
All District Health Boards

DHB Occupational Health Assessment Tool for Vulnerable Workers

Key Changes

- August 2021 Changes to pregnancy advice

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Risk Assessment Framework for Identifying Staff Potentially Vulnerable to COVID-19 Infection

Context

This Risk Assessment framework was developed by Occupational Health (OH) specialists from across New Zealand to categorise the risk factors of individual healthcare workers into one of four risk categories. An individual with multiple risk factors will be at higher risk than someone younger with the same risk factors. Category 4 staff are at most risk of severe COVID illness if infected and need the most protection from exposure to COVID-19.

Implementation of this framework should be considered alongside the National OH DHB

“Protecting vulnerable staff during COVID-19: Guide for Managers” (Version 2, 24 August 2021).

Each DHB Occupational Health service should provide localised information specific to the current point in time in the pandemic for their staff and managers. This should outline the tasks and location that each category of staff are currently able to undertake and should be updated as risk evolves. The OH implementation will not directly follow National, Regional or even Hospital alert levels – but will be influenced by these levels and other key workplace risks including mitigations using the hierarchy of controls in the specific worksites.

- Tasks that **Category 2-4** staff may undertake are not fixed because they are affected by current workplace risk. As community prevalence and hospital presentations increase, the tasks that are deemed to hold too high a workplace risk will expand, particularly for category 3 staff.
- At lower risk levels, **Category 3** staff may be able to perform clinical work face to face in the non-COVID stream in some workplaces. At higher risk levels, category 3 staff may need to work from home.
- **Category 2** staff are able to perform clinical duties but should avoid the highest risk tasks. This means they are able to work in the non-COVID workstream. Depending on the incidence of COVID in the workplace and the local community, the location that Category 2 staff are able to be deployed may change during the pandemic (e.g. with a community outbreak, the ED non-COVID workstream may become a COVID workplace).
- **Category 1** staff have the lowest risk of severe COVID illness if infected, and therefore they are fit to perform all their usual work tasks throughout the DHB. This includes assessment of, and aerosol generating procedures on, COVID-cases.
- Occupational Health exemptions may be provided to staff to be moved to a higher category, by mutual agreement, where there are sufficient individualised risk mitigations in place.

Where there is reference to individual risk assessment being required, this relates to risk assessing the individual, their work tasks, work location(s) and effectiveness of any controls in place.

This framework is current at the time of publication and updates will be provided as appropriate.

It incorporates current Ministry of Health Guidance, guidance from the Royal Australasian College of Physicians Australasian Faculty of Occupational and Environmental Medicine (AFOEM), and Australian Government Guide for general practitioners to inform shared decision making with patients around risk of severe illness related to COVID-19.

Acknowledging the role healthcare systems have in the health and social inequities experienced by Māori, guidance was specifically sought from Te Rōpū Whakakaupapa Urutā, the National Māori Pandemic Group of leading Māori medical health experts including Primary Care Specialists, Public Health Experts, Public Health Physicians, Māori Nurses, and iwi leaders.

Te Rōpū Whakakaupapa Urutā position statement:

“... The pandemic response cannot be allowed to cause inequitable unintended and long-lasting impacts to peoples’ health and well-being, income and employment support, whānau, Hapū, Iwi and community connection, or access to Te Ao Māori. This requires a comprehensive approach across government, effective immediately, that considers all aspects of Māori health and wellbeing, rather than a narrow preoccupation with the direct impacts of COVID-19.”

“We do not support advice that all Māori/Pacific over 65years of age should stay home and not work. As you have noted individualised assessment of risk is recommended.” - Associate Professor Dr Elana Curtis, Public Health Physician and member of Te Urutā.

Notes:

- The staff member is an equal partner in the employment relationship and should, as far as practical, be consulted in the decision-making
- An equitably accessible comprehensive risk assessment form enables assessment of hundreds of staff in a shorter time

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 – Most vulnerable and requiring protection from high risk work
AGE				
80y+ With 50-59y as reference group, >80y 12.6x increased risk of in hospital COVID-19 death	Not recommended	Not recommended	Not recommended	Yes
70-79 years With 50-59y as reference group, 70-79y 4.8x increased risk of in hospital COVID-19 death	No, unless individual risk assessment has been carried out, appropriate controls are in place and mutual agreement with the staff member to carry out COVID workstream tasks.	No, unless individual risk assessment has been carried out, appropriate controls are in place and mutual agreement with the staff member to carry out non- COVID workstream tasks.	Yes	Yes
60-69y With 50-59y as reference group, 60-69y 2.1x increased risk of in hospital COVID-19 death	Possibly. Prolonged clinical work in proximity to COVID patients (such as 1:1 nursing cares) is higher risk, so not recommended unless individual risk assessment has been carried out, appropriate controls are in place and mutual agreement with the staff member.	Yes	Yes	Yes

60-69y (continued)	For other clinical work in the COVID stream the risk of infection is comparatively lower, so this work may be appropriate for other staff IF no health conditions that would increase risk of severe COVID illness.			
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Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 most vulnerable and requiring protection from high risk work
ORGAN TRANSPLANT RECIPIENT				
Immunosuppression following solid organ transplants, haematopoietic stem cell transplant within 24months, Graft Versus Host Disease, etc. Organ transplant recipient 4.3x increased risk of severe COVID illness	Not recommended	Possibly yes for recipients > 24months ago. Consider GVHD and immunosuppressants. Discuss with their specialist.	Probably yes for recipients < 24months ago. Consider GVHD and immunosuppressants. Discuss with their specialist.	Yes

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
CANCER				
Active cancer	Not recommended	Not recommended	Tailor to diagnosis and symptoms.	Tailor to diagnosis and symptoms.
Recovering from cancer, on chemotherapy or radiotherapy.	Not recommended	Wait 3-6months after chemotherapy. Yes, if feels well at work trial.	Tailor to diagnosis and symptoms.	Tailor to diagnosis and symptoms. Some may be able to work from home.
HAEMATOLOGICAL CANCER				
Full recovery from haematological neoplasms: leukaemia, lymphoma, myelodysplastic syndromes Haematological malignancy diagnosed <1yr ago, 3.5x increased risk of severe COVID illness Haematological malignancy diagnosed 1- <5yrs ago, 3.1x increased risk of severe COVID illness.	Not recommended unless >5y remission	Possibly. Discuss with their specialist.	Yes	Yes

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
NON-HAEMATOLOGICAL CANCER				
Full recovery cancer non-haematological. Includes recovery from lung cancer (previous advice over-cautious). Full recovery <12m from non-haematological cancer 1.6x increased risk of severe COVID illness	Yes. Wait 3-6months after chemotherapy. Many individuals who have made a full recovery from cancer should be able to work in this area, if they don't have other health issues.	Yes. Wait 3-6months after chemotherapy. Most individuals who have made a full recovery from cancer should be able to do clinical work.	Yes	Yes
DIABETES SUBOPTIMAL CONTROL				
Type 1 Diabetes - Onset >10 years, or past/ current suboptimal control, or HbA1C>58, or unacceptable highs/lows, or any complications of diabetes. Uncontrolled DM HbA1C >58 2.4x increased risk severe COVID illness	Not recommended	Yes, for most.	Yes, particularly for poorly controlled OR significant co-morbidities.	Yes, particularly for poorly controlled OR significant co-morbidities.
Diabetes Type 2 sub-optimally controlled, HbA1C>58 or any complications of diabetes. Uncontrolled DM HbA1C >58 2.4x increased risk severe COVID illness	Not recommended	Yes	Yes	Yes

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 Most vulnerable and requiring protection from high risk work
DIABETES CONTROLLED				
Type 1 Diabetes - Onset <10 years, and with previous good control and good current control. HbA1C is below 58, and no unacceptable highs or lows, and no complications of diabetes. Controlled DM, HbA1C<58 1.5x increased risk of severe COVID illness	Can work in this area if ALL criteria met. Consider whether insulin scheduling may be affected if needs to wear full PPE most of shift.	Yes	Yes	Yes
Diabetes Type 2 - well controlled, HbA1C is below 58, and no complications of diabetes. Controlled DM, HbA1C<58 1.5x increased risk of severe COVID illness	Can only work in this area if no history of recurrent infections.	Yes	Yes	Yes
OBESITY SEVERE				
Obesity class 3 = 2.3x increased risk of severe COVID illness BMI norms vary by ethnicity. e.g. Class 3 = BMI>40 in European people	Not recommended for class 3.	Yes, but consider co-morbidities	Yes	Yes

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
RESPIRATORY – NON-ASTHMA CONDITIONS				
Any stable chronic lung disease eg. Chronic Obstructive Pulmonary Disease, Interstitial Lung Disease (ILD), recurrent bronchitis, bronchiectasis, cystic fibrosis, suppurative lung disease or lobectomy Respiratory disease (excluding asthma) 1.8x increased risk of severe COVID illness	Not recommended	Yes for most, be guided by current work function and symptom level. ILD with active co- existing connective tissue disease, discuss with specialist.	Yes	Yes
Proven recurrent pneumonia, in absence of an obvious underlying medical condition.	Possibly not for most. Some individuals may not have experienced an episode for many years.	Yes, for most individuals. Some may need specialist advice.	Yes	Yes
RESPIRATORY - ASTHMA				
Poorly controlled asthma: impacts on activities of daily living, frequent reliever inhaler use, night waking, 2+ courses prednisone in past 1yr, required ED or nebulisation 2x in past yr. Frequent medical consultations or multiple medications required.	Not recommended	Yes, be guided by current work function and symptom level. Some may have additional non-reversible pulmonary disease.	Yes	Yes
Sub-optimally controlled asthma: frequent reliever inhaler use but no night waking	Probably yes, but depends on symptom control.	Yes	Yes	Yes

RESPIRATORY - ASTHMA continued: Mild or well controlled asthma: Intermittent symptoms not affecting daily function, no night symptoms, reliever used up to 2x per week.	Yes	Yes	Yes	Yes
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Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 – most vulnerable and requiring protection from high risk work
NEUROLOGICAL CONDITIONS				
Conditions include multiple sclerosis, cerebral palsy and Parkinson's disease, and neuromuscular problems e.g. myasthenia gravis, that affect safe PPE doffing or independent ventilation. Stroke or dementia 2.3x increased risk of severe COVID illness.	Only if neurological condition is mild, there is no bulbar or respiratory compromise, and not taking immunosuppressant.	Yes, based on previous work abilities and current symptom status.	Yes especially if significant functional impairment from neurological disease	Yes
KIDNEY DISEASE				
Chronic renal impairment Kidney disease 1.8x increased risk of severe COVID illness If has a renal transplant with normal renal function, refer to ORGAN TRANSPLANT.	Not recommended	Possibly, yes if renal impairment does not meet criteria for dialysis, and worker has not had renal transplant. Discuss with specialist	Yes, if meets criteria for Dialysis and not had renal transplant. If uncertain, discuss with specialist.	

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
IMMUNOCOMPROMISING CONDITIONS				
Immunocompromised due to primary or acquired Immunodeficiency Eg. HIV	HIV cases will need clearance from their Infectious Disease Physician. Primary immunodeficiency will need clearance from their Immunologist.	Possibly Yes Yes, IF HIV virus is persistently suppressed over years AND CD4 count >350. Primary immunodeficiency will need discussion with OH Physician or Immunologist.	Yes IF HIV virus is suppressed AND CD4 count 200-350	Yes IF HIV Unsuppressed OR CD4 count <200
Other immunosuppressive condition 1.7x increased risk of severe COVID illness	Not recommended	Possibly yes	Yes	Yes
IMMUNOSUPPRESSANT MEDICATIONS WITH POTENTIAL TO COMPROMISE IMMUNITY				
Cyclophosphamide in last 6 months (any dose /route)	Not recommended	Not recommended	Not recommended	Yes
Immunosuppressant medications with potential to compromise the immune system include Biologic DMARDs in last 12months JAK inhibitors TNF inhibitors	Not recommended IF: Abatacept Adalimumab Anakinra Azathioprine >3.0mg/kg/day Baracitinib Belimumab	Yes if only one immunosuppressive medicines, biologics/ monoclonal, or small molecule immunosuppressants. Some individuals will need to be excluded from clinical areas due to risk of infection.	Yes if Two or more immunosuppressive medicines, biologics/ monoclonal, or small molecule immunosuppressants. Some individuals may need to work from home due to	Yes

<p>Acitretin, Dapsone, Hydroxychloroquine, and Sulfasalazine are widely used and are not immunocompromising.</p>	<p>Canakinumab Certolizumab Cyclosporin Etanercept Golimumab (list continues) Infliximab Ixekizumab Leflunomide Mercaptopurine >1.5mg/kg/day Methotrexate >0.4mg/kg/week Mycophenolate Rituximab Sarilumumab Seukinumab Sirolimus Tacrolimus Teriflunomide Tocilizumab Tofacitinib Ustekinumab OR discuss with their Specialist Physician</p>		<p>risk of infection from colleagues</p>	
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Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 Most vulnerable and requiring protection from high risk work
<p>Corticosteroids</p> <p>Consider duration and dose</p> <p>Prednisone equal to or > 10mg/day suppresses T-cell response (needed for viral infection).</p> <p>T cell response normalises at least 2/7 after prednisone is stopped.</p>	<p>Yes if Corticosteroid dose of <20mg (0.5mg/kg) per day for < 2 weeks.</p> <p>IF < 2weeks course of Prednisone >20mg/day, can return to work AFTER prednisone course complete.</p>	<p>Yes if Corticosteroid dose of >= 5 and <20mg (0.5mg/kg) per day for 2 - 4 weeks</p>	<p>Yes if Corticosteroid dose of >= 5 and <20mg (0.5mg/kg) per day for > 4 weeks</p>	<p>Yes if Corticosteroid dose of >= 20mg (0.5mg/kg) per day for > 4 weeks</p>
AUTOIMMUNE CONDITIONS NOT YET ON IMMUNOSUPPRESSANT				
<p>Rheumatoid arthritis, SLE, Psoriasis</p> <p>Consider organ impairment.</p> <p>Rheumatoid/SLE 1.2 increased risk severe COVID illness</p>	<p>Yes, if organ impairment mild.</p>	<p>Yes, if organ impairment mild.</p>	<p>Yes, if organ impairment moderate – severe.</p>	<p>Yes</p>

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
LIVER DISEASE				
<p>Chronic liver disease 1.6 x increased risk of severe COVID illness</p> <p>If now has a liver transplant with normal liver function, refer to ORGAN TRANSPLANT.</p>	<p>Will depend on nature of underlying condition.</p> <p>Many individuals with chronic liver disease may not be able to work in this area.</p> <p>May need discussion with Hepatologist or OH.</p>	<p>Probably yes; dependent upon nature of underlying condition, current stability, and previous ability to work.</p> <p>May need discussion with Occupational Health.</p>	Yes	Yes
HEART DISEASES -NON-ISCHAEMIC CARDIAC CAUSES				
<p>NO symptoms of chest pain, shortness of breath and/or swelling in the lower limbs.</p> <p>eg. cardiomyopathy, uncontrolled atrial fibrillation with HR>100, or multiple previous heart procedures</p> <p>If has a heart transplant, refer to ORGAN TRANSPLANT.</p>	Not recommended	<p>Yes, based on previous work abilities and current symptom status.</p> <p>Need to consider non-clinical work if highly symptomatic.</p> <p>Some may need specialist advice.</p>	Yes	Yes

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
With symptoms of chest pain, shortness of breath walking on the flat and/or swelling in the lower limbs. eg. heart failure with breathlessness walking on the flat, NYHA class 2 or above, cardiomyopathy, or previous heart valve surgery.	Not recommended	Yes, based on previous work abilities and current symptom status. Need to consider non-clinical work if very symptomatic. Some may need specialist advice.	Yes	Yes
HEART DISEASES -ISCHAEMIC HEART DISEASE				
Sub-optimally controlled IHD, WITH chest pain or shortness of breath eg. walking on the flat, with some impact on daily activities. Any degree of heart failure should not work in COVID areas.	Not recommended	Yes, based on previous work abilities and current symptom status. Consider non-clinical work if severe/very symptomatic. Some may need specialist advice.	Yes	Yes

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
Well controlled IHD with or without medicines, no chest pain or shortness of breath, AND normal daily function. No need to use GTN spray. No other significant risk Factors such as hypertension, diabetes or heart failure.	Yes, if no symptoms and normal daily function. Not recommended IF aged over 65y. Some may need specialist advice. Heart procedures in last 6 months should probably not work in COVID areas	Yes Including well controlled IHD over 65y	Yes	Yes
Hypertension, suboptimal control despite medication (Grade 2 hypertension BP 160- 179/100-109 or higher).	Not recommended	Yes	Yes	Yes
Hypertension - well controlled (including on medication) and no heart disease.	Yes	Yes	Yes	Yes
SPLENECTOMY				
Staff with splenectomy secondary to an autoimmune condition are at higher risk of severe COVID illness than staff with splenectomy secondary to non-autoimmune condition e.g. congenital cyst or traumatic rupture.	Not recommended. There is no increased risk from viruses, but individuals with no spleen are at risk of severe sepsis from secondary bacterial infection.	Yes, but only in clinical areas where there is a low risk of acquiring bacterial infections. Individuals should ensure they have been immunised with the pneumococcal vaccine.	Yes	Yes

Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 - Most vulnerable and requiring protection from high risk work
MENTAL HEALTH				
Any mental health state where judgement/ insight/ concentration is affected. This may be a long term condition or related to an acute stress situation for example.	Not if safe donning/ wearing/ doffing of PPE or clinical decision-making is at risk.	Yes	Yes	Yes
PREGNANCY				
<p>All pregnant workers should avoid, where possible, caring for patients with known or suspected coronavirus infection i.e. avoid work in COVID-19 stream.</p> <p>Women who are more than 28 weeks pregnant or have underlying health conditions (at any gestation) should not generally work in patient-facing roles*.</p>	No, regardless of vaccination status	<p>Yes if less than 28 weeks pregnant and otherwise well, with none of the risk factors below. May continue with patient-facing work in non-COVID-19 stream using the appropriate precautions*.</p> <p>Underlying health conditions of concern are:</p> <ul style="list-style-type: none"> - Being older than 35 years - Being overweight or obese (body mass index above 30 kg/m2) 	Yes	Yes

		<ul style="list-style-type: none"> - Having pre-existing (pre-pregnancy) high blood pressure - Having pre-existing (pre-pregnancy) diabetes (type 1 or type 2) <p>Caution also should be exercised for Maori, Pacific People and minority ethnic groups.</p> <p>* Exceptions for those not meeting criteria above would be considered where there is mutual agreement with the staff member, and providing the community rate of infection is considered low, for clinical roles where they can screen patients for symptoms, their patients are masked, the staff member can maintain distancing (> 2 metres) and use the best grade of Personal Protective Equipment (PPE) available (N95 or equivalent)</p>		
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Medical Condition Risk Factor	Category 1 – Least vulnerable and able to perform highest risk work	Category 2	Category 3	Category 4 Most vulnerable and requiring protection from high risk work
MUSCULOSKELETAL CONDITIONS				
Any active musculoskeletal condition (e.g. osteoarthritis, mild inflammatory joint conditions) Does not increase COVID illness risk.	Yes Should not be on immunosuppressive medication. Should be able to don and doff PPE with ease.	Yes	Yes	Yes
SKIN CONDITIONS				
Any active skin conditions.	Yes Should not be on immunosuppressive medication.	Yes	Yes	Yes

- Most staff with risk factors not listed in this framework should be able to undertake work in all risk exposure levels.
- Healthy Health Care Workers who become fatigued or stressed may become unsuitable to work in COVID stream.

ALAMA (UK)

Where assessment using this framework results in healthcare workers sitting on the boundary between two categories, utilisation of the “COVID age” from the UK ALAMA website may provide Occupational Health further clarity about which risk category an employee should be placed into: <https://alama.org.uk/covid-19-medical-risk-assessment/>

Associated Documents

1. Protecting Vulnerable DHB Staff During COVID-19: Guide for People Leaders and Line Managers, Version 2, 24 August 2021, National GMsHR COVID-19 Workforce Response.