

*Caring for adult patients
with post-COVID-19
conditions*



Caring for adult patients with post-COVID-19 conditions

Disclaimer

The information set out in this publication is current at the date of first publication and is intended for use as a guide of a general nature only and may or may not be relevant to particular patients or circumstances. Nor is this publication exhaustive of the subject matter. Persons implementing any recommendations contained in this publication must exercise their own independent skill or judgement or seek appropriate professional advice relevant to their own particular circumstances when so doing. Compliance with any recommendations cannot of itself guarantee discharge of the duty of care owed to patients and others coming into contact with the health professional and the premises from which the health professional operates.

Whilst the text is directed to health professionals possessing appropriate qualifications and skills in ascertaining and discharging their professional (including legal) duties, it is not to be regarded as clinical advice and, in particular, is no substitute for a full examination and consideration of medical history in reaching a diagnosis and treatment based on accepted clinical practices.

Accordingly, The Royal Australian College of General Practitioners Ltd (RACGP) and its employees and agents shall have no liability (including without limitation liability by reason of negligence) to any users of the information contained in this publication for any loss or damage (consequential or otherwise), cost or expense incurred or arising by reason of any person using or relying on the information contained in this publication and whether caused by reason of any error, negligent act, omission or misrepresentation in the information.

Recommended citation

The Royal Australian College of General Practitioners. Caring for adult patients with post-COVID-19 conditions. East Melbourne, Vic: RACGP, 2020.

The Royal Australian College of General Practitioners Ltd
100 Wellington Parade
East Melbourne, Victoria 3002

Tel 03 8699 0414
Fax 03 8699 0400
www.racgp.org.au

ABN: 34 000 223 807
ISBN: 978-0-86906-589-1

Published October 2020

© The Royal Australian College of General Practitioners 2020

This resource is provided under licence by the RACGP. Full terms are available at www.racgp.org.au/usage/licence. In summary, you must not edit or adapt it or use it for any commercial purposes. You must acknowledge the RACGP as the owner.

We acknowledge the Traditional Custodians of the lands and seas on which we work and live, and pay our respects to Elders, past, present and future.

Acknowledgements

The development of *Caring for adult patients with post-COVID-19 conditions* was undertaken by the RACGP in collaboration with the HealthPathways Community.

A clinical pathway has been written alongside this guidance and is currently in further development at the state/territory and regional level for publication on local **HealthPathways** sites. This aims to support general practice teams to collaborate with local hospital services in the care of patients with these conditions.

Feedback has also been gratefully accepted from the NSW Health COVID-19 Communities of Practice Rehabilitation and Respiratory expert groups.

Contents

<i>1. Background</i>	<i>1</i>
<i>2. Infection-control precautions</i>	<i>2</i>
<i>3. Specific sequelae of COVID-19</i>	<i>3</i>
<i>4. The most common scenario: Nonspecific multisystem post-viral symptoms</i>	<i>4</i>
<i>5. Providing care for specific groups recovering from COVID-19</i>	<i>6</i>
5.1 Patients who have had severe COVID-19 illness requiring hospitalisation	6
5.2 Older patients	7
5.3 People with disability	7
<i>Additional resources</i>	<i>8</i>
<i>References</i>	<i>9</i>

1. Background

Evidence regarding the spectrum of post-COVID-19 illness and management is evolving and will continue to develop in years to come. Recent suggested definitions have described post-acute COVID-19 as illness extending beyond three weeks from initial symptoms and chronic COVID-19 as illness extending beyond 12 weeks from initial symptoms.¹

The incidence of post-COVID-19 sequelae in those who have tested positive and who have been managed in an outpatient setting (such as management in the home) is thought to be between 10% and 35%,^{1,2} but for those admitted to hospital, this may be closer to 80%.³ The incidence of prolonged illness significantly increases with age, comorbidities and severity of the acute illness.

Global experience with the epidemics of SARS-CoV-1 (SARS) in 2003 and Middle Eastern Respiratory Syndrome (MERS) in 2012 has added to the evidence used in current recommendations in post-COVID-19 management.⁴

General practice presentations in a post-acute COVID-19 scenario are likely to be based on:

- non-specific post-viral symptoms, particularly fatigue and breathlessness
- specific serious sequelae resulting from the acute infection or as delayed complications
- recovery following severe illness requiring intensive care management
- mental health presentations, including anxiety related to the acute illness or ongoing post-viral functional impairment.

This guide contains information for general practitioners (GPs) who are providing care for adult patients who have previously tested positive to COVID-19 or have a history suggestive of undiagnosed COVID-19 and have – or are at risk of – post-COVID-19 conditions.

This document is generic, interim guidance and should be used to support any local or other more contemporaneous advice, acknowledging that in this rapidly changing pandemic environment, uncertainties remain in our understanding of the sequelae of COVID-19 and its management.

2. Infection-control precautions

When seeing any patient reporting post-COVID-19 symptoms, it is important to ensure that appropriate infection-control measures are utilised for both the patient and any carer presenting with them. Infection-control precautions may be indicated as the patient or their carer may still be within their self-isolation period.

At the time of writing, the [Communicable Diseases Network Australia \(CDNA\) guidelines](#)⁵ for the release from isolation require that:

- asymptomatic COVID-positive patients must self-isolate for at least 10 days from the time of their first positive swab
- patients with confirmed COVID-19 and mild symptoms must self-isolate for at least 10 days from onset of symptoms and be free of all symptoms of the acute illness for at least 72 hours
- patients who have been admitted to hospital due to severe COVID-19 symptoms must self-isolate for at least 14 days from onset of symptoms and until free of symptoms of the acute illness for at least 72 hours. Where the patients do not have resolution of symptoms of acute illness, they also require two consecutive negative respiratory specimens at least 24 hours apart
- patients who are significantly immunocompromised must meet the above criteria and also have had two negative polymerase chain reaction (PCR) swabs, at 24 hours apart, at least seven days after symptom onset
- carers and household contacts of people with confirmed COVID-19 are required to self-isolate for 14 days from the last day of close contact with that person, while that person is considered infectious.

Patients who have recovered from COVID-19 may believe that they are now immune and it is important to advise them to continue with infection-control precautions. Current data suggest that having COVID-19 does not confer complete immunity, and if there is partial immunity it may only persist for months.⁶

3. Specific sequelae of COVID-19

The majority of patients seen in general practice with post-COVID-19 illness will have had mild or asymptomatic COVID-19 infections. Post-acute COVID-19 illness may still occur after mild infection, and when assessing any patient, it is important to have an awareness of the known significant sequelae (refer to Box 1).

Box 1. COVID-19 specific significant sequelae^{1,4,7,8}

Pulmonary:

- Persisting interstitial lung disease
- Impaired lung function
- Pneumonia/lung cavitation
- Complications of intubation/ventilation

Cardiovascular:

- Myocardial infarction
- Myocarditis
- Pericarditis
- Arrhythmia
- Heart failure
- Venous thromboembolism (VTE)

Neurological:

- Stroke
- Cognitive impairment
- Encephalopathy
- Epilepsy
- Myelitis
- Critical care neuropathy/myopathy

Haematological:

- Hypercoagulable state
- Anaemia
- VTE

Rheumatological:

- Post-viral syndrome similar to chronic fatigue syndrome

Endocrine:

- Deterioration of diabetic control
- Osteoporosis due to prolonged immobilisation

Mental health:

- Worsening of cognitive decline
- Depression
- Anxiety
- Post-traumatic stress disorder (PTSD) following severe illness

Post-intensive care syndrome:

- Dyspnoea
- Anxiety
- Depression
- Prolonged pain
- Reduced physical function
- Reduced quality of life

General:

- Cardiac/respiratory/musculoskeletal deconditioning
- Renal impairment/acute kidney injury
- Liver dysfunction
- Malnutrition due to vomiting and diarrhoea/breathlessness/loss of appetite
- Pressure sores
- Skin rashes

4. The most common scenario: Nonspecific multisystem post-viral symptoms

The majority of patients seeking support from general practice will be experiencing a range of symptoms outlined in Box 2.

Box 2. Post-acute COVID-19 symptoms^{1,3}

Common symptoms include:

- fatigue
- dyspnoea
- joint pain
- chest pain
- cough
- change in sense of smell or taste.

Less common symptoms include:

- insomnia
- low-grade fevers
- headaches
- neurocognitive difficulties
- myalgia and weakness
- gastrointestinal symptoms
- rash
- depression.

Management of these presentations will usually be pragmatic and symptomatic, with avoidance of over-investigation.¹ Consider and exclude serious complications and possible alternative causes of ongoing symptoms, such as anaemia. Investigate new or worsening symptoms that could indicate delayed sequelae such as VTE, cardiac complications or pneumonia.

Consider chest X-ray at 12 weeks for those who have had significant respiratory illness.¹

Where possible, optimise the management of chronic conditions.

Collaborate with the patient to develop an individualised management plan to support their recovery. This may also present an opportunity for development of multidisciplinary models of care guided by the general practice team, utilising chronic disease management plans, team care plans and case conference items. Collaborate with physiotherapists, exercise physiologists and dietitians, along with outpatient rehabilitation physicians and/or geriatricians to support individual management planning where appropriate.

Consider current recommendations for management of specific symptoms (refer to Box 3).

Box 3. Management of common symptoms

Cough or breathlessness:^{1,9}

- Optimise management of pre-existing respiratory conditions
- Recommend respiratory muscle conditioning (pulmonary rehabilitation)
- Recommend gradual return to exercise guided by symptoms
- Consider home pulse oximetry measurement for reassurance
- Consider dietitian assistance if symptoms interfere with nutrition

Fatigue:^{1,4}

- Maximise self-care, sleep, relaxation and nutrition
- Recommend patients pace and apply prioritisation to daily activities
- Recommend caution with return to exercise (reduce if there is any increase in symptoms)
- A monitored return to exercise can be supported by physiotherapy or rehabilitation referral
- If fatigue is causing difficulty with activities of daily living (ADLs), energy conservation techniques and home visits to ensure patient safety can be provided by an occupational therapist or rehabilitation service

Chest pain:^{1,4,9}

- Exclude acute coronary syndrome, myocarditis, pericarditis and arrhythmia
- Manage with reassurance and education regarding symptoms of concern
- Patients who have had myocarditis or pericarditis as a component of their acute illness should have 3–6 months of rest from physical training and athletes should have cardiology supervision of return to training

Headaches, low-grade fevers, myalgia:¹

- Exclude COVID-19 reinfection or recrudescence
- Prescribe simple supportive measures and analgesia or antipyretics as needed
- Check for secondary infections and prescribe antibiotics as appropriate

Neurocognitive difficulty:^{1,4}

- Prescribe supportive management
- If severe enough to cause difficulty with ADLs, consider cognitive testing and occupational therapy support

Depression/anxiety:¹

- Provide information about post-COVID recovery
- Address multifactorial contributors that may require assistance with pain management, independence with ADLs, financial and other social supports and loneliness
- Consider options for supported access to mental health services or online support if patient is unwilling to access face-to-face counselling

Thrombosis risk and contraceptive choice:¹⁰

COVID-19 causes a hypercoagulable state in some people, which may worsen the VTE risk associated with combined hormonal contraception (CHC). The incidence of VTE in biological females of reproductive age with COVID-19 infection is currently not known.

- Patients should be advised of this risk to allow informed choice of contraceptive option
- Patients who have severe illness due to COVID-19 should cease their CHC and VTE prophylaxis should be considered
- The duration of risk is not yet ascertained, so consider recommending a progestogen-only or nonhormonal method of contraception for those who cease CHC
- It is reasonable to continue CHC in patients who have had asymptomatic or mild COVID-19 infection

5. Providing care for specific groups recovering from COVID-19

5.1 Patients who have had severe COVID-19 illness requiring hospitalisation

Patients who have had severe illness are likely to have a range of specialty and rehabilitation follow-up plans in place. They may have been discharged to a hospital virtual-care service, which may impact a GP's ability to provide Medicare Benefits Schedule (MBS)-funded consultations.

Consider an early telehealth appointment to:

- address any concerns noted in the hospital discharge plan
- discuss any patient or carer concerns
- gain a baseline understanding of symptom severity
- assess potential rehabilitation needs in terms of
 - physical needs
 - cognitive or mood disturbance
 - psychosocial needs⁷
- check that appropriate medical and rehabilitation service follow-up has been organised following hospital discharge
- ensure an action plan is in place if symptoms worsen
- check the patient has access to prescribed medicines
- plan for an appropriate face-to-face assessment as soon as the patient is released from isolation.

Management for these patients will be determined by the specific sequelae experienced during the hospitalisation (refer to Box 1). There may also be symptoms and signs of treatment-related complications, general deconditioning or PTSD.

The duration of a patient's hypercoagulable state post-COVID-19 is currently unknown. High-risk patients or those who have experienced VTE in hospital are likely to require ongoing anticoagulant therapy post discharge. This should be guided by hospital teams, with 2–4 weeks of therapy for those with known high risk of VTE and at least three months of therapy for those who have experienced VTE during their illness.¹¹

European and American taskforce recommendations for patients discharged following severe COVID-19 include the following:¹²

- Patients should be encouraged to do regular daily activities and low-to-moderate physical exercise (but not high-intensity exercise) in the first 6–8 weeks post discharge.
- Patients should have a formal assessment of physical and emotional functioning at 6–8 weeks post discharge, including measurement of respiratory function and exercise capacity, and referral to appropriate services where indicated. These may include
 - comprehensive rehabilitation service if there are multiple treatable concerns
 - pulmonary rehabilitation, if there is pre-existing or ongoing lung function impairment
 - exercise strengthening and nutritional support programs, if there is loss of lower limb muscle mass
 - formal psychological assessment if there is psychological distress.

5.2 Older patients

5.2.1 Medical wellbeing¹³

Older patients recovering after COVID-19 are less likely to present with cough, dyspnoea or fever.

Proactive surveillance may be important to detect loss of appetite, fatigue, deterioration in function or gastrointestinal symptoms. There may be an increased risk of falls, syncope and delirium.

Patients with functional decline and fatigue may be at increased risk of secondary infections; VTE; poor hydration, nutrition and mouth care; and medicine mismanagement.

Consider:

- proactive surveillance
- early investigation of symptoms, noting that symptoms may be unreliable
- checking oxygen saturation and blood screening for lymphopenia, rise in inflammatory markers, hyponatraemia and acute kidney injury.

5.2.2 Maintaining independence and support

Consider the following options to increase support for patients in their homes:

- Home delivery of medicines, including the use of blister packs
- Assistance with food and meals – patients can contact [My Aged Care](#) on 1800 200 422 to assist with setting up food delivery services such as Meals on Wheels, which is available for up to six weeks without an aged care assessment
- [My Aged Care](#) can also provide a My Aged Care ID number to enable prioritised online grocery ordering
- The [Older Persons COVID-19 support line](#) (1800 171 866) is available to older persons, families and carers for phone support and advice
- Patients already receiving a Home Care Package through My Aged Care can also access additional volunteer support through the [Community Visitors Scheme](#)

5.3 People with disability

There are often challenges in recognising and managing health problems in people with cognitive disabilities and this is no different during the post-COVID phase.

Carers should be advised about possible post-COVID-19 symptoms outlined in Box 2. These may be difficult to pick up by carers unfamiliar with the patient. In patients with cognitive disabilities, carers may need to look for secondary signs such as increased non-compliance with fatigue, food refusal with anorexia and a decline in skill levels with deterioration in function.

Blood pathology might be necessary to monitor for inflammation and the development of leukopenia. The person may need extra support with mobility and ADLs. The disruption in their life with change of environment, change of carer and changes in their daytime activity may trigger deterioration in behaviour that will take some time to settle after the acute infection and treatment phase.

GPs and other health professionals caring for people with disability can access advice from the [COVID-19 Health Professionals Disability Advisory Service](#) on 1800 131 330.

Additional resources

RACGP

- *COVID-19 infection control principles*
- *Home-care guidelines for adult patients with mild COVID-19*
- *Guide to providing telephone and video consultations in general practice*

Department of Health

- Isolation for coronavirus (COVID-19)
- COVID-19 infection control training
- CDNA national guidelines for public health units

Other

- National COVID-19 Clinical Evidence Taskforce
- COVID-19 in the older adult

References

1. Greenhalgh T, Knight M, A'Court M, Buxton M, Husain L. Management of post-acute covid-19 in primary care. *BMJ* 2020;370:m3026. doi: 10.1136/bmj.m3026.
2. Tenforde M, Kim S, Lindsell C, et al. Symptom duration and risk factors for delayed return to usual health among outpatients with COVID-19 in a multistate health care systems network – United States, March–June 2020. *MMWR Morb Mortal Wkly Rep* 2020;69(30):993–98.
3. Carfi A, Bernabei R, Landi R, et al. Persistent symptoms in patients after acute COVID-19. *JAMA* 2020;324(6):603–05. doi:10.1001/jama.2020.12603.
4. Barker-Davies R, O'Sullivan O, Senaratne K, et al. The Stanford Hall consensus statement for post-COVID-19 rehabilitation. *Br J Sports Med* 2020;54:949–59.
5. Communicable Diseases Network Australia. Coronavirus Disease 2019 (COVID-19): CDNA national guidelines for public health units. Version 3.8. Canberra: Department of Health, 2020. Available at www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm [Accessed 30 September 2020].
6. Moura DTH, McCarty T, Ribeiro IB, et al. Diagnostic characteristics of serological-based COVID-19 testing: A systematic review and meta-analysis. *Clinics (Sao Paulo)* 2020;75:e2212. doi: 10.6061/clinics/2020/e2212.
7. Phillips M, Turner-Stokes L, Wade D, Walton K. Rehabilitation in the wake of COVID-19 – A phoenix from the ashes. *BSRM* 2020;(2).
8. Selvaraj V, Dapaah-Afriyie K. Lung cavitation due to COVID-19 pneumonia. *BMJ Case Rep* 2020;13(7):e237245. doi:10.1136/bcr-2020-237245.
9. The National Health Service. Aftercare needs of inpatients recovering from COVID-19. Version 2. London: NHS, 2020. Available at www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/06/C0705-aftercare-needs-of-inpatients-recovering-from-covid-19-aug-2020.pdf [Accessed 30 September 2020].
10. NHMRC Centre for Research Excellence in Sexual and Reproductive Health for Women in Primary Care (SPHERE). Women's Sexual and Reproductive Health COVID-19 Coalition – Contraceptive method considerations for individuals with active COVID-19 infection: A consensus statement. Melbourne: SPHERE, 2020. Available at www.spherecre.org/coalition-outputs [Accessed 30 September 2020].
11. Spyropoulos A, Levy J, Ageno W, et al. Scientific and Standardization Committee communication: Clinical guidance on the diagnosis, prevention, and treatment of venous thromboembolism in hospitalized patients with COVID-19. *J Thromb Haemost* 2020;18(8): 1859–65. doi:10.1111/jth.14929.
12. Spruit M, Holland A, Singh S, Tonia T, Wilson KC, Troosters T. COVID-19: Interim guidance on rehabilitation in the hospital and post-hospital phase from a European Respiratory Society and American Thoracic Society-coordinated International Task Force. *Eur Respir J* 2020; doi: 10.1183/13993003.02197-2020.
13. Mitchell L. COVID-19 in the older adult. *British Geriatric Society* 2020. Available at <https://bgs.org.uk/sites/default/files/content/attachment/2020-06-02/COVID19intheolderadultposterFINAL.pdf> [Accessed 30 September 2020].



Healthy Profession.
Healthy Australia.