
All District Health Boards

DHB Occupational Health Assessment Tool for Vulnerable Workers

Key Changes

Updates were Made in the Following Sections:

- Covering page and column headings to guide interpretation of the tool
- Column headings
- Pregnancy – to align with the most recent Ministry of Health guidance
- Age
- Diabetes
- Immunosuppressant drug list
- Respiratory
- Notes on application

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

Context

The following guidance was developed by occupational health specialists from across New Zealand. It is intended as guidance only and will evolve as we learn more about COVID-19. It is important to note combinations of conditions are likely to increase the risk and should be considered more conservatively.

This guidance assumes the individual has not been infected with COVID-19 and is intended to be applied by Occupational Health.

To use the table below, start with the individual's condition (row) to assess what category (column) they can be assigned. An individual's vulnerability category will be the least vulnerable category indicated as "Yes". Category 1 is least vulnerable to Category 4 is most vulnerable.

Ex1. Ben has mild asthma. The row for mild asthma indicates "Yes" in all four categories. Ben is Category 1.

Ex2. Jane has hypertension with suboptimal control. The row for this indicates "Not recommended" Category 1 but "Yes" for 2, 3, 4. Jane is Category 2.

Explanation of the Categorisation Framework:

The following assessment framework categorises individuals in one of four risk categories. These assessments are then applied against the guide titled "*Protecting vulnerable DHB staff during COVID-19*".

- Category 1 staff are least vulnerable to complications from COVID-19 and so can work in all areas, including the COVID-19 stream where care for COVID-19 patients [confirmed or probable] is provided
- Category 2 staff have an underlying vulnerability which is relatively mild but which prompts the requirement for some protective measures.
- Category 3 staff have more significant vulnerabilities requiring significant protection.
- Category 4 staff have the most significant vulnerabilities requiring maximum protection.

The extent of protection recommended for each category will alter according to local circumstances, including - most significantly – the prevalence of COVID-19 in the community.

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 - ASTHMA				
There is a continuum of symptoms and condition severity for asthma; the ability for each individual to work with COVID-19 patients will be dependent upon symptom control and, use of inhaler and awaking at night short of breath. Mild asthma is defined as occasional intermittent breathing symptoms not usually affecting activities of daily living, with use of up to two relieving uses of inhaler each week and with no night waking. Less well controlled asthma is the use of relieving inhaler more often but not waking at night. Severe asthma impacts on daily activities of daily living, requires inhaler use on a frequent basis each day, with night waking, course of oral corticosteroids on two or more occasions in previous 12 months, required treatment in ED or nebulisation more than once in previous 12 months, etc.				
Mild well controlled asthma.	Yes	Yes	Yes	Yes
Less well controlled asthma.	Probably yes but depends on level of symptom control.	Yes	Yes	Yes
Poorly controlled asthma	Not recommended	Yes, but will need to be guided by current work function and symptom level. Some cases may need discussion with occupational health.	Yes	Yes
RESPIRATORY - OTHER CONDITIONS				
Any stable chronic lung disease (such as chronic obstructive pulmonary disease, interstitial	Not recommended	Yes, but will need to be guided by current work function and symptom level. Some cases may	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
lung disease, recurrent bronchitis).		need discussion with occupational health		
Proven recurrent pneumonia, in absence of an obvious underlying medical condition.	Possibly not recommended for most individuals. May need to be assessed on an individual basis, as some individuals may not have experienced an episode for many years.	Yes, for most individuals. Some cases may need discussion with occupational health.	Yes	Yes
DIABETES				
Type 1 Diabetes. Diagnosis for less than 10 years, and with previous good control and good current control. HbA1C blood test is below 60, and no unacceptable highs and/or lows, and no complications of diabetes.	Suitable for Category 1 only if all criteria are met. There will also be a need to determine if insulin scheduling may be affected.	Yes	Yes	Yes
Type 1 Diabetes. Diagnosis for more than 10 years, and/or previous or current poor control, and/or HbA1C blood test above 60, and/or unacceptable highs and/or	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
lows, and/or any complications of diabetes.				
Diabetes - type 2 diabetes well controlled, HbA1C blood test is below 60, and/or no complications of diabetes.	Suitable for Category 1, if good diabetic control, and HbA1C is lower than 60 and no history of recurrent infections.	Yes	Yes	Yes
Diabetes - type 2 diabetes poorly controlled, HbA1C blood test above 60 and/or any complications of diabetes.	Not recommended	Yes	Yes	Yes

HEART DISEASE

There is a continuum of symptoms and condition severity for heart disease; the ability for each individual to work with COVID-19 patients being dependent upon symptom control with or without treatment, presence of heart failure, etc.

Individuals with well-controlled ischaemic heart disease (IHD), narrowing of the arteries in the heart) must be well-controlled with or without medications; and with no chest pain/shortness of breath and with normal daily function. Individuals with less well-controlled IHD will present with occasional chest pain/shortness of breath with some impact on normal daily function. Most individuals with severe heart disease will probably not be able to work in clinical areas.

Presence of other risk factors such as hypertension needs to be considered.

Individuals with IHD in combination with any degree of heart failure should not work in COVID-19 areas.

Individuals with extensive history of heart disease and multiple previous heart procedures and interventions should not work in COVID-19 areas, whatever the current control of their condition. Individuals with heart procedures in last 6 months should probably not work in COVID areas.

For many individuals, there may be a need to determine previous ability to work as a guide for current abilities.

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 no other significant risk factors such as hypertension, diabetes or heart failure.	<p>Yes, if above criteria are satisfied, no symptoms and normal daily function and no need to use GTN spray.</p> <p>Not recommended for individuals if aged over 65.</p> <p>Some cases may need discussion with occupational health.</p>	Yes	Yes	Yes
Less well controlled IHD, with angina or chest pain walking on the flat impacting on daily activities.	Not recommended	Yes, based on previous work abilities and current symptom status. May need to be Category 3 if very symptomatic. Some individuals may need to be discussed with occupational health.	Yes	Yes
Other cardiac cause (such as cardiomyopathy, uncontrolled atrial fibrillation with HR>100, or previous significant heart valve surgery), with no symptoms of chest pain,	Not recommended	Yes, based on previous work abilities and current symptom status. May need to be Category 3 if highly symptomatic. Some individuals may need to	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
shortness of breath and/or swelling in the lower limbs.		be discussed with occupational health.		
Other cardiac cause (such as heart failure with breathlessness walking on the flat, NYHA class 2 or above, cardiomyopathy or previous heart valve surgery), with symptoms of chest pain, shortness of breath walking on the flat and/or swelling in the lower limbs.	Not recommended	Yes, based on previous work abilities and current symptom status. May need to be Category 3 if very symptomatic. Some individuals may need to be discussed with occupational health.	Yes	Yes
Hypertension, well controlled (including on medication) and no heart disease.	Yes	Yes	Yes	Yes
Hypertension, suboptimal control despite being on medication (Grade 2 hypertension BP 160-179/100-109 or higher).	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
IMMUNOCOMPROMISING CONDITIONS				
Immunocompromising conditions (i.e. those causing compromise of the immune system), including HIV infection, cancers, rheumatoid arthritis, immune deficiency syndromes, following organ transplants, etc.	Not recommended	Possibly yes, but some individuals may need to be Category 3 if very symptomatic. There is a wide range of immunocompromised conditions and needs. Discussion with a clinician is advised.	Yes, but some individuals may need to be Category 4 due to risk of infection from colleagues.	Yes
MEDICATIONS CAUSING IMMUNOCOMPROMISE				
Medications with potential to compromise the immune system.	Not recommended if on long-term prednisolone at a dosage greater than 10 mgs or on medications causing immunocompromise, including but not necessarily limited to the following medications: Abatacept	Possibly yes, but some individuals will need to be Category 3 due to risk of infection. There is a wide range of immunocompromising conditions and needs. Please refer to the previous medication list as a guide.	Yes, but some individuals may need to be Category 4 due to risk of infection from colleagues.	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
	Adalimumab Anakinra Cyclophosphamide Cyclosporin Etanercept Infliximab Mercaptopurine Mycophenolate Rituximab Tacrolimus / Sirolimus Tocilizumab Leflunomide Discussion with a clinician is advised for all other individuals.	Discussion with a clinician is advised.		
Chronic kidney/liver disease	Will depend on nature of underlying condition. Many individuals with chronic kidney or liver disease may not be suitable for this category.	Probably, most individuals with chronic kidney liver disease should be Category 2; dependent upon nature of underlying condition, current	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
	May need discussion with Occupational Health.	stability, previous ability to work. May need discussion with Occupational Health.		
CANCER				
Active cancer	Not recommended	Not recommended	Depends on clinical situation and symptoms.	Depends on clinical situation and symptoms.
Recovering from cancer, on chemotherapy or radiotherapy.	Not recommended	Probably not for most individuals.	Depends on clinical situation and symptoms.	Depends on clinical situation and symptoms. Some individuals may be able to work from home.
Full recovery from previous cancer.	Many individuals who have made a full recovery from cancer should be Category 1. However, there are some cancers (for example previous leukaemia or lung cancer) that may be relevant, in case an individual becomes unwell again. Advice from occupational health may be required.	Most individuals who have made a full recovery from cancer may be Category 2 (if not Category 1). Care may need to be taken with previous lung cancers or leukaemias due to infection risk.	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
MUSCULOSKELETAL CONDITIONS				
Any active musculoskeletal condition (such as osteoarthritis and mild inflammatory joint conditions)	Yes (from the perspective of increased risk of infection). Should not be on immunosuppressive medication.	Yes (from the perspective of increased risk of infection)	Yes (from the perspective of increased risk of infection)	Yes (from the perspective of increased risk of infection)
SKIN CONDITIONS				
Any active skin conditions.	Yes (as virus is not thought to spread through skin). Some individuals may be unable to be Category 1 due to immunosuppressant medications for their skin condition.	On the whole yes, individuals on immunosuppressant medication for skin conditions will need further discussion with clinician.	Yes	Yes
NEUROLOGICAL CONDITIONS				

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
Conditions include multiple sclerosis, cerebral palsy and Parkinson’s disease.	Only if neurological condition is mild, there is no bulbar or respiratory compromise and not taking immunotherapies.	Yes, based on previous work abilities and current symptom status. Need to consider Category 3 if significant neurological disease due to poor ventilatory outcomes. Some individuals may need to be discussed with occupational health.	Yes	Yes
OTHER MEDICAL CONDITIONS				
Splenectomy	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 care needs to be taken in situations where a risk of acquiring bacterial infections exists. Individuals should ensure they have been immunised with the pneumococcal vaccine.	Yes	Yes
There is a complete lack of data for all other medical conditions and Covid-19. Most individuals with other medical conditions	On the whole yes but will depend on the nature of the underlying condition. Risk of infection will need to be considered on a case by case basis.	If already working in a clinical area, should then be suitable. Risk of infection will need to be considered a case by case basis.	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
<p>not affecting the lung, heart, immune system, diabetes, should be able to undertake work in all zones.</p> <p>Relevant conditions include those affecting the musculature or lining of the lung, neuromuscular problems (such as myasthenia gravis), pleural conditions, selected psychological or psychiatric conditions, etc.</p>	<p>For some individuals, there may be a need to seek advice from occupational health.</p>			
PREGNANCY				
<p>Person is pregnant</p>	<p>Not recommended, unless individual risk assessment has been carried out, appropriate controls are in place and mutual agreement with the staff member to carry out high risk COVID-19 tasks.</p>	<p>Yes</p>	<p>Yes</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
AGE				
Current data indicates that the relative risk of dying from COVID19 is between 70-300x greater in the 60-69 age group compared with the 20-29 age group. Age is clearly an important factor to take into account regardless of underlying health conditions.	>70 Years old not recommended, unless individual risk assessment has been carried out, appropriate controls are in place and mutual agreement with the staff member to carry out COVID-19 stream work.	>70 Years old requires individual risk assessment, appropriate controls are in place and mutual agreement with the staff member to carry out non-COVID-19 stream work.	Yes	Yes

Notes on application:

- Other risk factors, including but not limited to smoking and body mass index greater than 40, should be considered on a case by case basis for borderline cases that do not clearly fall into the above categories. There is also evidence that COVID-19 may be disproportionately affecting some ethnic groups. A whole-of-person, case-by-case approach to occupational health should be applied, per the WHO definition of health*, taking into account and weighing all information provided or declared by the staff member.
- The staff member is an equal contributor in the employment relationship and therefore should, insofar as practicable, be consulted in the decision making process.
- Social/equity considerations will also be noted and discussion had as to the end result or level, this will give the opportunity for staff to offer their perspective and provide further information if appropriate, as the decision is made.
- Combinations of risk factors need to be taken into account using clinical judgement and may be more important than any individual risk factor.

*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.