

Risk assessment framework for identifying staff possibly 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.

Work Zones

During this pandemic, different work areas or zones have been categorised as follows:

- **Category 1*** – **Anywhere at high risk of COVID-19 exposure:** including but not limited to - dedicated COVID-19 wards, designated surgical beds, paediatric beds, Intensive Care Unit (ICU), Acute Medical Assessment Unit (AMAU) / Emergency Department (ED) / General Medical (GM) wards, anywhere else deemed locally high risk.
- **Category 2** – **Other clinical areas with low probability of COVID-19 exposure** – including but not limited to general wards and outpatient departments that are designated COVID-19 free areas and risk of exposure is low based on services delivered.
- **Category 3** - Non-clinical areas, including kitchens, stores, offices, cleaners of non-clinical areas, etc.
- **Category 4** - Work from home or in self-isolation for whatever reason.

The above categorisation scheme is relevant to all members of staff working in those zones, irrespective of their work or role. Kitchen staff, orderlies, maintenance and engineering staff, environmental services and any other staff visiting any zone even on an intermittent and short-lived basis will be considered as working in that zone.

*within category 1 work zones there may be other categories based on localised assessment.

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
RESPIRATORY - ASTHMA				
<p>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 together with night waking. Further guidance will be coming to clarify and assist in assessing severity.</p>				
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	Yes	Yes
RESPIRATORY - OTHER CONDITIONS				
Any stable chronic lung disease (such as chronic obstructive pulmonary disease, recurrent bronchitis).	Not recommended	Yes, will need to be guided by current work function and level of symptoms. Some cases may need discussion with occupational health.	Yes	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
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, but will depend on infection risk.	Yes	Yes
DIABETES				
Diabetes - type 1 diabetes well controlled, HbA1C blood test is below 70, and no complications of diabetes.	Can only work in this area, if good diabetic control, and HbA1C is lower than 70 and no history of recurrent infections. There will also be a need to determine if insulin scheduling may be affected.	Yes	Yes	Yes
Diabetes - type 1 diabetes poorly controlled, HbA1C blood test above 70 and/or any complications of diabetes.	Not recommended	Yes	Yes	Yes
Diabetes - type 2 diabetes well controlled,	Can only work in this area, if good diabetic	Yes	Yes	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
HbA1C blood test is below 70, and no complications of diabetes.	control, and HbA1C is lower than 70 and no history of recurrent infections.			
Diabetes - type 2 diabetes poorly controlled, HbA1C blood test above 70 and/or any complications of diabetes.	Not recommended	Yes	Yes	Yes
HEART DISEASE				
<p>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.</p> <p>Presence of other risk factors such as hypertension needs to be considered.</p> <p>Individuals with IHD in combination with any degree of heart failure should not work in COVID-19 areas.</p> <p>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.</p> <p>For many individuals, there may be a need to determine previous ability to work as a guide for current abilities.</p>				
Well controlled IHD, with no other significant risk	Yes, if above criteria are satisfied, no symptoms	Yes	Yes	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
factors such as hypertension, diabetes or heart failure.	and normal daily function and no need to use GTN spray. Not recommended for individuals if aged over 65. Some cases may need discussion with occupational health.			
Less well controlled IHD, with occasional symptoms and occasional impact on daily activities.	Not recommended	Yes, based on previous work abilities and current symptom status. Need to consider non-clinical work if very symptomatic. Some individuals may need to be discussed with occupational health.	Yes	Yes
Other cardiac cause (such as cardiomyopathy or previous heart valve surgery), with no symptoms of chest pain, shortness of breath and/or swelling in the lower limbs.	Not recommended	Yes, based on previous work abilities and current symptom status. Need to consider non-clinical work if highly symptomatic. Some individuals may need to be discussed with occupational health.	Yes	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
Other cardiac cause (such as heart failure, cardiomyopathy or previous heart valve surgery), with symptoms of chest pain, shortness of breath and/or swelling in the lower limbs.	Not recommended	Yes, based on previous work abilities and current symptom status. Need to consider non-clinical work 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 (including with medication) and no heart disease.	Not recommended	Yes	Yes	Yes
IMMUNOCOMPROMISING CONDITIONS				
Immunocompromising conditions (i.e. those causing compromise of the immune system), including HIV/AIDS, cancers, rheumatoid arthritis, immune deficiency syndromes,	Not recommended	Possibly yes, but some individuals will need to be excluded from clinical areas due to risk of infection. There is a wide range of immunocompromised conditions and needs.	Yes, but some individuals may need to work from home due to risk of infection from colleagues.	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
following organ transplants, etc.		Discussion with a clinician is advised.		
MEDICATIONS CAUSING IMMUNOCOMPROMISE				
Some medications have potential to compromise the immune system. Ask whether individual takes any of the medications mentioned in this section.	Cannot work if on the following medications: Long-term prednisolone at a dosage greater than 10 mgs Abatacept Adalimumab Anakinra Azathioprine Cyclophosphamide Cyclosporin Etanercept Hydroxychloroquine Infliximab Mercaptopurine Methotrexate Mycophenolate Rituximab Tacrolimus / Sirolimus Discussion with a clinician is advised for all other individuals.	Possibly yes, but some individuals will need to be excluded from clinical areas due to risk of infection. There is a wide range of immunocompromised conditions and needs. Please refer to previous list as a guide. Discussion with a clinician is advised.	Yes, but some individuals may need to work from home due to risk of infection from colleagues.	Yes
Chronic kidney/liver disease	Will depend on nature of underlying condition.	Probably, most individuals with chronic	Yes	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
	Many individuals with chronic kidney or liver disease may not be able to work in this area. May need discussion with occupational health.	kidney liver disease should be able to undertake work in this area; dependent upon nature of underlying condition, current 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 able to work in this area. However, there are some cancers (for example previous leukaemia or lung cancer) that may be relevant, in case an	Most individuals who have made a full recovery from cancer should be able to work in this area. Care may need to be taken with previous lung cancers or leukaemias due to infection risk.	Yes	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
	individual becomes unwell again in this area of work. Advice from occupational health may be required.			
MUSCULOSKELETAL CONDITIONS				
Any active musculoskeletal condition (such as osteoarthritis and mild inflammatory joint conditions)	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)	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 work in these areas 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
OTHER MEDICAL CONDITIONS				
There is a complete lack of data for all other	On the whole yes but will depend on the nature of	If already working in a clinical area, should then	Yes	Yes

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
<p>medical conditions and Covid-19. Most individuals with other medical conditions not affecting the lung, heart, immune system, diabetes, should be able to undertake work in all zones. 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>the underlying condition. Risk of infection will need to be considered on a case by case basis. For some individuals, there may be a need to seek advice from occupational health.</p>	<p>be able to continue working in a clinical area. Risk of infection will need to be considered a case by case basis.</p>		

Medical condition / Risk Factor	Category 1 work zones (able to work in areas at high risk of COVID-19 exposure and care for COVID patients)	Category 2 work zones (able to work in other clinical areas with low probability of COVID-19 exposure)	Category 3 work (able to work in non-clinical areas)	Category 4 work (able to work from home or in self-isolation with mild symptoms)
PREGNANCY				
Person is pregnant	Not recommended	<28 Weeks, Yes with appropriate PPE >28 Weeks, Not Recommended	<28 Weeks, Yes >28 Weeks, Not Recommended	Yes
AGE				
>70 Years Old	Not Recommended	Not recommended	Yes	Yes

Note: Other risk factors, including but not limited to smoking and body mass index, should be considered on a case by case basis for borderline cases that do not clearly fall into the above categories.