

Best Practice Message

Updated 18th July 2022

Focus on Efficacy: Paxlovid™ (nirmatrelvir/ritonavir) v4

Practice changing moments

- Nirmatrelvir/ritonavir (Paxlovid™) is the first oral antiviral treatment available for COVID-19.
- PHARMAC have strict access criteria around prescribing Paxlovid™.
- Paxlovid™ has a significant number of drug interactions and must be assessed prior to prescribing.
- Renal dose adjustment is required for the nirmatrelvir component.
- In patients for whom Paxlovid™ is contraindicated consider if remdesivir or molnupiravir would be appropriate.

Background

Nirmatrelvir/ritonavir (Paxlovid™) is the first oral antiviral treatment available in New Zealand for COVID-19. It is indicated for treatment of acute symptomatic COVID-19 in adults 18 years of age and older, who do not require initiation of supplemental oxygen due to COVID-19. It reduces the risk of hospitalisation (NNT 18) for those who have a higher risk of hospitalisation or becoming seriously unwell. Treatment should be initiated as early as possible and within five days of symptom onset.

Ritonavir boosts levels of nirmatrelvir by inhibiting CYP3A4. Ritonavir is also an inhibitor of CYP2D6 and P-glycoprotein transporters. Therefore, Paxlovid™ comes with a large array of drug interactions and all patients must be assessed for drug interactions prior to initiating treatment. Details on this are provided below.

Renal dose adjustment is required for the nirmatrelvir component of Paxlovid™. Details on this are provided below.

Paxlovid™ Pharmacies

Paxlovid™ is available from selected pharmacies to allow close monitoring of stock levels. Pharmacies are funded for clinical support and education; patients will receive this service for free. To enable pharmacists to complete the clinical review please supply key information on the prescription.

Key information to be added to prescription:

- Annotation of endorsement: Patient meets access criteria
- Date of symptom onset (Day zero)
- Latest eGFR (if available – see notes in dosing)
- Annotation of any drug adjustments required based on patient's regular medications.
- If prescription is not being sent to patient's regular pharmacy consider sending through regular list of patient's medications
- Prescriber contact phone number for any pharmacist queries.

Selected Pharmacies to send e-prescriptions:

- Ahuriri Pharmacy
- Andrew Spence Pharmacy
- Bay Plaza Pharmacy
- Clive Pharmacy
- Dentons Peak Pharmacy
- Flaxmere Pharmacy
- Gilmours Pharmacy
- Glenn's Pharmacy
- Greenmeadows Pharmacy
- Mahora Pharmacy
- Maraenui Pharmacy
- Taiwhenua Pharmacy
- Tamatea Pharmacy
- The Pharmacy @ The Hastings Health Centre
- Unichem Munroe Street Pharmacy
- Unichem Russell Street
- Unichem Stortford Lodge Pharmacy
- Unichem Taradale
- Unichem Waipukurau
- Wairoa Pharmacy
- Napier Pharmacy (only for patients living rurally, who need it afterhours when other pharmacies are closed)

Opening hours for the various pharmacies can be found at: [Find a pharmacy - Hawkes Bay – Our Health \(ourhealthhb.nz\)](#)

What is the process?

1. Ensure that the patient meets access criteria

Pharmac has specific eligibility for patients to access Paxlovid™.

To be eligible for a Prescription the client (ages 18 years or older) needs to meet the following criteria:

1. Confirmed (or probable) symptomatic COVID-19

AND

2. Symptom onset of <5 days

AND

3. Patient doesn't require supplemental oxygen to maintain O2 Sat >93% (or baseline in patients with chronic resting hypoxia)

AND

4. Either:
 - a. Immunocompromised*, and not expected to reliably mount an adequate immune response to COVID-19 vaccination or SARS-CoV-2 infection, regardless of vaccination status; or
 - b. **Patient has Down syndrome;** or
 - c. **Patient has Sickle cell disease;** or
 - d. **Patient has had a previous admission to ICU directly as a result of COVID-19;** or
 - e. **Patient is 75 years or older;** or
 - f. **Patient meets high risk criteria as per below table:**

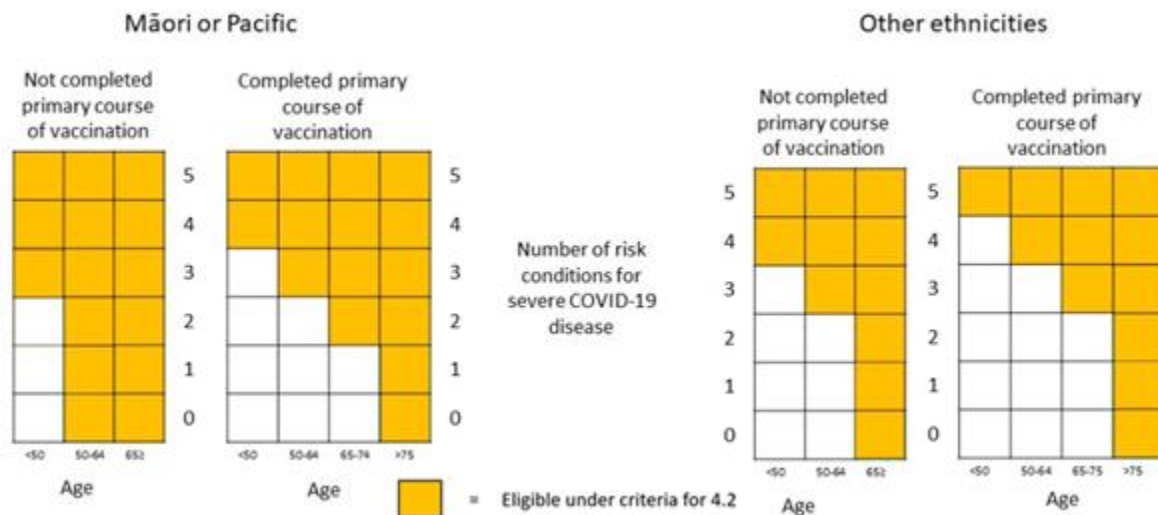
5 of the following for Patients <50	4 of the following for Patients 50-64	3 of the following for Patients ≥65
<ul style="list-style-type: none"> ○ Chronic air/lung disease ○ Serious heart disease (CHF, CAD, RHD, Congenital disorders) ○ Uncontrolled hypertension ○ Chronic neurological or neuromuscular disease ○ Uncontrolled Diabetes ○ CKD ○ Liver disease (cirrhosis) ○ Haematological disorders ○ Severe mental illness ○ Active cancer ○ BMI >35 ○ Māori or Pacific ethnicity ○ Unvaccinated (N.B. If the patient is aged >50 for Maori or Pasifika; or ≥65 for other ethnicities this qualifies patient for treatment irrespective of other conditions) 		

AND

Not to be used with other COVID-19 Antiviral treatments

* As per Ministry of Health criteria of 'severe immunocompromise' for third primary dose

Updated heatmap to identify patients eligible for antiviral Covid treatment. Adapted from PHARMAC website. Original available [here](#)



2. Check for contraindications

Review suitability of the therapeutic, specifically any contraindications and whether the patient wishes for active intervention.

Contraindications (see Paxlovid™ [Medsafe data sheet](#) for all contraindications):

- Hypersensitivity to nirmatrelvir or ritonavir
- Age < 18 years
- Pregnancy – not recommended, as limited information available
- Breastfeeding
- Severe renal impairment (eGFR < 30 mL/minute)
- Severe hepatic impairment (Child-Pugh Class C)

Additional precautions:

- Advise patients at risk of conceiving to use contraception during and for the 7 days following treatment.
- Advise patients using oral contraceptives containing ethinylestradiol to use additional contraceptive precautions.
- Warn breastfeeding patients that the effects of Paxlovid™ on the breastfed infant are not known and they should therefore avoid breastfeeding during and for the 7 days following treatment.
- Caution patients to avoid any contraindicated medications used intermittently, e.g. agents for erectile dysfunction, colchicine etc. See [He Ako Hiringa Full Prescribing Guide](#).

Side-effects:

- Common side effects of Paxlovid™ are generally mild and include impaired sense of taste, diarrhoea, vomiting and headache.
- Less commonly high blood pressure and muscle aches are reported.

Advise patient to contact the prescriber or pharmacy if they experience adverse events or worsening of condition. Pharmacists and prescribers are asked to report any adverse events to the [Centre for Adverse Reactions Monitoring \(CARM\)](#).

3. Check for interactions - modify co-medicines appropriately

To assess the risk of interactions:

- Use the [University of Liverpool's COVID-19 interaction checker](#).
- Consult the [Ontario Science Brief](#) for specific advice on management of interactions.
- The [New Zealand Formulary](#) is also reliable resources but may not be updated as quickly and frequently as the Liverpool and Ontario websites.

Manage any necessary dose adjustments or changes to regular medications, communicate this clearly to the patient and document details in notes.

4. Check the patient's renal function - prescribe corresponding dose

Important Note: Consider arranging urgent eGFR if no eGFR result within the last 3 months and you have concerns that there may have been further deterioration in renal function.

The 5 day course contains two medicines dosed as follows:

- eGFR above 60mL/min/1.73m²: **Two** 150mg tablets of nirmatrelvir and one 100mg tablet of ritonavir are to be taken together twice a day for five days.
- eGFR 30 – 60mL/min/1.73m²: **One** 150mg tablets of nirmatrelvir and one 100mg tablet of ritonavir are to be taken together twice a day for five days. Pharmacists adjusting the dose for this purpose may refer to information provided by the supplier, or the tablets may be repackaged in a compliance pack.
- eGFR below 30mL/min/1.73m²: Paxlovid™ is not currently recommended.

Manage any necessary dose adjustments of Paxlovid™, communicate this clearly to the patient and document details in notes.

Tools available:

- [He ako hiringa Treating COVID-19 with Paxlovid in primary care](#)
- [Christchurch medicines information service : Drug interactions with nirmatrelvir with ritonavir](#)
- [PHARMAC Access Criteria assessment tool](#)

- Useful pages that can be found on the [Liverpool website](#) include a flow chart "*Assessing a patient for treatment with Paxlovid*" and drug interaction tables "*Interactions with selected WHO essential medicines and Paxlovid*".
- [Patient fact sheet: COVID-19 Seeking medical help – when and how](#)
- [Positions to make breathing easier](#)

References:

- Pharmac. Access criteria for antiviral treatment widened as molnupiravir arrives in New Zealand. [Access criteria for antiviral treatments widened as molnupiravir arrives in New Zealand - Pharmac | New Zealand Government](#). Accessed May 2022.
- He Ako Hiringa. Treating COVID-19 with Paxlovid in primary care. [Treating COVID-19 with Paxlovid in primary care | He Ako Hiringa](#). Accessed April 2022.
- New Zealand Ministry of Health. Information and guidance for the health sector: Paxlovid™ oral therapeutic for COVID-19 community treatment. March 2022.
- New Zealand Ministry of Health. *Medsafe data sheet (Paxlovid)*. [Data Sheet Template \(medsafe.govt.nz\)](#). Accessed April 2022
- Hammond J, Leister-Tebbe H, Gardner A, Abreu P, Bao W, Wisemandle W, et al. Oral Nirmatrelvir for High-Risk, Nonhospitalized Adults with Covid-19. *New England Journal of Medicine*. 2022 Feb 16;0(0):null.

Authored by: Riani Albertyn

Reviewed by: Brendan Duck

Acknowledgements: Thanks to Dr. Rhys Parry and Ben Firestone for content contribution and guidance.

Disclaimer: The information and advice contained in this document is aimed at health professionals, based upon evidence from available resources at our disposal at the time of publication, and reflects best practice. However, this information is not a substitute for clinical judgment and individualised medical advice. Health Hawke's Bay accepts no responsibility or liability for consequences arising from use of this information