Guide for general practitioners to inform shared decision making with patients around risk of severe illness related to COVID-19

This document is intended as a guide for general practitioners to inform discussions with patients around individual risk related to COVID-19 as restrictions are eased.

When a patient presents with concerns about their risk of severe COVID-19 illness you can help them develop a COVID-19 action plan that considers their wishes and priorities and helps them manage risk and maintain a lifestyle that has quality and meaning. This process could include the following:

1. Considering the factors that may affect their risk of severe COVID-19 illness.
2. Helping the person define their risk.
3. Helping the person understanding how personal risk is impacted by:
   a. the epidemiological context;  
   b. their activities and interactions; and 
   c. personal actions (physical distancing and hygiene measures).
4. Helping the person develop their own risk management strategy.

Severe COVID-19 illness

COVID-19 is caused by the novel beta-coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). [1] The majority of people infected develop a mild illness while a minority develop severe illness. Higher disease severity, as indicated by hospitalisation, admission to ICU, and death, has been associated with increased age and comorbidities. [2]

In Australia, 13% of the total cases of COVID-19 notified were admitted to hospital. These figures are lower than for many other countries, with 16% of Canadian cases and 36% of cases in the EU/EEA hospitalised. [4] Case fatality rates (CFR) also varied. In the UK and Italy the CFR is around 14%, while the US and the global average CFR is just below 6%. [3] In Australia, the CFR is 1.4%. [2] These differences likely reflect high levels of testing and case ascertainment in Australia. Australian data is more likely to accurately reflect risk in Australian communities.
What factors are important when assessing individual risk of severe COVID-19 illness?

Age

Increasing age is the single most important factor for risk of severe COVID-19 disease. Both Australian and international data show that higher disease severity is associated with older age. [2] The table below includes data from a large UK cohort study that looked at the risk of death in patients with COVID-19, among different age groups.

### Hazard Ratios for in hospital COVID-19 death [4]

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Increased risk (adjusted hazard ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-59</td>
<td>1.0 (reference group)</td>
</tr>
<tr>
<td>60-69</td>
<td>x 2.09 (1.84 - 2.38)</td>
</tr>
<tr>
<td>70-79</td>
<td>x 4.77 (4.23 - 5.38)</td>
</tr>
<tr>
<td>Over 80</td>
<td>x 12.64 (11.19 – 14.28)</td>
</tr>
</tbody>
</table>

A hazard ratio above one, such as 2.0, equates to 2.0 times higher risk compared to baseline.

Co-morbidities and other issues

While age is the factor most strongly associated with risk of severe COVID-19 illness, many chronic conditions appear to increase risk. [2, 4] In some studies male gender has been shown to increase risk. [4] Data from the UK also found that poverty was an independent risk factor not explained by co-morbidity or other risk factors. [4]

First Nations peoples are thought to be at higher risk in public health emergencies. Aboriginal and Torres Strait Islander peoples may be at increased risk of severe disease and should be considered a priority population when assessing potential risk related to COVID-19.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Increased risk (95% confidence intervals) [4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic heart disease</td>
<td>1.27 (1.20 – 1.35)</td>
</tr>
<tr>
<td>Rheumatoid/Lupus/Psoriasis</td>
<td>1.23 (1.12 – 1.35)</td>
</tr>
<tr>
<td>Controlled diabetes (HbA1c 58mmol/mol) (vs none)</td>
<td>1.50 (1.40 – 1.60)</td>
</tr>
<tr>
<td>Non-haematological cancer (&lt;12mths) (vs none)</td>
<td>1.56 (1.26 – 1.89)</td>
</tr>
<tr>
<td>Liver disease</td>
<td>1.61 (1.33 – 1.95)</td>
</tr>
<tr>
<td>Other immunosuppressive condition</td>
<td>1.69 (1.21 – 2.34)</td>
</tr>
<tr>
<td>Kidney disease</td>
<td>1.72 (1.62 – 1.83)</td>
</tr>
<tr>
<td>Respiratory disease (excluding asthma)</td>
<td>1.78 (1.67 – 1.90)</td>
</tr>
<tr>
<td>Stroke/dementia</td>
<td>1.79 (1.79 – 1.93)</td>
</tr>
<tr>
<td>Obesity Class III (≥40 kg/m²) (vs none)</td>
<td>2.27 (1.99 – 2.58)</td>
</tr>
<tr>
<td>Uncontrolled diabetes (HbA1c ≥58mmol/mol) (vs none)</td>
<td>2.36 (2.18 – 2.56)</td>
</tr>
</tbody>
</table>
Risk appears to increase with the number of comorbid conditions. The proportion of COVID-19 cases who reported one or more comorbid conditions increased with the level of care required, with 76% of ventilated cases reporting comorbid conditions. [5]

<table>
<thead>
<tr>
<th>Condition (see list below)</th>
<th>Increased risk of (95% confidence intervals) [5]</th>
</tr>
</thead>
<tbody>
<tr>
<td>No co-morbidities</td>
<td>1.0 (reference group)</td>
</tr>
<tr>
<td>One chronic condition</td>
<td>1.8 (1.16 – 2.77)</td>
</tr>
<tr>
<td>Two or more chronic conditions</td>
<td>2.6 (1.61 – 4.17)</td>
</tr>
</tbody>
</table>

Factors that do not appear to increase risk, or where the evidence is mixed or absent, include mild to moderate asthma, and controlled hypertension. There is a lack of reliable studies showing increased risk for these as independent factors, although there is variation across different countries. While it is considered likely that smoking increases risk, there is currently no robust data around this risk factor, but it may be a good time to raise smoking cessation.

Pregnancy has not been shown to be associated with more severe illness from COVID-19 and there is little evidence of vertical transmission of the virus.

Consider your patient's age and their condition/s and treatment to better define their risk.

**My patient has factors that increase their risk of severe COVID-19 illness. How do I help them make decisions to manage their risk?**

When your patient has factors that increase their risk of severe illness, you can help them characterise their personal risk and contextualise how this risk is modified by the local epidemiology and the activities they wish to undertake in the community.

Together you can develop a COVID-19 action plan that considers the patients' wishes and priorities and helps your patient manage risk and maintain a lifestyle that has quality and meaning. Encourage the patient to explore the benefits and advantages versus the risks and disadvantages of any choices that are open to them.

When considering risk, it is important that patients understand that their risk relates to the presence of a hazard, in this case, SARS-CoV-2 and exposure to the hazard. Whilst they may have factors that increase their risk for more severe COVID-19, if they are not exposed to SARS-CoV-2, they are not at risk of COVID-19.

The best time to develop the COVID-19 action plan with your patient is now, when there is a low prevalence of disease in the community.
Epidemiology: the case numbers

The number of cases of COVID-19 in the local community is the most important determinant of your patient’s risk of exposure. If there are no cases or a low number of cases, and no evidence of community transmission, there will be no or low risk of COVID-19 regardless of their age or any health conditions. This is an important consideration in the assessment of risk. Those at increased risk need to stay up to date on cases in their community through their state or territory health department. If they are travelling, they should be aware of transmission rates at their destination. Further information on geographically localised areas with elevated risk of local transmission of COVID-19 can be found here.

Plans and risk strategies should change in response to changes in cases numbers in the area. You may wish to consider a COVID-19 action plan for your patient, so that if case numbers increase, activities and actions are modified to suit the change in exposure risk.

Even if cases remain low you should advise your patients to protect their health by maintaining physical distancing, practising good respiratory and hand hygiene, downloading the COVIDSafe app, getting the influenza vaccination, and staying at home and getting tested for COVID-19 if they have even mild cold or flu-like symptoms.

Activities and settings

It is important to remind your patients that regardless of the level of risk, if there are few cases in the community, they are unlikely to be exposed and the actual risk of severe COVID-19 is low.

However, when there are COVID-19 cases in the community, some types of activities, events and settings appear to increase the chance of contracting COVID-19. These include activities that:

- are in closed or indoor environments;
- have large numbers of people in close contact over an extended period (e.g. public transport at peak hour, weddings, protests or other large gatherings);
- require physical activity and close contact (e.g. dancing or contact sport);
- require vocalising in an indoor environment (e.g. choirs or singing in church);
- require sharing objects with others (e.g. utensils at a buffet);
- require sharing accommodation or amenities with others (e.g. cruise ships);
- are longer (the risk for exposure and transmission increases with time).

Even if local numbers of COVID-19 cases are low, travel to an area with higher case numbers, or attendance at an event with groups or participants from other locations with higher case numbers, is likely to increase risk of exposure to COVID-19.

People need to consider all of their activities and the associated risks. Activities should be considered, modified, substituted (e.g. ride share rather than public transport) or avoided in a higher risk epidemiological environment.
At all times people at higher risk should maintain physical distancing, practise good respiratory and hand hygiene, use the COVIDSafe app, and stay at home and get tested for COVID-19 if they have even mild cold or flu-like symptoms. People should be up to date with their vaccinations.

In situations that cannot be avoided (e.g. travelling to work on public transport) and where physical distancing cannot be maintained, people at risk could consider wearing a mask. See Coronavirus (COVID-19) – Use of masks by the public in the community.

Work and volunteer settings

It is important to remind patients that regardless of their individual level of risk, if there are few cases in the community, they are unlikely to be exposed and the actual risk of severe COVID-19 illness is low.

Employees may be higher risk of exposure in some workplaces may also pose an increased the risk of contracting COVID-19, either through:

- potential exposure to infected people, such as in health or aged care settings; and/or
- working conditions where physical distancing is difficult to maintain (e.g. working in the disability or aged care sector); and/or
- work with multiple face-to-face interactions with others; and/or
- working in a setting associated with increased transmission of the virus (e.g. meat processing).

Workplaces need to develop a COVIDSafe risk mitigation strategy in accordance with the approved code of practice How to manage work health and safety risks (2018).

People at increased risk of severe COVID-19 illness can still work or volunteer, particularly in a low risk epidemiological environment. It is important to discuss this with those at higher risk of severe COVID-19 illness and help inform a risk assessment for their workplace, including a COVID-19 action plan. This may involve consultation with their employer and should involve consideration of:

- the individual, their clinical situation and assessed risk of severe COVID-19 illness;
- the work and level of risk associated with their normal role;
- their workplace, is there a higher risk of exposure (see above for activities and settings with higher risk);
- their workplace, is there a higher risk of transmission (e.g. health care facilities, meat or food processing, other roles with close physical contact);
- the COVID-19 controls in place and the degree to which risk is mitigated; and
- additional COVID-19 controls that could be used to protect this worker.

People and workplaces need to consider risk related to their work activities and appropriate controls applied particularly in a higher risk epidemiological environment. If there is uncertainty about the degree of risk, appropriate mitigations or other complexity, referral for assessment by an occupational physician may be appropriate.
References


