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New guidance on the underwriting considerations of long COVID is now available in hr | Ascent

Long COVID – An overview of a troubling legacy of the SARS-CoV-2 pandemic virus

Introduction

Long COVID is one term used to describe the persistence of various symptoms for weeks and months following acute infection with the SARS-CoV-2 virus. Other terms used to refer to this disorder include post-COVID syndrome, post-acute COVID and Post-Acute Sequelae of SARS-CoV-2 (PASC). Sufferers of long COVID are often referred to as “long haulers”.

Symptoms of long COVID

Long COVID symptoms – shown in Table 1 – may occur continuously or in a relapsing remitting pattern. The symptoms may persist from the initial acute bout of COVID-19 infection or may be new symptoms different to those experienced during the acute infection. By far the majority of patients with long COVID test negatively for SARS-CoV-2 indicating microbiological recovery and as such, the mechanism(s) of long COVID remain uncertain. Explanations include end-organ damage, exaggerated immune or autoimmune responses and persistent but undetectable viral reservoirs.

Table 1 – Symptoms of long COVID

Symptoms	Reported frequency (%)
Fatigue	53
Headache	44
Shortness-of-breath	43
Joint pain	27
Attention Disorder (Brain Fog)	27
Hair Loss	25
Chest pain	22
Chronic Cough	18
Sensory disturbances	8 – 17
Muscle pain	5
Sore throat	6
Diarrhea	2
Skin rashes	-
Mental health issues (stress, anxiety, depression)	-

Classification of long COVID

Experts have started to classify long COVID into two stages:

- Post-acute COVID where symptoms persist for more than 3 but less than 12 weeks after the initial infection and,
- Chronic COVID where symptoms persist for more than 12 weeks following a acute infection

Another suggested way of classifying long COVID is according to the predominant residual/chronic symptom(s):

- Post COVID cardiorespiratory syndrome
- Post COVID fatigue syndrome
- Post COVID neuro-psychiatric syndrome

Risk factors for long COVID

Hospitalization during a acute infection – Patients hospitalized during the acute COVID-19 infection have an increased risk of developing long COVID (87%) compared to those treated with outpatient COVID-19 (10 to 35%). Hospitalized patients are also more likely to sustain end-organ damage from their acute infection.

Older age groups – Long COVID is more commonly reported in adults aged 50+ years although it can occur in any age group including children.

Severity of the initial infection – The number of symptoms at initial infection appears to predict the likelihood of developing long COVID. The more symptoms at initial infection the higher the risk is of developing a long COVID syndrome.

Comorbidities – Individuals with comorbid and in particular comorbid psychiatric disorders have an increased risk of developing long COVID after a acute SARS-CoV-2 infection. The more comorbidities the higher the risk.

Evaluation of long COVID

The predominating residual symptom profile should guide the focus of the evaluation. For example, if the predominating symptoms are shortness of breath and chest pain, cardiorespiratory investigations such as lung function tests, EKG, echo, chest imaging, etc., should be conducted.

For more general symptom profiles, blood and imaging tests should be guided by clinical assessment and may include

tests such as complete blood count, liver and renal function, urinalysis, D-dimer assay, inflammatory markers and NT proBNP.

Treatment of long COVID

There are currently no official guidelines for the treatment of long COVID. The most important challenge for the treating primary care physician is to distinguish those with life-threatening post-COVID conditions from those with less worrisome symptoms. Serious defined conditions should be treated according to existing evidence-based guidelines. Treatment for non-specific symptoms predominated by fatigue consists of supportive measures, ongoing monitoring and symptomatic treatment e.g. non-opioid analgesics for pain.

Long COVID & morbidity

Wide varieties of new-onset pulmonary and extra-pulmonary disorders have been observed in long COVID patients. Pulmonary conditions include persistent dyspnea, pulmonary embolism, pulmonary vascular damage, interstitial lung disease and respiratory failure.

The following is a list of the extra-pulmonary conditions associated with long COVID:

Nervous system – Headache, loss of taste, smell and hearing, convulsions, confusion, nerve pain, dizziness, ataxia, stroke and cerebral hemorrhage

Mental health – Sleep wake disorders, anxiety, depression and trauma- and stress-related disorders

Metabolic – Dyslipidemia, diabetes mellitus and obesity

Cardiovascular – Hypertension, arrhythmias, coronary atherosclerosis, myocardial hypertrophy, focal myocardial fibrosis and heart failure

Renal – Impaired renal function, renal systemic microangiopathy

Hematological – Coagulopathy, anemia

General – Fatigue, malaise, muscle disorders, musculoskeletal pain, skin disorders, arthralgia, arthritis and infections e.g. urinary tract infections

Long COVID & mortality

According to a recent longitudinal study of more than 73,000 US veterans with a history of outpatient COVID-19 infection, there was an increase in observed short-term mortality at 6 months (hazard ratio of 1.59), when compared to veterans with no history of COVID-19 infection⁽²⁾. More research evaluating the impact of long COVID on mortality however is required for a better understanding of the mortality associations of various Long COVID syndromes.

Long COVID underwriting considerations

New guidance on the underwriting considerations of long COVID is now available in hr|Ascent. If there is any evidence of documented Long COVID end-organ damage then the corresponding ratings should be applied. For Long COVID with non-specific symptoms and no evidence of end-organ damage there does not appear to be any significant excess mortality considerations.

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