

Cheat Sheet: Key points for translating potential Paxlovid benefits for patients

1 Just because you are eligible doesn't mean you will benefit

2 The only benefit is a reduced risk of hospitalisation, so you are not at any real risk of hospitalisation then you won't benefit. (The Ontario science table infographic clearly defines those at >5% of hospitalisation taking into account vaccine status. This is the subpopulation where there is likely a clinically important benefit in terms of preventing hospitalisation.)

3 There is no evidence of positive benefits on symptoms and illness duration, or on long COVID risk. The adverse effect counts were the same in the Paxlovid and control (placebo) arms. Common side effects of Paxlovid include dysgeusia (making everything taste bitter, sour or sweet), diarrhea, hypertension, headache and myalgia.

4 There has only been one trial and it was in the unvaccinated population during the much more severe delta variant so not very similar to our current situation in Ontario. There is no evidence in a vaccinated population.

Degree of Benefit

NNT in trial (17) to prevent hospitalisation in the trial is misleading because as above it was unvaccinated delta population and in a high-risk group. The level of risk in the trial population (6.5%) that benefited is more in line with Science Table recommendations than the current "eligible population"

To give context to benefit in a lower risk population: the background risk of hospitalisation in Ontario for non-long-term care patients in 2021 was 0.9%. Extrapolating, the NNT for a group with this level of risk to prevent 1 hospitalisation is 125. This wider population risk will be lower now for Omicron and more vaccinated population, so the NNT is likely even greater for a general population.

It makes sense then to focus on those at similar (higher) risk of hospitalisation to the trial - e.g. [Ontario Science Table Infographic](#) – as this is a group that might meaningfully benefit:

STEP 1 ► Determine the risk of disease progression.

- Higher risk individuals are those who have a ≥5% risk of hospitalization if they develop COVID-19. Standard risk individuals are those who have a <5% of hospitalization.
- Indigenous people, Black people, and members of other racialized communities may be at increased risk of disease progression due to disparate rates of comorbidity, increased barriers to vaccination, and social determinants of health. They should be considered **priority populations** for access to COVID-19 drugs and therapeutics.

AGE (years)	NUMBER OF VACCINE DOSES			RISK FACTORS
	0 doses	1 or 2 doses	3 doses	
<20 ¹	Higher risk if ≥3 risk factors ¹	Standard risk ¹	Standard risk ¹	<ul style="list-style-type: none"> Obesity (BMI ≥30 kg/m²) Diabetes Heart disease, hypertension, congestive heart failure Chronic respiratory disease, including cystic fibrosis Cerebral palsy Intellectual disability Sickle cell disease Moderate or severe kidney disease (eGFR <60 mL/min) Moderate or severe liver disease (e.g., Child Pugh Class B or C cirrhosis)
20 to 39	Higher risk if ≥3 risk factors	Higher risk if ≥3 risk factors	Standard risk	
40 to 69	Higher risk if ≥1 risk factors	Higher risk if ≥3 risk factors	Standard risk	
≥70	Higher risk	Higher risk if ≥1 risk factors	Higher risk if ≥3 risk factors	
Immunocompromised ² individuals of any age	Higher risk: Therapeutics should always be recommended for immunocompromised individuals not expected to mount an adequate immune response to COVID-19 vaccination or SARS-CoV-2 infection due to their underlying immune status, regardless of age or vaccine status. ^{1,2}			
Pregnancy	Higher risk ³	Standard risk	Standard risk	

1. Evidence for the safety and efficacy of sotrovimab and nirmatrelvir/ritonavir (Paxlovid) in children <18 years of age is limited. While early evidence on risk factors for moderate and severe COVID-19 in children is emerging, the ability to reliably predict disease progression in children remains very limited, and the frequency of progression is rare. While not routinely recommended in children <18 years of age, the use of these agents may be considered in exceptional circumstances (e.g., severe immunocompromise and/or multiple risk factors, clinical progression) on a case-by-case basis. Multidisciplinary consultation with Infectious Diseases (or Pediatric Infectious Diseases) and the team primarily responsible for the child's care is recommended to review the individual consideration of these medications.

2. Examples of immunocompromised or immunosuppressed individuals include receipt of treatment for solid tumors and hematologic malignancies (including individuals with lymphoid malignancies who are being monitored without active treatment), receipt of solid-organ transplant and taking immunosuppressive therapy, receipt of chimeric antigen receptor (CAR)-T-cell or hematopoietic stem cell transplant (within 2 years of transplantation or taking immunosuppression therapy), moderate or severe primary immunodeficiency (e.g., DiGeorge syndrome, Wiskott-Aldrich syndrome, common variable immunodeficiency, Good's syndrome, hyper IgE syndrome), advanced or untreated HIV infection, active treatment with high-dose corticosteroids (i.e., ≥20 mg prednisone or equivalent per day when administered for ≥2 weeks), alkylating agents, antimetabolites, transplant-related immunosuppressive drugs, cancer chemotherapeutic agents classified as severely immunosuppressive, tumor-necrosis factor (TNF) blockers, and other biologic agents that are immunosuppressive or immunomodulatory. These individuals should have a reasonable expectation for 1-year survival prior to SARS-CoV-2 infection.

3. Therapeutics should always be recommended for pregnant individuals who have received zero vaccine doses.