Assessment of person with prolonged symptoms following COVID-19 infection

Goal of initial assessment is to differentiate between:

1. Non-specific post viral symptoms – particularly fatigue, breathlessness, persistent cough and cognitive dysfunction
2. Specific serious COVID-19 sequelae
3. Recovery following severe illness that required ICU management
4. Exacerbation of pre-existing conditions

Red Flags

- Severe, new onset or worsening dyspnoea or hypoxia
- Syncope
- Unexplained chest pain, palpitations or arrythmias
- New delirium or focal neurological signs
- Severe psychiatric symptoms

> Refer for emergency management

Targeted investigations

Baseline Bloods: CBE, EUC, LFTs

Chest pain: If cardiovascular risk factors present, manage in line with national guidelines. If no cardiovascular risk factors present, assess with CXR, ECG, BNP +/- consider Echocardiogram and **assessment** for Venous Thromboembolism (VTE).

Palpitations: ECG, TFTs, check for other postural symptoms

Fatigue: Blood test for thyroid, iron studies, B12, plus urine dipstick, fasting BSL

Dyspnoea and cough: CXR and assess for VTE +/- D-Dimer, CTPA, VQ Scan as clinically appropriate. Consider: Spirometry, CT Chest, echo.

Postural or Autonomic symptoms: If palpitations or dizziness on standing consider:

- lying and standing blood pressure and heart rate recordings with sustained >30 bpm HR increase significant for POTS
- 3 minute active stand test for orthostatic hypotension, or
- **10-minute lean test** for POTS
- If suspect POTS but testing normal, then consider Compass-31 questionnaire & at-home blood pressure testing

Comprehensive history and examination

↓

Exclude red flags requiring emergency management

↓

Consider, manage and optimise co-morbidities

↓

Initiate appropriate investigations tailored to the patient's signs and symptoms

↓

Consider/exclude recognised complications of COVID or other alternative diagnoses

↓

Consider diagnosis of Long COVID and triage to appropriate level of care

History

- Details of COVID-19 infection
- Red flags
- Function – extent to which daily activities are limited (Pre vs Post-COVID)
- Post-Exertional Symptom Exacerbation (worsening or 'crash' immediately or up to 72 hours after a physical or cognitive activity)
- Co-morbidities
- Systems review
- Time to listen to symptoms
- Validate patient's experience

Exam

- Heart rate, blood pressure (BP), oxygen saturations, temperature
- Weight
- Laying & standing BP
- Targeted physical exam
- **1-minute sit-to-stand test**
- 3-minute active stand test for orthostatic hypotension
- 10 minute Nasa Lean test for POTS

Assessment tools

- **Covid-19 Yorkshire Rehabilitation Screening** (C19-YRS)
- **Post-COVID-19 functional status** (PCFS)
- Autonomic symptoms

Targeted tools for patient's symptoms:

- STOPBANG, Epworth Sleepiness Scale or OSA-50
- DASS-21, K10
- GP COG, MMSE, GP-COG

Recognised complications

Pulmonary (eg interstitial lung disease, impaired lung function, VTE)

Cardiovascular (eg MI, myocarditis, pericarditis, arrhythmia, heart failure, VTE)

Neurological (eg stroke, encephalopathy, myelitis, cognitive decline)

Autonomic Dysfunction (e.g. Postural Orthostatic Tachycardia Syndrome, Orthostatic Intolerance)

Immunological (eg Mast cell activation syndrome, allergies)

Endocrine (eg deterioration of diabetic control, new onset Type 1 or 2 diabetes, thyroiditis)

Renal and Hepatic impairment

Mental Health (depression, anxiety, PTSD, sleep disorders)

Post intensive care syndrome

Triage Long COVID patients to appropriate level of care

Triage criteria

Supported self-management

- Some functional impairment
- Able to commence self-management

Community allied health referral with GP support

- Single allied health discipline input

Multidisciplinary tertiary Long COVID clinic referral

- Severed functional impairments
- Severe symptoms
- Diagnostic dilemma
- Patients with severe initial infection

Supported self-management

- Provide advice and resources for all patients (even if they require referral to the multidisciplinary clinic)
- Educate about the uncertain pathophysiology, recovery time frames and validate the patient's experience
- Symptom based management
- Patient resources
  - WHO **Support for rehabilitation booklet** RACGP **managing post-COVID-19 resource**
- Symptom tracking and diaries
  - Repeat symptom tools (C19-YRS or PCFS) monthly
  - Fatigue diary (see **webinar 1**)
  - Energy conservation approach (RCOT UK **How to conserve your energy**
- Energy conservation approach
  - Pacing, Prioritisation, Planning (see webinar 1)
  - Paced exercise & rehab **IN ABSENCE** of Post-Exertion Symptom Exacerbation
- Patient support groups
  - Long Covid Collaboration Australia, Facebook groups, twitter, Podcasts
  - Lung Foundation Australia
- Detect and manage POTS
  - Lifestyle advice, compression stockings, medications, or referral
  - Australian POTS Foundation or **POTS UK**
- Follow up review (separate appointments out for fatigued patients)
  - New or worsening symptoms could require further investigation or referral
- COVID-19 Vaccination (Uncertain evidence, may provide some improvement in Long COVID symptoms)
- Long term care coordination
  - GP Management Plan + Team care arrangement +/- case conference item numbers
  - Consider Mental Health Care Plan for psychology input around *how* to cope with symptom burden
- Walk the journey, "share the uncertainty"

Community allied health referral with GP support

Refer to allied health (specific discipline will depend upon patient's symptoms)

- Rehabilitation-familiar physio or exercise physiologist
- Other disciplines may include psychology, occupational therapy, dietetics, speech pathology

Multidisciplinary tertiary Long COVID clinic referral

Refer to **HealthPathways** for up-to-date referral pathways and processes

Long COVID definition

< 4 weeks = acute COVID-19

4-12 weeks = ongoing symptomatic COVID-19

>12 weeks = Long COVID, Post-COVID-19 Syndrome or Post-Acute Sequelae of COVID-19 (PASC)

Confirmed or probable SARS-CoV-2, 3 months from onset of COVID-19, at least 2 months of symptoms, cannot be explained by alternate Dx, symptoms may be new onset, persist &/or fluctuate, may be experienced by people who had mild, moderate or severe acute COVID-19

Resources for GPs

Health pathways Login: covid19, Password: sapassword

National Clinical Evidence Taskforce **Care of People after COVID-19** flowchart

NSW Living Evidence – **post acute sequelae of COVID-19**

Long COVID – **A primary care update** **BMJ**

Government of South Australia
SA Health