ReCOVery: Designing an allied health model of care for post-acute (long) COVID-19

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Austin HEALTH

Post-COVID-19 Condition

Definition (WHO)

- Hx of SARS-COV-2 infection
- Ongoing symptoms 3 months from onset
- Cannot be explained by other diagnoses – Diagnosis of exclusion

Recommendations

- Access to multidisciplinary rehabilitation, including Allied Health
- Goal setting & self management strategies
- Provide interventions/support to return to premorbid functioning

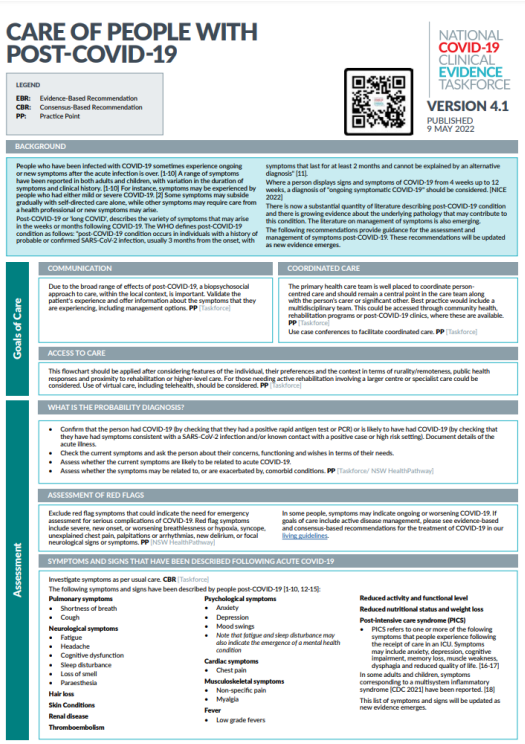
Prevalence

- Estimates vary from 5% to over 40%
- Over 200 symptoms, multisystem
- Most common: Fatigue, Brain Fog, Dyspnea, Mood

COVID-19 rapid guideline: managing the long-term effects of COVID-19

NICE guideline [NG188] Published: 18 December 2020 Last updated: 11 November 2021

Guidance | Tools and resources | Information for the public | Evidence | History



CARE OF PEOPLE WITH POST-COVID-19

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

VERSION 4.1

PUBLISHED 9 MAY 2022

LEGEND

EBR: Evidence-Based Recommendation

CBR: Consensus-Based Recommendation

PP: Practice Point

BACKGROUND

People who have been infected with COVID-19 sometimes experience ongoing or new symptoms after the acute infection is over. [1-10] A range of symptoms have been reported in both adults and children, with variation in the duration of symptoms and clinical history. [1-13] For instance, symptoms may be experienced by people who had either mild or severe COVID-19. [2] Some symptoms may subside gradually with self-directed care alone, while other symptoms may require care from a health professional or new symptoms may arise.

Post-COVID-19 or 'long COVID', describes the variety of symptoms that may arise in the weeks or months following COVID-19. The WHO defines post-COVID-19 condition as follows: "post-COVID-19 condition occurs in individuals with a history of probable or confirmed SARS-CoV-2 infection, usually 3 months from the onset, with symptoms that last for at least 2 months and cannot be explained by an alternative diagnosis" [11].

Where a person displays signs and symptoms of COVID-19 from 4 weeks up to 12 weeks, a diagnosis of "ongoing symptomatic COVID-19" should be considered. [NICE 2022]

There is now a substantial quantity of literature describing post-COVID-19 condition and there is growing evidence about the underlying pathology that may contribute to this condition. The literature on management of symptoms is also emerging.

The following recommendations provide guidance for the assessment and management of symptoms post-COVID-19. These recommendations will be updated as new evidence emerges.

Goals of Care

COMMUNICATION

Due to the broad range of effects of post-COVID-19, a biopsychosocial approach to care, within the local context, is important. Validate the patient's experience and offer information about the symptoms that they are experiencing, including management options. **PP** [Taskforce]

COORDINATED CARE

The primary health care team is well placed to coordinate person-centred care and should remain a central point in the care team along with the person's carer or significant other. Best practice would include a multidisciplinary team. This could be accessed through community health, rehabilitation programs or post-COVID-19 clinics, where these are available. **PP** [Taskforce]

Use case conferences to facilitate coordinated care. **PP** [Taskforce]

ACCESS TO CARE

This flowchart should be applied after considering features of the individual, their preferences and the context in terms of rurality/remoteness, public health responses and proximity to rehabilitation or higher-level care. For those needing active rehabilitation involving a larger centre or specialist care could be considered. Use of virtual care, including telehealth, should be considered. **PP** [Taskforce]

Assessment

WHAT IS THE PROBABILITY DIAGNOSIS?

- Confirm that the person had COVID-19 (by checking that they had a positive rapid antigen test or PCR) or is likely to have had COVID-19 (by checking that they have had symptoms consistent with a SARS-CoV-2 infection and/or known contact with a positive case or high risk setting). Document details of the acute illness.
- Check the current symptoms and ask the person about their concerns, functioning and wishes in terms of their needs.
- Assess whether the current symptoms are likely to be related to acute COVID-19.
- Assess whether the symptoms may be related to, or are exacerbated by, comorbid conditions. **PP** [Taskforce/ NSW HealthPathway]

ASSESSMENT OF RED FLAGS

Exclude red flag symptoms that could indicate the need for emergency assessment for serious complications of COVID-19. Red flag symptoms include severe, new onset, or worsening breathlessness or hypoxia, syncope, unexplained chest pain, palpitations or arrhythmias, new delirium, or focal neurological signs or symptoms. **PP** [NSW HealthPathway]

In some people, symptoms may indicate ongoing or worsening COVID-19. If goals of care include active disease management, please see evidence-based and consensus-based recommendations for the treatment of COVID-19 in our living guidelines.

SYMPTOMS AND SIGNS THAT HAVE BEEN DESCRIBED FOLLOWING ACUTE COVID-19

Investigate symptoms as per usual care. **CBR** [Taskforce]

The following symptoms and signs have been described by people post-COVID-19 [1-10, 12-15]:

Pulmonary symptoms
- Shortness of breath
- Cough

Neurological symptoms
- Fatigue
- Headache
- Cognitive dysfunction
- Sleep disturbance
- Loss of smell
- Paraesthesia

Hair loss

Skin Conditions

Renal disease

Thromboembolism

Psychological symptoms
- Anxiety
- Depression
- Mood swings
- *Note that fatigue and sleep disturbance may also indicate the emergence of a mental health condition*

Cardiac symptoms
- Chest pain

Musculoskeletal symptoms
- Non-specific pain
- Myalgia

Fever
- Low grade fevers

Reduced activity and functional level

Reduced nutritional status and weight loss

Post-intensive care syndrome (PICS)
- PICS refers to one or more of the following symptoms that people experience following the receipt of care in an ICU. Symptoms may include anxiety, depression, cognitive impairment, memory loss, muscle weakness, dysphagia and reduced quality of life. [16-17]

In some adults and children, symptoms corresponding to a multisystem inflammatory syndrome (CDC 2021) have been reported. [18]

This list of symptoms and signs will be updated as new evidence emerges.

ReCOVery model of care principles

- Access to multidisciplinary allied health led care
- Symptom management & functional improvement
- Scalability & automation
- Sustainability: Self management & telehealth
- Data and research aligned

Referral

Internal, staff self referral, GP or SMS response: COVID-19 symptoms persisting ≥ 12-weeks

Initial Triage & Assessment

ReCOVery Triage tool

Collection of clinically relevant information, including symptoms, vaccination status, demographics, patient expectations of the clinical service

Goal Setting Appointment

Standardised outcome measures: Identify priority areas for therapy

Streamline referrals to appropriate discipline for individualised care

Individual Discipline Ax & Intervention

- Exercise Physiology
- Neuro-Psychology
- Clinical Psychology
- Occupational Therapy
- Social Work
- Nutrition & Dietetics
- Speech Pathology
- Rehab Medicine

Data collection

Triage

ReCovery Tool

Demographics

Vax status

Symptoms

Pt expectations

Goal Setting

Mood: PHQ-9 & GAD 7

PTSD: PCL-5 (if endorsed)

MRC dyspnoea scale

Neuro-QOL Fatigue short form

Neuro-QOL Cognitive fxn short form

Sleep (if endorsed)

HRQOL: EQ5D-5L

Social questions

Goal setting

Discipline specific assessment
(e.g. 30 second sit to stand; neuropsychology measures)

Outcome

Mood: PHQ-9 & GAD 7

PTSD: PCL-5 (if completed at T1)

MRC dyspnoea scale

Neuro-QOL Fatigue short form

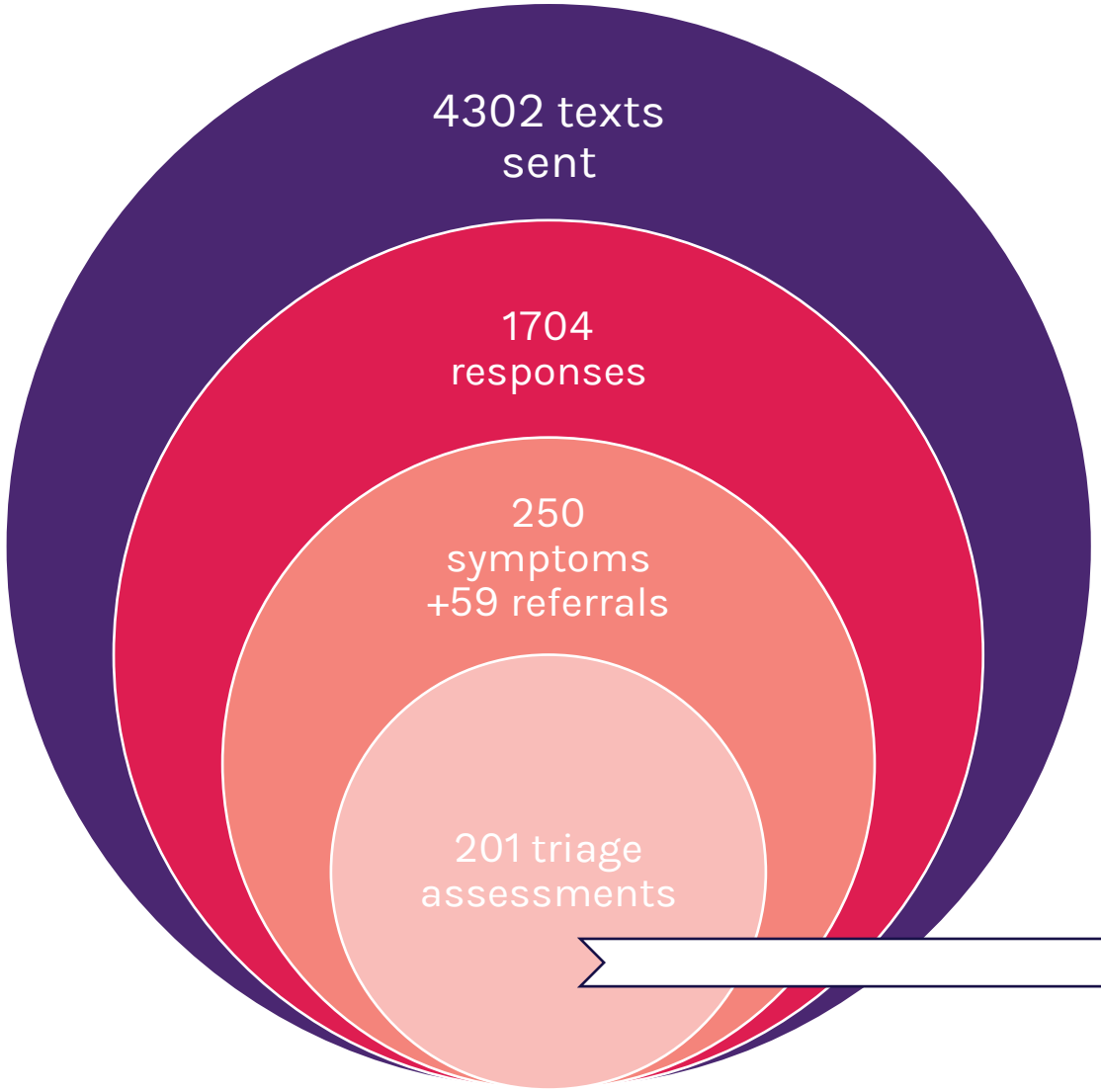
Neuro-QOL Cognitive fxn short form

Sleep (if completed at T1)

HRQOL: EQ5D-5L

Malnutrition: MUST

Goal attainment scaling



53% Severe

27% moderate

20% mild

Eligible for individual discipline therapy

Self-management pathways

Initial data

50 (SD 16) Average age

67% female

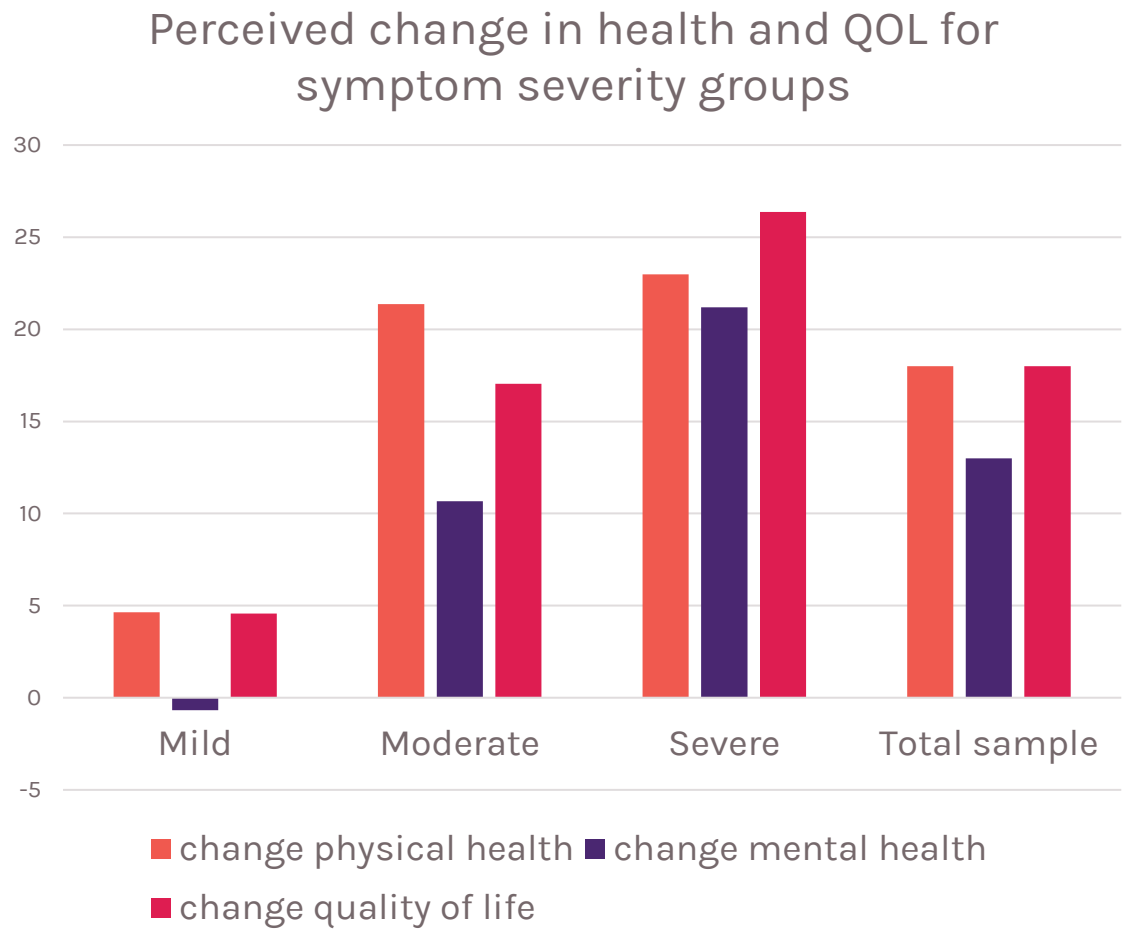
88% vaccinated when they contracted COVID

36% are healthcare workers

75% working/studying at time of infection

15% ceased/changed employment due to illness/sick leave

15% have first language other than English



Significant reduction in perceived physical & mental health & QOL post-COVID (p<0.001)

Symptom profile

Top 10 symptoms	% Moderate-severe
Fatigue	66
Brain fog	52
Sleep	43
Persistent muscle pain	43
Headache	39
Shortness of breach	39
Anxiety/worry	35
Mood/depression	33
Persistent cough	25
Voice changes	22

Symptoms	%moderate -severe
Swallowing problems	12%
Loss of smell	20%
Loss of taste	18%
Chest pain	19%
PTSD markers	16%

Opportunities & next steps

"The ReCOVery Service has been a big help with getting me ready to return to work. I think their therapy has been just the right amount and I'm very grateful to be getting back to work in the hospital."

" It is an illness that goes un-noticed and people do not understand the physical and mental fatigue associated…It has been a blessing to have a dedicated team helping me….they are incredibly supportive and I'm slowly getting back to my life."

Equity of access

Evaluation & improvement

Research

Sustainability