generating procedures are being undertaken or aerosol generating behaviours result in direct exposure to the eyes. However, employees should follow all IPC guidance provided by their employers at all times and this may include the routine use of eye protection.

Laboratory staff (technicians, scientists, pathologists and support staff) handling COVID-19 specimens, where a breach in best laboratory practice has occurred, should report the exposure to the senior scientist on duty, who may seek guidance from the on-call clinical microbiologist if required.

Use of gown/apron and gloves should be risk assessed based on individual incident, exposure to body substance and chances of environmental contamination.

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[1] Staff who are cleaning up spillage or toilets used by cases who have vomiting, or diarrhoea need an individualised risk assessment.

[2] Full = is greater than or equal to 7 days following 2nd dose (https://www.health.govt.nz/our-work/immunisation-handbook-2020/5-coronavirus-disease-covid-19#23-5) or completion of primary course if immunocompromised. Advice on booster doses may result in the Ministry of Health changing this definition in the future.

[3] Degree of controls in the environment need to be taken into consideration: e.g., controlled intubation in ICU less risk than acute resuscitation situation; and degree of exposure, e.g., patient use of unvented CPAP but in otherwise controlled environment would be lower risk. Alternative actions include potential to review at day 5 regarding return to work or classification as lower risk.

Contact Actions		
Health Care Worker Contact	****Vaccination status of the healthcare worker**	
	Partial or none**	**Full**
Level I **Low risk exposure**	• **No stand down required** • Daily symptom / fitness for work screen as per local protocols • Monitor for symptoms for 10 days • Test if symptomatic, no matter how mild, and stay at home until negative test result and until 24 hours symptom free • Comply with IPC protocols when at work • Continue regular surveillance testing where in place • **Offer support to be vaccinated as soon as possible**	**No stand down from work required** • Daily symptom / fitness for work screen as per local protocols • Monitor for symptoms for 10 days • Test if symptomatic, no matter how mild, and stay at home until negative test result and until 24 hours symptom free • Comply with IPC protocols when at work • Continue regular surveillance testing where in place
Level II **Moderate risk exposure**	• If exposure on current shift, comply with IPC protocols, leave workplace at the end of the shift, test on days 2* & 5 post exposure • If exposure occurred prior to current shift and/or outside of workplace, leave workplace immediately, test immediately & day 5 post exposure • Stay at home for 7 days post exposure and until negative day 5 test is available. Return to work after completion of 7 days, negative day 5 test, and be sure you are symptom free • Monitor for symptoms for 10 days • Test if symptomatic, no matter how mild, and stay at home until negative test result and until symptom free for 24 hours • Daily symptom / fitness for work screen as per local protocols once returned to work • When return to work, fastidious use of medical mask, donned before entry to the workplace, changed as needed during the day, and comply with IPC protocols when at work • When mask must be removed (e.g., for eating and drinking), ensure physical distancing is maintained • Continue regular surveillance testing where in place once post-exposure monitoring is complete • **Offer support to be vaccinated as soon as possible**	**No stand down from work required if the following is in place** • A post exposure PCR test on day 3-5 post exposure (the exact timing can be determined depending on when the exposure becomes notified) • Daily symptom / fitness for work screen as per local protocols • Monitor for symptoms for 10 days • Fastidious use of medical mask, donned before entry to the workplace, changed as needed during the day and comply with IPC protocols when at work • When mask must be removed (e.g., for eating and drinking), ensure physical distancing is maintained • Test if symptomatic, no matter how mild, and stay at home until negative test result and symptom free for 24 hours • Continue regular surveillance testing where in place

Level III
 	
High risk exposure
	• If exposure has occurred on current shift, comply with IPC protocols, leave workplace at the end of the shift
	  ○ Self-isolate for 10 days post exposure, test on 2*,5 and 8 post exposure. Can return to work on completion of 10 days self-isolation, negative day 8 test and be sure you are symptom free
	• If exposure occurred prior to current shift and/or outside of the workplace, leave workplace immediately,
	  ○ Test immediately, self-isolate for 10 days post exposure, test on days 5* and 8 post exposure. Can return to work on completion of 10 days self-isolation, negative day 8 test and be sure you are symptom free
	• If symptoms develop within 10 days post exposure, no matter how mild, test again and self-isolate until negative test result and symptom free for 24 hours
	• Daily symptom / fitness for work screen as per local protocols once returned to work
	• Continue regular surveillance testing where in place once post-exposure monitoring is complete
	• Household members must follow current public health advice.
	• **Offer support to be vaccinated as soon as possible**
		No stand down from work required if the following is in place
		• Post exposure daily testing (whether at work each day or not) required until day 7 instead of self-isolation
		• Daily symptom / fitness for work screen as per local protocols
		• Monitor for symptoms for 10 days
		• Fastidious use of medical mask, donned before entry to the workplace, changed as needed during the day and comply with IPC protocols when at work
		• When mask must be removed (e.g., for eating and drinking), ensure physical distancing is maintained
		• Eat alone in a well-ventilated space, if possible
		• If symptoms develop within 10 days post exposure, no matter how mild, test again and self-isolate until negative test result and symptom free for 24 hours
		• Continue regular surveillance testing where in place once post-exposure monitoring is complete
		• **When not at work**, self-isolate as per standard Close contact advice until 7 days, provided no new or worsening symptoms AND negative daily tests
		
		Stand down is still required in the following situation
		if daily testing declined or unavailable or not sufficiently timely, then
		• Self-isolate for 7 days post exposure and PCR test on day 2* and on day 5 post exposure. Can return to work on completion of 7 days isolation, provided no new or worsening symptoms and negative day 5 test
		• Once returned to work, ensure the following
		• Fastidious use of medical mask, donned before entry to the workplace, changed as needed during the day and comply with IPC protocols when at work
		• Monitor for symptoms for 10 days (7 days isolation + 3 days)

		• If symptoms develop within 10 days post exposure, no matter how mild, test again and self-isolate until negative test result and symptom free for 24 hours • Continue regular surveillance testing where in place once post-exposure monitoring is complete

Level IV
 	
Highest risk exposure
	• If exposure has occurred on current shift, comply with IPC protocols, leave workplace at the end of the shift then
	  ○ Self-isolate for 10 days, test on days 2*,5 and 8 post exposure. Can return to work on completion of 10 days self-isolation, negative day 8 test and symptom free for 24 hours
	• If exposure occurred prior to current shift, leave workplace immediately, test immediately then
	  ○ Self-isolate for 10 days, test on days 5* and 8 post exposure. Can return to work on completion of 10 days self-isolation, negative day 8 test and symptom free for 24 hours
	• If symptoms develop within 10 days post exposure, no matter how mild, test again and self-isolate until negative test result and symptom free for 24 hours
	• Daily symptom / fitness for work screen as per local protocols once returned to work
	• Continue regular surveillance testing where in place once post-exposure monitoring is complete
	• Household members must follow current public health advice.
	• **Offer support to be vaccinated as soon as possible**
		• If exposure has occurred on current shift, comply with IPC protocols, leave workplace at the end of the shift then
		  ○ Self-isolate for 10 days, test on days 2*, 5 and 8 post exposure. Can return to work on completion of 10 days self-isolation, negative day 8 test and symptom free for 24 hours
		• If exposure occurred prior to current shift, leave workplace immediately, test immediately then
		  ○ Self-isolate for 10 days, test on days 5 and 8 post exposure. Can return to work on completion of 10 days self-isolation, negative day 8 test and symptom free for 24 hours
		• If symptoms develop within 10 days post exposure, no matter how mild, test again and self-isolate until negative test result and symptom free for 24 hours
		• Daily symptom / fitness for work screen as per local protocols once returned to work
		• Continue regular surveillance testing where in place once post-exposure monitoring is complete
		• Household members must follow current public health advice.

*Day 0 is the day of, or last day of, exposure(s), day 1 is the first day following the day of, or last day of, exposure

** For exposure events in partially or unvaccinated individuals, seek further public health advice