

Multidisciplinary rehabilitation communication and referral

for patients diagnosed with, or recovering from COVID-19

Information for public health physicians and their teams, general practitioners and primary health teams

This document provides guidance on referring people who have recovered from COVID-19 and are experiencing ongoing symptoms, to multidisciplinary rehabilitation assessment and management.

The long tail of COVID-19

Research into COVID-19 in Italy and the UK found that over 80% of those who have recovered from COVID-19 continue to suffer from at least one symptom for a minimum of three months.^{1,2,3} This is echoed by interim results from unpublished data from ongoing Australian and UK studies.^{4,5,6}

These ongoing symptoms are now being referred to as 'the long tail of COVID'. The most commonly reported symptoms are fatigue, dyspnoea, weakness and pain, although many with moderate and severe COVID-19 suffer from extra-pulmonary complications including renal failure, neuropathy and myopathy, and thromboembolism.^{7,8}

Further to those suffering ongoing effects of COVID-19, many other people who rely on regular face-to-face rehabilitation services in the community are suffering functional deterioration as a result of social isolation and/or lack of access to usual services, which may lead to falls, infections, poor wound healing, peripheral oedema, venous thromboembolism, mental health issues and carer strain.¹²

COVID-19, primary care and rehabilitation

Published in October 2020, the Royal Australian College of General Practitioners' document *Caring for adult patients with post-COVID-19 conditions*, provides guidance for the community management of post-COVID-19 illness.⁹

Many ongoing symptoms of COVID-19 can be appropriately and effectively handled in community general practice (GP) and primary care.¹⁰ This includes a number of conditions that would respond to standard rehabilitation interventions that can be easily undertaken in the community setting, supervised by GPs using team care arrangements, mental health plans and regular coordination of allied health.

All rehabilitation interventions in general practice should be coordinated by the GP with regular coordination, case conferencing and a distinct, documented set of time-limited goals. There needs to be an admission case conference and a discharge case conference to define goals, assess goal achievement dates and completion of rehabilitation. Practice nurses may be able to assist in the coordination of these case conferences. It is assumed that all organic causes of the symptoms have been excluded and that the ongoing symptoms can be attributed to a prior COVID-19 diagnosis.

What is multidisciplinary rehabilitation?

Rehabilitation medicine can offer a range of community-based services for those recovering from COVID-19 requiring management from a number of disciplines of care, including medicine, allied health and nursing. This type of rehabilitation is particularly relevant for those with persistent symptoms, i.e. three months or more post COVID-19 diagnosis and/or extra-pulmonary complications.

Multidisciplinary rehabilitation teams are led by rehabilitation medicine physicians who coordinate a process of care by nurses, doctors and allied health therapists. Doctors in the team undertake medical liaison with treating clinical teams (neurology, psychiatry, respiratory physicians, etc.) as well as oversee ongoing management of other comorbidities if required.

Rehabilitation medicine can be delivered in the home, at an outpatient clinic or day facility, or via telerehabilitation. Telerehabilitation services can also be offered to people living with physical or intellectual disabilities, who depend on regular rehabilitation services such as exercise physiology, physiotherapy, speech pathology, cognitive rehabilitation or psychological treatments, to maintain a level of independence and optimal mobility, self-care, communication and/or cardiovascular and cognitive functioning.

Who to refer?

For people with symptoms who can be appropriately managed by a GP, it is reasonable for the practice nurse to take on a coordination role, provided the GP is present to ensure access to the relevant MBS claim code.

People with symptoms that are disabling or causing functional limitation may need referral to a rehabilitation physician for multidisciplinary rehabilitation. GP-coordinated rehabilitation may be appropriate as an interim measure while they are awaiting access to more comprehensive rehabilitation.

Referral to a rehabilitation physician or a multidisciplinary rehabilitation service in the public sector is appropriate when:

- GP-based rehabilitation programs are not meeting goals of care
- the GP determines the patient's safety is at risk despite optimal therapy, e.g. recurrent falls at home
- it is not possible to coordinate two or more therapists using a goal-directed case conference system due to time constraints or a lack of resources
- patients are unable to afford the required number of community-based rehabilitation sessions and need access to publicly funded programs, such as a hospital-based pulmonary or other rehabilitation program
- the patient requests the continuation of existing service provision to rehabilitation hospital or centre based care that is already being attended
- there is a need for increased diversity and intensity of existing single discipline interventions by allied health practitioners
- patients with pulmonary symptoms are known to a pulmonary rehabilitation service, e.g. COPD.

It is appropriate to refer a person to a rehabilitation physician in the private sector if:

- the above referral criteria are met
- they have access to financial resources, such as private health insurance and workers compensation.

Rehabilitation prescription for general practice

The rehabilitation prescription is dependent on the achievement of specific rehabilitation goals.

In general practice, there is access via Medicare to five sessions of allied health therapy and 20 sessions of psychological treatments per calendar year through various team care arrangements. For some patients, these sessions can be supplemented by private services where financial resources exist. This means that a limited rehabilitation course of treatment can be managed in general practice for patients suffering from functional decline due to symptoms associated with long COVID (weakness, fatigue, dyspnoea, pain etc.).

Goals need to be set at the beginning of the course of rehabilitation, and it is critical that reviews of functional goals are undertaken throughout the course of treatment and signed off as achieved at the end of the rehabilitation intervention.

This means undertaking regular case conferences with the allied health and nursing team, patients should also be included throughout the course of treatment. These case conferences are supported by MBS item numbers.

These case conferences are important because they review patient safety, the success or otherwise of the course of treatment and allow for changes in treatment goals or interventions. Without case conferences, the definition of multidisciplinary rehabilitation and the patient safety requirements associated with it are not achieved.

Included in this document is a sample of a case conference document for rehabilitation following functional decline associated with post-COVID-19 fatigue, a common symptom of long COVID. It forms part of the Health Pathways documentation.

Methodology

This document was developed by members of the Rehabilitation Community of Practice Executive Group in consultation with directors of rehabilitation services, rehabilitation physicians and other rehabilitation clinicians working in both the public and private sectors. Consultation with Dr Louise Delaney (Clinical Lead Advice and Support, Health Pathways Community) and colleagues from the HealthPathways Community and Royal Australian College of General Practitioners also informed the production of this document.

Document authors identified and reviewed relevant published research. Searches using Twitter were conducted between 10 September and 2 November using search terms 'long covid', 'long tail of COVID' and 'primary care'.

The rationale for the communications and referral documents comes from five key sources:

- existing international guidelines on rehabilitation for those suffering from COVID-19¹³⁻²¹
- research regarding early rehabilitation for a variety of conditions that cause temporary or permanent disability²²⁻²⁴
- existing Agency for Clinical Innovation documents regarding models of care for rehabilitation²⁵⁻²⁶
- limited evidence for early rehabilitation following COVID-19²⁷⁻³²
- research on the ongoing symptoms following a diagnosis of COVID-19, commonly referred to as 'the long tail of COVID'.^{1,2,4,5,7-11}

Appendix: Information required for rehabilitation referral

Patient information and clinical details that should be provided in the rehabilitation referral.

Patient information

- Patient details including name, contact details, date of birth
- Medicare and/or Department of Veteran Affairs number
- Whether an interpreter is required and the language
- If the patient is Aboriginal and Torres Strait Islander
- If the patients is an Australian resident
- Employment information, pre-pandemic, before illness and current status.

COVID-19 illness information

- Date of COVID-19 onset
- Swab dates
- Hospital admission dates (if relevant)
- ICU admission dates (of relevant).

Current goals

Below is a table that should be included in the patient file with some sample goals for one symptom (e.g. fatigue) and explanations in italics.

| Domain | Goals | Metrics | Date achieved or abandoned |
|--|--|--|----------------------------|
| Medical/nursing <i>(what the doctors and nurses do)</i> | (e.g. for fatigue – medication review, minimise sedation) | Minimise benzodiazepines/antihistamines etc. during day | |
| Physical <i>(what the physiotherapists and exercise physiologists do)</i> | (e.g. for fatigue – up to 30 min endurance exercise 3 times a week) | 2 min walk test greater than 100m | |
| Functional <i>(what the OTs do)</i> | (e.g. for fatigue – home visit focus on energy conservation) | Independent personal ADLs or cooking | |
| Psychosocial <i>(what the psychologists and social workers do)</i> | (e.g. for fatigue – CBT for depression/anxiety management) | Meditation session for 20 min, 2–3 times a week | |
| Other <i>(what speech pathologists, dietitians and other therapists might do, as required)</i> | (e.g. for fatigue – high energy/protein diet, increase iron in diet) | Albumin levels within normal range Monitoring of weight | |

COVID-19 Yorkshire Rehabilitation Screen¹¹

Covid 19 Yorkshire Rehab Screen (C19-YRS)

Patient name and NHS number:

Time and date of call:

Staff member making call:

We are getting in touch with people who have been discharged after having had a diagnosis of coronavirus disease (Covid-19). The purpose of this call is to find out if you are experiencing problems related to your recent illness with coronavirus. We will document this in your clinical notes. We will use this information to direct you to services you may need and inform the development of these services in the future.

This call will take around 15 minutes. If there's any topics you don't want to talk about you can stop the conversation at any point. Do you agree to talk to me about this today? Yes No

Opening questions:

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|---|
| Have you had any further medical problems or needed to go back to hospital since your discharge? Re-admitted? Yes <input type="checkbox"/> No <input type="checkbox"/> Details: |
| Have you used any other health services since discharge (e.g. your GP)? Yes <input type="checkbox"/> No <input type="checkbox"/> Details: |

I'll ask some questions about how you might have been affected since your illness. If there are other ways that you've been affected then there will be a chance to let me know these at the end.

| 1. Breathlessness | On a scale of 0-10, with 0 being not breathless at all, and 10 being extremely breathless, how breathless are you: (n/a if does not perform this activity) | Now | Pre-Covid |
|--------------------------------------|---|--|--|
| a) At rest? | | 0-10: ____ | 0-10: ____ |
| b) On dressing yourself? | | 0-10: ____ N/a <input type="checkbox"/> | 0-10: ____ N/a <input type="checkbox"/> |
| c) On walking up a flight of stairs? | | 0-10: ____ N/a <input type="checkbox"/> | 0-10: ____ N/a <input type="checkbox"/> |

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| 2. Laryngeal/airway complications | Have you developed any changes in the sensitivity of your throat such as troublesome cough or noisy breathing? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes: rate the significance of impact on a scale of 0-10 (0 being no impact, 10 being significant impact) 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 3. Voice | Have you or your family noticed any changes to your voice such as difficulty being heard, altered quality of the voice, your voice tiring by the end of the day or an inability to alter the pitch of your voice? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes: rate the significance of impact on a scale of 0-10 (0 being no impact, 10 being significant impact) 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 4. Swallowing | Are you having difficulties eating, drinking or swallowing such as coughing, choking or avoiding any food or drinks? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes: rate the significance of impact on a scale of 0-10 (0 being no impact, 10 being significant impact) 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 5. Nutrition | Are you or your family concerned that you have ongoing weight loss or any ongoing nutritional concerns as a result of Covid-19? Yes <input type="checkbox"/> No <input type="checkbox"/> Please rank your appetite or interest in eating on a scale of 0-10 since Covid-19 (0 being same as usual/no problems, 10 being very severe problems/reduction) 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 6. Mobility | On a 0-10 scale, how severe are any problems you have in walking about? 0 means I have no problems, 10 means I am completely unable to walk about. Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 7. Fatigue | Do you become fatigued more easily compared to before your illness? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, how severely does this affect your mobility, personal cares, activities or enjoyment of life? (0 being not affecting, 10 being very severely impacting) Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 8. Personal-Care | On a 0-10 scale, how severe are any problems you have in personal cares such as washing and dressing yourself? 0 means I have no problems, 10 means I am completely unable to do my personal care. Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 9. Continence | Since your illness are you having any <u>new</u> problems with: <ul style="list-style-type: none"> controlling your bowel Yes <input type="checkbox"/> No <input type="checkbox"/> controlling your bladder Yes <input type="checkbox"/> No <input type="checkbox"/> |

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| 10. Usual Activities | On a 0-10 scale, how severe are any problems you have in do your usual activities, such as your household role, leisure activities, work or study? 0 means I have no problems, 10 means I am completely unable to do my usual activities. Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 11. Pain/discomfort | On a 0-10 scale, how severe is any pain or discomfort you have? 0 means I have no pain or discomfort, 10 means I have extremely severe pain Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 12. Cognition | Since your illness have you had new or worsened difficulty with: <ul style="list-style-type: none"> concentrating? Yes <input type="checkbox"/> No <input type="checkbox"/> short term memory? Yes <input type="checkbox"/> No <input type="checkbox"/> |
| 13. Cognitive-Communication | Have you or your family noticed any change in the way you communicate with people, such as making sense of things people say to you, putting thoughts into words, difficulty reading or having a conversation? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes: rate the significance of impact on a scale of 0-10 (0 being no impact, 10 being significant impact) 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 14. Anxiety | On a 0-10 scale, how severe is the anxiety you are experiencing? 0 means I am not anxious, 10 means I have extreme anxious. Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 15. Depression | On a 0-10 scale, how severe is the depression you are experiencing? 0 means I am not depressed, 10 means I have extreme depression. Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 16. PTSD screen | a) Have you had any unwanted memories of your illness or hospital admission whilst you were awake, so not counting dreams? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, how much do these memories bother you? (is the distress: mild <input type="checkbox"/> / moderate <input type="checkbox"/> / severe <input type="checkbox"/> / extreme <input type="checkbox"/> b) Have you had any unpleasant dreams about your illness or hospital admission? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, how much do these dreams bother you? (is the distress: mild <input type="checkbox"/> / moderate <input type="checkbox"/> / severe <input type="checkbox"/> / extreme <input type="checkbox"/> c) Have you tried to avoid thoughts or feelings about your illness or hospital admission? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, how much effort do you make to avoid these thoughts or feelings? (mild <input type="checkbox"/> / moderate <input type="checkbox"/> / severe <input type="checkbox"/> / extreme <input type="checkbox"/> d) Are you currently having thoughts about harming yourself in any way? Yes <input type="checkbox"/> No <input type="checkbox"/> |

| | |
|-----------------------------|---|
| 17. Global Perceived Health | How good or bad is your health overall? 10 means the best health you can imagine. 0 means the worst health you can imagine. Now: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> Pre-Covid: 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> |
| 18. Vocation | What is your employment situation and has your illness affected your ability to do your usual work? Occupation: _____ Employment status before Covid-19 Lockdown: _____ Employment status before you became ill: _____ Employment status now: _____ |
| 19. Family/carers views | Do you think your family or carer would have anything to add from their perspective? views |

Closing questions:

| |
|--|
| Are you experiencing any other new problems since your illness we haven't mentioned? |
| Any other discussion (clinical notes): |

Figure 1. The C19-YRS tool

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| For use by | Primary care physicians and teams and general practitioners caring for people in the community post COVID-19 diagnosis |



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