ARTICLE

Treatment of acute COVID-19 in the community

Eliza Milliken
Infectious Diseases Specialist and Clinical Pharmacologist[1]

[1] Hunter New England Health, New South Wales

Keywords
antivirals, COVID-19, molnupiravir, nirmatrelvir, ritonavir, SARS-CoV-2 infection

Aust Prescr 2026;49:116-23
https://doi.org/10.18773/austprescr.2026.033

SUMMARY

COVID-19 infection in an otherwise healthy person is usually a mild to moderate self-limiting illness, but certain populations are at higher risk of severe disease (e.g. older age, severe immunocompromise, certain comorbidities).

Adults with acute COVID-19 should be assessed for disease severity and underlying risk factors to guide appropriate management. Infection control, including case isolation, is important to reduce spread. Antiviral therapy is reserved for patients most likely to benefit, given its high cost, potential adverse effects and uncertain clinical benefit. Patients showing signs of severe or critical disease should be referred to hospital.

Antiviral therapies are most effective when started within 5 days of symptom onset. Nirmatrelvir with ritonavir is the first-line antiviral for patients without contraindications, but it has extensive drug interactions. Molnupiravir is used when nirmatrelvir with ritonavir is unsuitable.

Inhaled and oral glucocorticoids and immune therapies have no role in routine community treatment of mild to moderate COVID-19.

Vaccination remains the single most effective intervention for reducing the risk of severe disease and should be actively encouraged, particularly in unvaccinated or vaccine-hesitant individuals.

Introduction

SARS-CoV-2, the virus responsible for COVID-19, was first identified in 2019 and spread rapidly worldwide, prompting the declaration of a global pandemic in March 2020.[1]

Coryzal (cold and flu-like) respiratory symptoms are the predominant feature of acute COVID-19, although other organ systems can be involved.[2] COVID-19 can cause severe pneumonitis and acute respiratory distress syndrome, but these have become much less common following widespread immunity through vaccination and past infection, as well as changes in the circulating variants of the virus.

Acute COVID-19 in an otherwise healthy person is usually a mild to moderate self-limiting illness.[3] Patients diagnosed with COVID-19 should be assessed for disease severity and underlying risk factors for progression to severe disease to guide treatment decisions.

Several treatment modalities designed to modify disease course and severity have been investigated and recommended for use in selected patients, including antivirals, immunomodulatory therapies and corticosteroids.[2-4] The level of evidence supporting most treatment options is low to moderate, and most international guidelines make conditional recommendations only.[2-4]

This article focuses on treatment of adults with acute COVID-19 in community settings, which is predominantly antiviral therapy. The role of drug therapies in long COVID remains uncertain and is beyond the scope of this article.

Patient assessment

To determine whether an individual with COVID-19 can be treated in the community or should be referred to hospital, clinicians should assess both disease severity and risk factors for developing severe disease. Educating patients about seeking medical attention if they experience worsening of respiratory symptoms is important in initially well patients.

Establishing disease severity and need for hospital referral

The Australian National COVID-19 Clinical Evidence Taskforce, until 2023, provided continuously updated, evidence-based national guidelines for the management of COVID-19. There have been no significant recent changes in the clinical presentation of COVID-19, and the 2023 Taskforce recommendations for assessing disease severity remain useful.[4]

This article is peer-reviewed
BY-NC-ND © 2026 Therapeutic Guidelines Ltd

The Taskforce's COVID-19 assessment framework centres on respiratory function (Box 1).[4] Referral to hospital should be prompted for patients with:

- normal respiratory function but unable to maintain oxygen saturation over 92% on room air,
- chronic lung disease and a relative drop in oxygen saturation (i.e. below 90% if baseline is 92% or above), accompanied by evidence of increased work of breathing, or
- radiological features or clinical suspicion of pneumonitis.

These thresholds do not replace clinical assessment of the whole patient, and if a clinician is concerned about severe systemic features such as persistent fever, prostration, and evidence of increased work of breathing to maintain normal oxygen saturation, it is reasonable to refer the patient for in-hospital care.[4,5]

Risk factors for progression to severe disease

Risk factors for severe COVID-19 include older age, chronic disease, frailty, immunosuppression, and a

Box 1 Definition of COVID-19 disease severity for adults (National Clinical Evidence Taskforce 2023)[4]

Mild illness

Adults not presenting any clinical features suggestive of moderate or severe disease

Characteristics:

- no symptoms
- mild symptoms or signs
- no new shortness of breath or difficulty breathing on exertion
- no evidence of lower respiratory tract disease during clinical assessment or on imaging (if performed).

Moderate illness

Stable adult patients with evidence of lower respiratory tract disease

Characteristics:

- oxygen saturation 92 to 94% at rest
- desaturation or breathlessness with mild exertion
- evidence of lower respiratory tract disease on imaging.

Severe illness

Adult patients with signs of moderate disease who are deteriorating

OR

Adult patients meeting any of the following criteria:

- respiratory rate 30 breaths/minute or greater
- oxygen saturation below 92% at rest or requiring oxygen
- lung infiltrates over 50%.

Critical illness

Adult patients meeting any of the following criteria:

- respiratory failure:
  - severe respiratory failure (PaO_2/FiO_2 200 or lower)
  - respiratory distress or acute respiratory distress syndrome
  - deteriorating despite advanced forms of respiratory support (noninvasive ventilation, high-flow nasal oxygen)
  - requiring mechanical ventilation
- hypotension or shock
- impairment of consciousness
- other organ failure.

PaO_2/FiO_2 = ratio of the arterial partial pressure of oxygen to the fraction of inspired oxygen

past history of hospitalisation with COVID-19.[6,7] The Pharmaceutical Benefits Scheme (PBS) approval for antivirals in Australia provides a set of risk-based criteria that are continually updated in light of emerging evidence (Box 2).[8,9] It is worth noting that most evidence pre-dates wide uptake of vaccinations and the emergence of new variants. The interplay between these factors and high-risk features is essentially unknown.

Reporting

Monitoring of SARS-CoV-2 is a key objective of the Australian Centre for Disease Control. There is no requirement for clinicians or patients to report COVID-19 cases detected with rapid antigen tests (RATs), but polymerase chain reaction (PCR) results are usually provided to Population Health Units (PHUs) by pathology laboratories for surveillance purposes.

If an at-risk or unwell patient, or a patient from a high-risk setting such as a residential aged-care facility, is diagnosed via a point-of-care RAT, a confirmatory PCR nasopharyngeal swab is advisable, and the patient will be included in surveillance data.

Outbreak response is determined by local PHU policy, but if a clinician identifies a case from a high-risk setting, such as an aged-care facility, disability residential service, prison or other health facility, the local PHU can be contacted for advice.

Box 2 Pharmaceutical Benefits Scheme (PBS) risk-based criteria for COVID-19 antiviral prescription in the community (May 2026)[8,9]

Eligible patients [NB1]:

- aged 70 years or over
- aged 50 years with either a history of hospitalisation with COVID-19 or at least two high-risk criteria (see below)
- aged 30 years or over and identifies as Aboriginal or Torres Strait Islander and has either a history of hospitalisation with COVID-19 or at least one high-risk criteria (see below)
- aged 18 years or over with moderate to severe immunocompromise (see below) or a history of hospitalisation with COVID-19.

High-risk criteria [NB2]:

- neurological conditions (e.g. stroke, dementia)
- respiratory compromise (e.g. moderate or severe asthma requiring inhaled corticosteroids, chronic obstructive pulmonary disease, bronchiectasis)
- heart failure
- coronary artery disease
- diabetes mellitus
- obesity
- cirrhosis
- renal impairment (eGFR less than 60 mL/min)
- disability with multiple comorbidities and/or frailty
- living in residential aged care.

Moderate to severe immunocompromised status [NB2]:

- post solid organ or stem cell transplantation
- human immunodeficiency virus
- immunosuppressive therapy in the last 3 months, for example chemotherapy, high-dose corticosteroids (at least 20 mg of prednisone daily for at least 14 days), biologic drugs that deplete or inhibit B cell or T cell function, or selected disease-modifying antirheumatic drugs.

eGFR = estimated glomerular filtration rate

NB1: For PBS subsidy, treatment must be initiated within 5 days of symptom onset or, where asymptomatic, as soon as possible after a diagnosis is confirmed. The patient must not require hospitalisation for COVID-19 at the time of prescribing.

NB2: Refer to the PBS website for full details of the criteria for high risk and immunocompromise.

Infection control

Case isolation is an effective means of reducing the spread of respiratory viruses.[3] See Box 3 for guidance on infection control interventions for confirmed COVID-19 cases.

Persons who are immunosuppressed can have a prolonged infectious period and should generally follow these procedures until active symptoms have abated for at least 48 hours. Close contacts should be advised to monitor for symptoms.

Antiviral therapies

Antiviral therapy for COVID-19 is reserved for patients most likely to benefit, given the high cost, potential for adverse effects and the uncertain clinical benefit. Those most likely to benefit include older adults, people with moderate to severe immunocompromise, and patients with significant comorbidities who meet PBS eligibility criteria (Box 2). Most otherwise healthy vaccinated adults with mild COVID-19 do not require antiviral treatment.

Antivirals are most likely to be effective in the early stages of infection, when viral load is elevated and adaptive immune response has had insufficient time to upregulate activity. Thus, antiviral therapies should be commenced within 5 days of symptom onset and are likely of no benefit after this time.

The purpose of antiviral therapy is to reduce the risk of progression to severe acute COVID-19. Evidence for antivirals preventing persistent post-COVID ('long COVID') symptoms remains mixed. A large retrospective US study of over 150,000 nonhospitalised patients found nirmatrelvir with ritonavir was associated with a similar incidence of post-COVID conditions compared with matched controls, except for a lower rate of venous thromboembolism.[10]

In Australia, orally administered antiviral drugs that are PBS approved for the treatment of COVID-19 are nirmatrelvir with ritonavir (Paxlovid), and molnupiravir (Lagevrio) (Table 1). Remdesivir (Veklury), an intravenous antiviral, is only used for hospitalised patients.

Nirmatrelvir with ritonavir (Paxlovid)

Nirmatrelvir with ritonavir (Paxlovid) inhibits the main protease of SARS-CoV-2, thus blocking viral replication. It is considered first-line treatment for most patients when an antiviral is indicated; however, ritonavir's extensive drug interactions may preclude the use of this combination in some patients.

The Australian National COVID-19 Clinical Evidence Taskforce initially recommended nirmatrelvir with ritonavir within 5 days of symptom onset for unvaccinated adults, based on the EPIC-HR (high risk) trial, which demonstrated benefit compared with placebo in unvaccinated, high-risk adults infected with the Delta variant.[14] The subsequent EPIC-SR (standard risk) trial found no significant difference between nirmatrelvir–ritonavir and placebo in symptom resolution or secondary outcomes in patients without additional risk factors or in those who had been vaccinated, and was terminated early.[15]

Generalisability of the evidence underpinning the original approval to the current population (characterised by widespread vaccination, prior SARS-CoV-2 exposure and Omicron variant predominance) is uncertain. Consequently, PBS approval criteria for nirmatrelvir with ritonavir have been revised to focus on populations most likely to benefit (Box 2).[16] However, even within these populations, the extent to which vaccination and prior exposure attenuate treatment benefit remains unclear.

Recent randomised controlled trials have sought to clarify the effectiveness of nirmatrelvir–ritonavir in vaccinated or previously exposed adults with COVID-19 who were aged 50 years and over or aged 18 years and over with relevant coexisting conditions. Treated patients had a more rapid reduction in viral load compared with the usual-care group and they reported a shorter median time to full recovery (by 3 or more days).[17] Although the trials did not demonstrate a morbidity or mortality benefit for nonhospitalised patients with comorbidities,[17] reductions in viral load and symptom duration suggest effective antiviral activity. Thus, clinicians should continue to assess individuals on a case-by-case basis as patients with impaired immune function, such as those living with human immunodeficiency virus (HIV) or who are heavily immunosuppressed, may still benefit from antiviral therapy. In patients with normal immune function, reductions in viral load are unlikely to translate into a meaningful clinical benefit.

Box 3 Australian infection control advice for confirmed COVID-19 cases[3]

In addition to staying at home, COVID-19 cases are recommended to employ the following additional mitigations while active symptoms (productive cough, fever, rhinorrhoea) are present:

- undertake appropriate hand and respiratory hygiene
- wear a mask for necessary trips outside the home, especially while indoors
- avoid crowded areas
- work or study from home where feasible
- observe local work health and safety policies.

Table 1 Oral antiviral drugs for acute COVID-19[11-13]

Drug (brand)	When to prescribe	Contraindications	Common adverse effects	Dose and administration	Use in pregnancy and breastfeeding
Nirmatrelvir 150 mg tablets with ritonavir 100 mg tablets (Paxlovid)	First-line oral antiviral for adult patients with acute COVID-19 who are at increased risk of progression to hospitalisation or death and do not require initiation of supplemental oxygen PBS subsidised only for higher risk patient groups (see Box 2)	Severe hepatic impairment (Child–Pugh class C) Unavoidable drug interaction with potential for serious and/or life-threatening reactions including the following (not a comprehensive list): • amiodarone • carbamazepine • colchicine • diazepam • eplerenone • finerenone • flecainide • ivabradine • piroxicam • phenytoin • rifampicin • simvastatin (may be able to be temporarily discontinued) • sildenafil • St John's Wort Hypersensitivity to nirmatrelvir or ritonavir	Dysgeusia (altered or metallic taste) Diarrhoea Nausea Vomiting Headache Hypertension Myalgia Abdominal discomfort Transient elevation in liver enzymes	Nirmatrelvir 300 mg (two 150 mg tablets) plus ritonavir 100 mg (one tablet), taken together orally every 12 hours for 5 days For patients with eGFR 30 to 60 mL/min/1.73 m^2, dose should be reduced to nirmatrelvir 150 mg (one tablet) plus ritonavir 100 mg (one tablet) every 12 hours for 5 days [NB1] For patients with eGFR below 30 mL/min/1.73 m^2, the dose is nirmatrelvir 300 mg (two 150 mg tablets) plus ritonavir 100 mg (one tablet) on *day one*, followed by nirmatrelvir 150 mg (one tablet) plus ritonavir 100 mg (one tablet) once daily on *days two to five* [NB1] No dosage adjustment required for patients with mild or moderate liver disease (Child–Pugh class A or B)	No human data for nirmatrelvir in pregnancy; animal studies have not identified safety concerns For pregnant individuals at risk of severe COVID-19, seek advice from an obstetrician Women of childbearing potential should use effective contraception during treatment and for at least 7 days after the final dose Breastfeeding should be avoided during treatment and for 7 days after the final dose
Molnupiravir 200 mg capsules (Lagevrio)	Second-line oral antiviral for adult patients with acute COVID-19 when nirmatrelvir with ritonavir is contraindicated PBS subsidised only for higher risk patient groups (see Box 2)	Hypersensitivity to molnupiravir	Diarrhoea Nausea Dizziness Headache Fatigue	800 mg (four 200 mg capsules) every 12 hours for 5 days No dose adjustment required for patients with renal or hepatic impairment	Not recommended in pregnancy (no human data) Women of childbearing potential should use effective contraception during treatment and for 4 days after the final dose Breastfeeding should be avoided during treatment and for 4 days after the final dose

eGFR = estimated glomerular filtration rate, PBS = Pharmaceutical Benefits Scheme

NB1: The nirmatrelvir with ritonavir (Paxlovid) daily blister contains two separated parts each containing 2 tablets of nirmatrelvir and 1 tablet of ritonavir, corresponding to the daily administration at the standard dose.

Drug interactions with nirmatrelvir and ritonavir

Ritonavir is a strong CYP3A inhibitor that is included to increase nirmatrelvir plasma concentration and thereby improve antiviral efficacy. Drugs that are metabolised by CYP3A may reach toxic concentrations when co-administered with nirmatrelvir and ritonavir, while drugs that induce CYP3A may reduce the antiviral efficacy of nirmatrelvir. For all patients taking regular medicines, a validated drug interactions resource should be used, such as the University of Liverpool's COVID-19 Drug Interactions Checker. Management of interactions depends on the specific interacting medicine and its indication, therapeutic index and the feasibility of temporarily withholding it or adjusting the dose. Essential medicines should not be stopped solely to permit treatment with nirmatrelvir and ritonavir. In patients with complex comorbidities, polypharmacy or severe disease, advice on the safest strategy should be sought from an infectious diseases specialist.

As nirmatrelvir is co-administered with low-dose ritonavir, there may be a risk of HIV-1 developing resistance to HIV protease inhibitors in individuals with uncontrolled or undiagnosed HIV-1 infection.[11] If considering treatment of COVID-19 in a person living with HIV, discussion with an infectious diseases physician or HIV treatment provider is recommended.

Prescribing nirmatrelvir with ritonavir in patients with renal or hepatic impairment

Dose reduction of nirmatrelvir is recommended in patients with moderate renal impairment (estimated glomerular filtration rate [eGFR] 30 to 60 mL/min/1.73 m^2), and further dose reduction is required in patients with severe renal impairment (eGFR below 30 mL/min/1.73 m^2) (Table 1).[11]

No dose adjustment is required in patients with mild or moderate hepatic impairment (Child–Pugh class A or B). Nirmatrelvir with ritonavir is not recommended in patients with severe hepatic impairment (Child–Pugh class C).[11,13]

Newer protease inhibitors

Other SARS-CoV-2 protease inhibitors with fewer drug–drug interactions and once-daily dosing, such as ensitrelvir, are approved overseas but not yet available in Australia.

Molnupiravir (Lagevrio)

Molnupiravir is a prodrug of N-hydroxycytidine, which is incorporated into viral RNA resulting in the inhibition of SARS-CoV-2 replication. Molnupiravir is listed on the PBS for higher risk patients (Box 2) in whom nirmatrelvir with ritonavir is contraindicated (Table 1). Regulatory approval was based on the initial interim analysis of randomised controlled trial data; however, no reduction in hospitalisation or mortality was demonstrated in the final analyses of the largest randomised controlled trials to date.[18,19]

Overall, molnupiravir is recommended only as an alternative to nirmatrelvir–ritonavir due to lack of evidence for its efficacy, potential viral mutagenicity, and embryofetal toxicity seen in pre-clinical animal models.[2] No dose adjustment of molnupiravir is required in renal or hepatic impairment, making it a suitable alternative for patients with severe hepatic impairment.[12,13]

Adverse effects of antiviral therapy

Both nirmatrelvir with ritonavir and molnupiravir have well-described adverse effects that are fairly common among antiviral drugs, including dysgeusia (altered or unpleasant taste), diarrhoea, headache, nausea, vomiting, abdominal pain, hypertension, fatigue and skin rash.[11,12] In clinical trials, many participants reported an inability to tolerate nirmatrelvir with ritonavir due to gastrointestinal adverse effects.[17] Although mild adverse effects are common, they are usually self-limiting and resolve with cessation of therapy.

Monitoring

Given the relatively short duration of therapy, no routine monitoring beyond disease symptoms is required. However, patients should receive clear advice to seek medical assistance if their condition or respiratory function deteriorates.

Repeat courses

Although some clinicians choose to give repeat drug courses in specific scenarios, such as immunosuppressed patients with persistent symptoms, there are no trial data to support this approach. Some patients report mild 'rebound symptoms' after stopping antiviral therapy; however, these are usually self-limiting and not an indication for a repeat course of therapy.

Other therapies for severe COVID-19

In the minority of patients who progress to severe or critical disease, the associated aberrant inflammatory response causes immunopathological damage to organs. It is during this phase that immune-modifying drugs such as corticosteroids, Janus kinase (JAK) inhibitors and interleukin-6 (IL-6) inhibitors have the most benefit.

Glucocorticoids

Among hospitalised or critically ill patients with COVID-19 infection, dexamethasone (intravenous or oral) is recommended for mortality benefit.[2]

In patients without hypoxaemia, there is no evidence for benefit from corticosteroid therapy (including inhaled steroids), and some evidence for harm in the mild to moderate disease population, including adrenal dysregulation, super-infection, hyperglycaemia and neurological toxicity. Glucocorticoid therapy is therefore not recommended in the community.[2,20,21]

Immunomodulating drugs

JAK inhibitors, such as baricitinib and tofacitinib, are recommended for some hospitalised patients in whom steroids are contraindicated. JAK inhibitors modulate cytokine response and may prevent or reduce immune complications, but they carry a significant risk of adverse events. The level of evidence for using these drugs is moderate and trials are ongoing.[2]

Other drugs that may benefit patients hospitalised with progressive or severe COVID-19 include IL-6 inhibitors, such as tocilizumab and sarilumab, and other immune-modifying drugs such as abatacept and infliximab.[2]

All of these drugs should be given under the supervision of an infectious diseases or respiratory physician. At present, they have no role in routine community treatment of COVID-19.

Direct antibody therapy and convalescent plasma

In immunocompetent patients, there is strong evidence that convalescent plasma is of no benefit.[2] Significantly immunosuppressed patients remain an area of uncertainty, with the REMAP-CAP trial suggesting some benefit from convalescent plasma in certain subgroups that was not seen overall.[2,22] Most studies of convalescent antibodies, such as tixagevimab, cilgavimab and regdanvimab, were conducted before widespread vaccine availability and the emergence of the Omicron variant, against which these antibodies have no demonstrated efficacy.[4,23-25]

Prevention

Vaccination against COVID-19 remains the single most effective intervention for reducing the risk of severe disease and should be actively encouraged, particularly in unvaccinated or vaccine-hesitant individuals. Booster doses are recommended every 6 to 12 months in older people and those with severe immunocompromise.[26]

Conclusion

Drug therapies for acute COVID-19 infection in the community mainly consist of the oral antivirals (e.g. nirmatrelvir with ritonavir), which should be reserved for specific high-risk patients. Clinicians should assess disease severity and risk factors for disease progression to guide decisions around treatment or referral, and consider patient factors such as symptom duration, renal function, drug interactions and potential adverse effects when prescribing antivirals. Inhaled and oral glucocorticoids have no role in mild to moderate COVID-19. <

This article was finalised on 24 June 2026.

Acknowledgements: The author would like to thank Professor Joshua Davis for reviewing the initial draft of the manuscript.

Conflicts of interest: Eliza Milliken is the Chair of the Quality Use of Medicines Committee for the Hunter New England Health District, subject matter advisor to the Council of Australian Therapeutic Advisory Groups and member of the Therapeutic Goods Administration Advisory Committee on Medicines Scheduling. Eliza was previously a principal investigator for an early-phase clinical trial of a novel COVID compound, where she was responsible for patient safety oversight and trial compliance with ethical and Good Clinical Practice standards.

REFERENCES

1. Park SE. Epidemiology, virology, and clinical features of severe acute respiratory syndrome -coronavirus-2 (SARS-CoV-2; Coronavirus Disease-19). Clin Exp Pediatr 2020;63:119–24. https://doi.org/10.3345/cep.2020.00493
2. Infectious Diseases Society of America (IDSA). How to Approach a Patient with Mild to Moderate COVID-19. Infectious Diseases Society of America; 2025. https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management [cited 2025 Dec 23]
3. Australian Centre for Disease Control. Coronavirus Disease (COVID-19) – CDNA National Guidelines for Public Health Units. Commonwealth of Australia; 2024. https://www.cdc.gov.au/resources/publications/cdna-national-guidelines-covid-19 [cited 2026 Apr 7]
4. National COVID-19 Clinical Evidence Taskforce. Australian guidelines for the clinical care of people with COVID-19. version 74.1. National COVID-19 Clinical Evidence Taskforce; 2023. https://app.magicapp.org/#/guideline/L4Q5An/section/nV2P3n [cited 2026 Jun 1]
5. Royal Australian College of General Practitioners. RACGP Home-care guidelines for adult patients with mild COVID-19. The Royal Australian College of General Practitioners; 2020. https://www.racgp.org.au/ [cited 2026 Apr 27]
6. Centers for Disease Control and Prevention. People with Certain Medical Conditions and COVID-19 Risk Factors. U.S. Centers for Disease Control and Prevention; 2025. https://www.cdc.gov/covid/risk-factors/index.html [cited 2026 Jan 19]
7. Gandhi RT, Lynch JB, Del Rio C. Mild or Moderate Covid-19. N Engl J Med 2020;383:1757–66. https://doi.org/10.1056/NEJMcp2009249

8. The Pharmaceutical Benefits Scheme. NIRMATRELVIR (&) RITONAVIR. Department of Health, Disability and Ageing; 2026. https://www.pbs.gov.au/medicine/item/12996b [cited 2026 May 26]
9. The Pharmaceutical Benefits Scheme. MOLNUPIRAVIR. Department of Health, Disability and Ageing; 2026. https://www.pbs.gov.au/medicine/item/12910l [cited 2026 May 26]
10. Ioannou GN, Berry K, Rajeevan N, Li Y, Mutalik P, Yan L, et al. Effectiveness of Nirmatrelvir-Ritonavir Against the Development of Post-COVID-19 Conditions Among U.S. Veterans: A Target Trial Emulation. Ann Intern Med 2023;176:1486–97. https://doi.org/10.7326/M23-1394
11. Therapeutic Goods Administration. Australian Product Information - Paxlovid. Department of Health, Disability and Ageing; 2026. https://www.tga.gov.au/resources/artg/389801 [cited 2026 Jun 2]
12. Therapeutic Goods Administration. Australian Product Information - Lagevrio. Department of Health, Disability and Ageing; 2022. https://www.tga.gov.au/resources/artg/372650 [cited 2026 Jun 2]
13. Australian Medicines Handbook Pty Ltd. Australian Medicines Handbook 2026 (online). Adelaide; 2026. https://amhonline.amh.net.au/ [cited 2026 Apr 5]
14. 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. N Engl J Med 2022;386:1397–408. https://doi.org/10.1056/NEJMoa2118542
15. Hammond J, Fountaine RJ, Yunis C, Fleishaker D, Almas M, Bao W, et al. Nirmatrelvir for Vaccinated or Unvaccinated Adult Outpatients with Covid-19. N Engl J Med 2024;390:1186–95. https://doi.org/10.1056/NEJMoa2309003
16. Rawson JMO, Donaldson EF, O'Rear JJ, Harrington PR. Independent FDA Analyses of Nirmatrelvir/Ritonavir Resistance in the Phase 2/3 Trials EPIC-HR and EPIC-SR. Clin Infect Dis 2025;80:1005–12. https://doi.org/10.1093/cid/ciae615
17. Butler CC, Pinto AD, Harris V, Holmes J, Rahman NM, Cureton L, et al. Oral Nirmatrelvir-Ritonavir for Covid-19 in Higher-Risk Outpatients. N Engl J Med 2026;394:1583–94. https://doi.org/10.1056/NEJMoa2502457
18. Butler CC, Hobbs FDR, Gbinigie OA, Rahman NM, Hayward G, Richards DB, et al. Molnupiravir plus usual care versus usual care alone as early treatment for adults with COVID-19 at increased risk of adverse outcomes (PANORAMIC): an open-label, platform-adaptive randomised controlled trial. Lancet 2023;401:281–93. https://doi.org/10.1016/S0140-6736(22)02597-1
19. Guan Y, Puenpatom A, Johnson MG, Zhang Y, Zhao Y, Surber J, et al. Impact of Molnupiravir Treatment on Patient-Reported COVID-19 Symptoms in the Phase 3 MOVe-OUT Trial: A Randomized, Placebo-Controlled Trial. Clin Infect Dis 2023;77:1521–30. https://doi.org/10.1093/cid/ciad409
20. Corral-Gudino L, Bahamonde A, Arnaiz-Revillas F, Gómez-Barquero J, Abadía-Otero J, García-Ibarbia C, et al. GLUCOCOVID: A controlled trial of methylprednisolone in adults hospitalized with COVID-19 pneumonia. medRxiv 2020:2020.06.17.20133579. https://doi.org/10.1101/2020.06.17.20133579
21. Lu X, Chen T, Wang Y, Wang J, Zhang B, Li Y, et al. Adjuvant corticosteroid therapy for critically ill patients with COVID-19. medRxiv 2020:2020.04.07.20056390. https://doi.org/10.1101/2020.04.07.20056390
22. The REMAP-CAP Investigators, Derde LPG, Gordon AC, Mouncey PR, Al-Beidh F, Rowan KM, et al. Effectiveness of Tocilizumab, Sarilumab, and Anakinra for critically ill patients with COVID-19 The REMAP-CAP COVID-19 Immune Modulation Therapy Domain Randomized Clinical Trial. medRxiv 2021:2021.06.18.21259133. https://doi.org/10.1101/2021.06.18.21259133
23. Montgomery H, Hobbs FDR, Padilla F, Arbetter D, Templeton A, Seegobin S, et al. Efficacy and safety of intramuscular administration of tixagevimab-cilgavimab for early outpatient treatment of COVID-19 (TACKLE): a phase 3, randomised, double-blind, placebo-controlled trial. Lancet Respir Med 2022;10:985–96. https://doi.org/10.1016/S2213-2600(22)00180-1
24. Holland TL, Ginde AA, Paredes R, Murray TA, Engen N, Grandits G, et al. Tixagevimab–cilgavimab for treatment of patients hospitalised with COVID-19: a randomised, double-blind, phase 3 trial. Lancet Respir Med 2022;10:972–84. https://doi.org/10.1016/S2213-2600(22)00215-6
25. Streinu-Cercel A, Sandulescu O, Preotescu LL, Kim JY, Kim YS, Cheon S, et al. Efficacy and Safety of Regdanvimab (CT-P59): A Phase 2/3 Randomized, Double-Blind, Placebo-Controlled Trial in Outpatients With Mild-to-Moderate Coronavirus Disease 2019. Open Forum Infect Dis 2022;9:ofac053. https://doi.org/10.1093/ofid/ofac053
26. Department of Health, Disability and Ageing. COVID-19 vaccine advice and recommendations. 2025. https://www.health.gov.au/our-work/covid-19-vaccines/getting-your-vaccination [cited 2026 May 26]