

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

Effective Date:	8/1/2023
------------------------	-----------------

- | | | |
|--------------------------------|------------------------------------|--|
| POLICY | PRODUCT VARIATIONS | DESCRIPTION/BACKGROUND |
| RATIONALE | DEFINITIONS | BENEFIT VARIATIONS |
| DISCLAIMER | CODING INFORMATION | REFERENCES |
| POLICY HISTORY | | |

I. POLICY

The following services may be considered **medically necessary** for the diagnosis, assessment, or management of Post-Acute Sequelae Covid (PASC).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7643287/> accessed 2/14/2023
<https://www.nice.org.uk/guidance/ng188> accessed 2/14/2023
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7380205/> accessed 2/14/2023
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8198537/> accessed 2/14/2023
<https://pubmed.ncbi.nlm.nih.gov/33226861/> accessed 2/14/2023
<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/415378> accessed 2/14/2023

<https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests.html> accessed 2/14/2023

Autonomic nervous system (ANS) testing, consisting of a battery of tests in several domains, may be considered **medically necessary** for the diagnosis, assessment, or management of Post-Acute Sequelae Covid (PASC).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7850225/> accessed 2/14/2023

Cognitive rehabilitation may be considered **medically necessary** for the diagnosis, assessment, or management of Post-Acute Sequelae Covid (PASC).

<https://pubmed.ncbi.nlm.nih.gov/33322316/> accessed 2/14/2023

https://www.medscape.com/viewarticle/970309?uac=54216PT&faf=1&sso=true&impID=4091342&src=mkcovidupdate_220315_MSCPEDIT accessed 2/14/2023

[Neurocognitive Rehabilitation in COVID-19 Patients: A Clinical Review - PMC \(nih.gov\)](#) accessed 2/21/2023

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

Electrodiagnostic assessment, consisting of electromyography (EMG), nerve conduction study (NCS), and related measures, may be considered **medically necessary** for the diagnosis, assessment, or management of Post-Acute Sequelae Covid (PASC)

<https://pubmed.ncbi.nlm.nih.gov/32912745/> accessed 2/14/2023

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7380205/> accessed 2/14/2023

Measurement of exhaled nitric oxide may be considered **medically necessary** for the diagnosis, assessment or management of PASC.

<https://clinicaltrials.gov/ct2/show/NCT04728919> accessed 2/14/2023

Neuropsychological testing may be considered **medically necessary** for the diagnosis, assessment or management of PASC when the patient:

- has neurological or behavioral symptoms following known or suspected COVID infection
 - symptoms may be new or progressive
- is able to understand and participate in all activities necessary for testing

<https://pubmed.ncbi.nlm.nih.gov/32912745/> accessed 2/14/2023

<https://clinicaltrials.gov/ct2/show/NCT04745611> accessed 2/14/2023

<https://pubmed.ncbi.nlm.nih.gov/32901580/> accessed 2/14/2023

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8183238/> accessed 2/14/2023

Outpatient cardiac rehabilitation programs may be considered **medically necessary** for the diagnosis, assessment or management of PASC.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8004041/> accessed 2/14/2023

Physical medicine services may be considered **medically necessary** for the diagnosis, assessment or management of Post-Acute Sequelae Covid (PASC).

- Patient must be under the care of a physician for a condition for which physical medicine treatment is medically necessary, reasonable, and appropriate.
- Services must be considered under accepted standards of medical practice to be a specific and effective treatment for the patient's condition.

<https://www.iospt.org/do/10.2519/iospt.blog.20210120.2/full/> accessed 2/14/2023

<https://www.apta.org/article/2021/03/31/national-plan-address-pasc> accessed 2/14/2023

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

<https://world.physio/news/world-physiotherapy-briefing-paper-focuses-safe-rehabilitation-people-living-long-covid> accessed 2/14/2023

Pulmonary rehabilitation programs may be considered **medically necessary** for the diagnosis, assessment or management of Post-Acute Sequelae Covid (PASC)

[Three Cases of COVID-19 Pneumonia in Female Patients in Italy Who Had Pulmonary Fibrosis on Follow-Up Lung Computed Tomography Imaging - PMC \(nih.gov\)](#) accessed 2/14/2023

https://www.medscape.com/viewarticle/970247?uac=54216PT&faf=1&sso=true&impID=4091342&src=mkm_covid_update_220315_MSCPEDIT#vp_1 accessed 2/14/2023

Smell dysfunction testing is considered **not medically necessary** for the diagnosis, assessment or management of Post-Acute Sequelae Covid (PASC)

Smell therapy may be considered **medically necessary** for the diagnosis, assessment or management of Post-Acute Sequelae Covid (PASC)

[Potential pharmacologic treatments for COVID-19 smell and taste loss: A comprehensive review - PMC \(nih.gov\)](#) accessed 2/14/2023

Sleep studies, unsupervised or supervised, may be medically necessary for the diagnosis, assessment, or management of Post-Acute Sequelae Covid (PASC).

[Sleep symptoms are essential features of long-COVID – Comparing healthy controls with COVID-19 cases of different severity in the international COVID sleep study \(ICOSS-II\) - Merikanto - 2023 - Journal of Sleep Research - Wiley Online Library](#) Accessed 3/3/2023

[The role of sleep and dreams in long-COVID - PubMed \(nih.gov\)](#) Accessed 3/3/2023

[Sleep Apnea and COVID | Sleep Foundation](#) Accessed 3/3/2023

Cross-reference:

- MP 8.005 Cardiac Rehabilitation in the Outpatient Setting**
- MP 8.008 Outpatient Pulmonary Rehabilitation**
- MP 8.001 Physical Medicine and Specialized Physical Medicine Treatments**

(Outpatient)

- MP 2.100 Autonomic Nervous System Testing**
- MP 2.063 Electromyography and Nerve Conduction Studies**
- MP 4.027 Neuropsychological Testing for Medical Purposes**
- MP 4.038 Measurement of Exhaled Nitric Oxide and Exhaled Breath Condensate in Diag-Mgmt Asthma and other Resp Disorders**
- MP 8.007 Cognitive Rehabilitation**

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

II. PRODUCT VARIATIONS

[TOP](#)

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations as discussed in Section VI. Please see additional information below.

FEP PPO:

Refer to FEP Benefit Brochure for information on Post-Acute Sequelae Covid (PASC).

<https://www.fepblue.org/benefit-plans/benefit-plans-brochures-and-forms>

Note* - The Federal Employee Program (FEP) Service Benefit Plan does not have a medical policy related to these services. “

III. DESCRIPTION/BACKGROUND

[TOP](#)

People with post-COVID conditions can have a wide range of symptoms that can last weeks, months, or even years after infection. Sometimes the symptoms can even go away or come back again.

Post-COVID conditions may not affect everyone the same way. People with post-COVID conditions may experience health problems from different types and combinations of symptoms happening over different lengths of time. Though most patients’ symptoms slowly improve with time, speaking with your healthcare provider about the symptoms you are experiencing post-COVID could help identify new medical conditions. For some people, post-COVID conditions can last weeks, months, or years after COVID-19 illness and can sometimes result in disability.

- People who experience post-COVID conditions most commonly report:
- **General symptoms (*Not a Comprehensive List*)**
 - Tiredness or fatigue that interferes with daily life
 - Symptoms that get worse after physical or mental effort (also known as “[post-exertional malaise](#)”)
 - Fever
- **Respiratory and heart symptoms**
 - Difficulty breathing or shortness of breath
 - Cough
 - Chest pain
 - Fast-beating or pounding heart (also known as heart palpitations)
- **Neurological symptoms**

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

- Difficulty thinking or concentrating (sometimes referred to as “brain fog”)
- Headache
- Sleep problems
- Dizziness when you stand up (lightheadedness)
- Pins-and-needles feelings
- Change in smell or taste
- Depression or anxiety
- **Digestive symptoms**
 - Diarrhea
 - Stomach pain
- **Other symptoms**
 - Joint or muscle pain
 - Rash
 - Changes in menstrual cycles

[Post-COVID Conditions | CDC](#) Accessed 2/14/2023

Health Inequities May Affect Populations at Risk for Long COVID

Some people are at increased risk of getting sick from COVID-19 because of where they live or work, or because they can’t get health care. [Health inequities](#) may put some people from racial or ethnic minority groups and some people with disabilities at greater risk for developing post-COVID conditions. Scientists are researching some of those factors that may place these communities at higher risk of both getting infected or developing post-COVID conditions.

[Long COVID or Post-COVID Conditions | CDC](#) accessed 2/21/2023

Autonomic Nervous System Testing

“It has been hypothesised that COVID-19 infection affects the autonomic nervous system.¹⁶ The relationship between the two is complex: the well-documented cytokine response storm of COVID-19¹⁷ results from sympathetic activation inducing pro-inflammatory cytokine release.^{18,19} Conversely, vagal stimulation results in an anti-inflammatory responses,¹⁷ suggesting possible therapeutic targets in the autonomic nervous system.

Alternatively, COVID-19 related autonomic dysfunction could be mediated by the virus itself. Immune-mediated neurological syndromes have been described.²⁰ It is also well established that autonomic disorders such as OH and POTS are associated with autoantibodies,²¹ for example to α - β -adrenoceptors and muscarinic receptors.²²⁻²⁵ Cohort studies describe commonly preceding infections in POTS,²⁶ as well as a link with autoimmune biomarkers and autoimmune disorders.²⁷ Thus, we speculate that there is an underlying autoimmune

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

component to the post-COVID syndromes that we report.”<https://www.rcpjournals.org/content/clinmedicine/21/1/e63> accessed 2/14/2023.

"We have diagnosed a large number of patients with postural orthostatic tachycardia syndrome [POTS] and other forms of COVID-related tachycardia at our post-COVID outpatient clinic at Karolinska University Hospital and wanted to highlight this phenomenon," he said. Between 25% and 50% of patients at the clinic report tachycardia and/or palpitations that last 12 weeks or longer, the authors report.

"Systematic investigations suggest that 9% of Post-acute Covid-19 syndrome patients report palpitations at six months," the authors write.

[Tachycardia Syndrome May Be a Distinct Marker for Long COVID Accessed 2/14/2023\(medscape.com\)](https://www.medscape.com/viewarticle/970309?uac=54216PT&faf=1&sso=true&impID=409134&src=mkm_covid_update_220315_MSCPEDIT#vp_2)

[Dysautonomia, particularly POTS, is commonly comorbid with ME/CFS116 and also often has a viral onset117. POTS is associated with G protein-coupled adrenergic receptor and muscarinic acetylcholine receptor autoantibodies, platelet storage pool deficiency, small fibre neuropathy and other neuropathologies118. Both POTS and small fibre neuropathy are commonly found in long COVID111,119, with one study finding POTS in 67% of a cohort with long COVID120.](#)

[Long COVID: major findings, mechanisms and recommendations - PMC \(nih.gov\)](#)

Cognitive Impairment and Rehabilitation

“At baseline, 53% of patients showed an impairment in at least one cognitive domain, primarily executive functions. In addition, 16%, 6%, and 6% of patients showed pure executive, memory, and visual-spatial impairment, respectively.

One quarter of participants showed a multidomain impairment — with 23% involving, among others, the executive domain.

Additionally, 28% of patients presented with psychopathologic disturbances, including depressive symptoms (10%), PTSD features (12%), or both (6%).

Participants performed more poorly in all the investigated cognitive domains, compared to the healthy controls group; and the executive dysfunctions correlated with acute-phase respiratory distress.”

https://www.medscape.com/viewarticle/970309?uac=54216PT&faf=1&sso=true&impID=409134&src=mkm_covid_update_220315_MSCPEDIT#vp_2 Accessed 2/14/2023.

“Rehabilitation clinics are already offering cognitive behavioural therapy (CBT) as an effective treatment for long COVID and post-COVID-19 fatigue syndrome based on the claims that it is effective for myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)-the most common post-infectious syndrome-as no study into the efficacy of CBT for post-COVID-19 fatigue syndrome has been published.” <https://pubmed.ncbi.nlm.nih.gov/33322316/> Accessed 2/14/2023.

Electromyography

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

“The pathophysiology of critical illness myopathy (CIM) and (critical illness polyneuropathy) CIP is complex, multifactorial, and not completely understood. Both conditions are caused by some combination of critical insult to the body with cytokine overproduction leading to microvascular derangement, and metabolic and electrical (channel) alterations ^[13]. Although CIM and CIP can and do occur simultaneously in patients, their mechanisms are distinct and important to differentiate.”

“The exact mechanism of injury in CIP is also unknown. One theory is that systemic inflammation and overproduction of cytokines, nitric oxide, and oxygen radicals causes hypoxic and anaerobic conditions leading to decreased circulation of local axonal survival factors and subsequent Wallerian degeneration”

“Nerve conduction studies and electromyography are also helpful diagnostic tools. CIM nerve conduction studies show reduced amplitude compound motor action potentials with preserved sensory response. Electromyography may show polyphasic motor unit potentials with or without fibrillations. CIP nerve conduction studies will show decreased amplitude (or absence) of sensory nerve action potentials. Electromyography would show axonal loss without demyelinating features”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7380205/> accessed 2/14/2023.

"Our findings suggest that some long COVID patients had damage to their peripheral nerve fibers and that damage to the small-fiber type of nerve cell may be prominent," she said.

“They found that 10 patients — or 59% — had at least one test that confirmed neuropathy. Two patients had rare neuropathies that affected muscle nerves, and 10 were diagnosed with small-fiber neuropathy, which is a cause of chronic pain. Common symptoms included fatigue, weakness, changes in their senses, and pain in their hands and feet.”

“For treatment, 11 patients were given immunotherapies such as corticosteroids or intravenous immunoglobulins, and the five patients who received repeated immunoglobulin G treatments appeared to benefit. Over time, 52% of patients improved, though none had all of their symptoms go away.”

<https://www.medscape.com/viewarticle/969611> accessed 2/14/2023

Nitric Oxide Measurement

“These data suggest the iNO may be beneficial in those patients with more severe hypoxaemia with raised BNP and hs-troponin, likely suggestive of RV strain. It is also likely that these patients have a pulmonary vascular phenotype, increasingly recognised in COVID-19 pneumonia.⁵ This specific phenotypic response to iNO support the interplay between pulmonary vascular blood flow and right heart function in COVID-19 pneumonia, with RV dysfunction increasingly reported, ¹⁴ and associated with radiological signs suggesting pulmonary microthrombosis in severe cases.¹⁵

iNO may be helpful in patients with COVID-19 with refractory hypoxaemia despite standard interventions, especially in those with raised BNP and troponin. BNP and hs-troponin may be useful biomarkers for phenotypic enrichment for future clinical trials of iNO in COVID-19 ARDS.”

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7666572/> accessed 2/14/2023

Neuropsychological Testing

“Coronavirus disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV2). COVID-19 primarily affects the respiratory system. However, in severely ill patients damage is also reported to other organ systems including the heart, the kidneys, the circulatory, and gastrointestinal system. Further, research indicates an impact of the virus on the brain and, thereby, on cognition. Patients experience neurological symptoms, MR imaging implies the presence of brain abnormalities, specifically in severely ill patients and studies on cognition suggest problems with memory, attention, information processing, and executive function. Preliminary clinical data also show that COVID-19 is associated with neurological and neuropsychiatric illness.”

[Neurological and Neuropsychological Sequelae of COVID-19 Infection - Full Text View - ClinicalTrials.gov](#) accessed 2/14/2023

Outpatient Cardiac Rehabilitation Programs

“Recent scientific literature has investigated the cardiovascular implications of COVID-19. The mechanisms of cardiovascular damage seem to involve the protein angiotensin-converting enzyme 2 (ACE2), to which severe acute respiratory syndrome (SARS) coronavirus-2 (CoV-2) binds to penetrate cells and other mechanisms, most of which are still under study. Cardiovascular sequelae of COVID-19 include heart failure, cardiomyopathy, acute coronary syndrome, arrhythmias, and venous thromboembolism. This article aims to collect scientific evidence by exploiting PubMed, Scopus, and Pedro databases to highlight the cardiovascular complications of COVID-19 and to define the physiotherapy treatment recommended for these patients. Exercise training (ET), an important part of cardiac rehabilitation, is a powerful tool in physiotherapy, capable of inducing significant changes in the cardiovascular system and functional in the recovery of endothelial dysfunction and for the containment of thromboembolic complications. In conclusion, due to the wide variety of possible exercise programs that can be obtained by combining intensity, duration, and speed in various ways, and by adjusting the program based on continuous patient monitoring, exercise training is well suited to the treatment of post-COVID patients with an impaired cardiovascular system of various degrees.”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8004041/> accessed 2/14/2023

Physical Medicine Services

“Physical Therapy for COVID-19 Patients in Recovery Period (Discharge, Home Isolation, Suspected): Prolonged hospital admission or isolation greatly reduced the amount of exercise in this stage, resulting in muscle weakness, low exercise endurance, weakness, or fatigue. Long periods of absence from social and family activities can also make patients feel isolated. Prolonged isolation may also lead to negative psychological effects (depression, anxiety) and

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

including PTSD⁸. The purpose of PT of discharged patients was to enable patients to return to society, restore their organic functions and prevent psychological disorders. PT at home mainly uses remote guidance, psychological support, social education, and other means to let patients understand the importance of PT, through brochures or videos to make patients understand respiratory rehabilitation, adopt a healthy lifestyle, and to promote their return to the family and society.”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7443542/> accessed 2/14/2023.

Pulmonary Rehabilitation Programs

“The respiratory system is the front-line of the SARS-CoV-2 infection [9, 10]. The virus can injure the lungs in 3 ways: acute respiratory distress syndrome (ARDS) with diffuse alveolar damage (DAD), diffuse thrombotic alveolar microvascular occlusion, and inflammatory mediator-associated airway inflammation [9, 10]. The results of these combined actions include impaired alveolar oxygenation, hypoxemia, and acidosis. In the absence of effective treatment, the consequences of this poor oxygenation are either death of the patient from respiratory failure, or the sequelae of permanent lung injury if the patient recovers [9–11].”

“After subtracting the number of deaths, a conservative calculation indicates that one-third of the survivors who have been infected with SARS-CoV-2 will develop significant pulmonary fibrosis, and the number who may develop chronic sequelae of pulmonary fibrosis will reach an estimated 10 230 628 [22]. In addition, the COVID-19 pandemic has not ended, and the number of people infected with SARS-CoV-2 increases daily. If this pandemic continues, the number of survivors with chronic lung fibrosis after SARS-CoV-1 infection will increase further.”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7643287/> accessed 2/14/2023.

Smell Therapy

The loss of taste or smell was identified as [a Covid symptom](#) very early in the pandemic. There is growing evidence that a substantial number of people go on to develop long-term distortions to their senses.

AbScent, a UK-based support group for people with taste and smell disorders had 1500 members prior to the pandemic. It now has 76,000 worldwide.

Scientists at the Karolinska Institute in Sweden published a study that found nearly half of the infected people it studied in the first wave had experienced distorted smell, a condition known as parosmia. A third were less able to detect smells, according to the pre-print, which has not yet been peer reviewed.

The Office for National Statistics estimates that more than 500,000 people in the UK have been suffering Covid symptoms for more than a year.

<https://www.theguardian.com/society/2022/jan/30/like-sewage-and-rotting-flesh-covids-lasting-impact-on-taste-and-smell> accessed 2/14/2023

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

“The precise cause of sensory loss related to Covid is not known, but scientists do think it stems from damage to infected cells in a part of the nose called the olfactory epithelium. These cells protect olfactory neurons, which help humans smell.”

“This genetic risk factor increases the likelihood a person infected with SARS-CoV-2 will experience a loss of smell or taste by 11 percent. While some estimates suggest 4 out of 5 Covid patients regain these senses, research suggests the persistent inability or reduced ability to smell and taste impacts relationships, physical health, and psychological well-being.”

<https://www.nbcnews.com/science/science-news/genetic-risk-factor-found-covid-19-smell-taste-loss-researchers-say-rcna11996> accessed 2/14/2023

Sleep Disturbances and Obstructive Sleep Apnea

"The overlapping health issues linked to both COVID and sleep apnea have led many researchers to try to understand the relationship between these conditions.

Sleep apnea and COVID can impact many of the same systems of the body. Sleep apnea involves repeated reductions in breathing, and COVID-19 also frequently hinders breathing through its effects on the lungs and respiratory tract. As a result, both sleep apnea and COVID can cause there to be too little oxygen in the blood, which is called hypoxemia.

OSA and COVID-19 are both conditions that frequently affect sleep quality. OSA interferes with sleep by causing frequent awakenings at night as a person wakes up to reestablish a normal breathing pattern. Studies have found that people with COVID also have poor sleep quality, which may be a result of the wide range of symptoms caused by the disease.

While the relationship between COVID and sleep apnea is still not fully understood, studies to date can help answer key questions about the relationship between OSA and COVID-19. "

[Sleep Apnea and COVID | Sleep Foundation](#)

IV. RATIONALE

[TOP](#)

PROFESSIONAL SOCIETIES

The National Institute for Health and Care Excellence (NICE) recommends providing “integrated, multidisciplinary rehabilitation services, based on local need and resources. Healthcare professionals should have a range of specialist skills, with expertise in treating fatigue and respiratory symptoms (including breathlessness). Additional expertise may be needed depending on the age and symptoms of the person. The core team could include, but not be limited to, the following specialist areas:

- Occupational therapy
- Physiotherapy
- Clinical psychology and psychiatry
- Rehabilitation medicine”

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

[Overview | COVID-19 rapid guideline: managing the long-term effects of COVID-19 | Guidance | NICE](#) accessed 2/14/2023

[Guideline COVID-19 rapid guideline: managing the long-term effects of COVID-19 \(nice.org.uk\)](#)

V. DEFINITIONS

[TOP](#)

Acute COVID-19 – Symptoms of COVID-19, up to four weeks following the onset of illness.

Post-COVID conditions – Broad range of symptoms (physical and mental) that develop during or after COVID-19, continue for ≥2 months (i.e., three months from the onset), and are not explained by an alternative diagnosis-

[COVID-19: Evaluation and management of adults following acute viral illness - UpToDate](#)

Accessed 2/14/2023

Pulmonary rehabilitation (PR) is a structured exercise program designed for people living with chronic lung diseases like pulmonary fibrosis (PF). Pulmonary rehabilitation includes exercise training; breathing exercises; anxiety, stress, and depression management; nutritional counseling; education; and more.

[Pulmonary Rehabilitation | Pulmonary Fibrosis Foundation | Pulmonary Fibrosis Foundation](#) accessed 2/14/2023

Rehabilitation: a set of interventions designed to optimise functioning, health, and wellbeing, and reduce disability in people with health conditions in interaction with their environment. In the context of ongoing COVID-19 symptoms, this may include providing information, education, supported self-management, peer support, symptom management strategies, and physical rehabilitation. (Informed by the [World Health Organization's fact sheet on rehabilitation.](#))

VI. BENEFIT VARIATIONS

[TOP](#)

The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member's health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits and which require preauthorization. There are different benefit plan designs in each product administered by Capital Blue Cross. Members and providers should consult the member's health benefit plan for information or contact Capital Blue Cross for benefit information.

VII. DISCLAIMER

[TOP](#)

This is a new treatment. This policy may be subject to change due to additional data, information and feedback received. Please check for updates.

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

Capital Blue Cross’s medical policies are developed to assist in administering a member’s benefits, do not constitute medical advice, and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member’s benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member’s plan of benefits, please contact Capital Blue Cross’ Provider Services or Member Services. Capital Blue Cross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.

VIII. CODING INFORMATION

[TOP](#)

Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Covered when medically necessary:

Procedure Codes®							
93015	93016	93017	93018	93797	93798	92265	95860
95861	95863	95864	95865	95866	95867	95868	95869
95870	95872	95874	95885	95886	95887	95907	95908
95909	95910	95911	95912	95913	95937	95012	95992
97010	97012	97016	97018	97022	97024	97028	97034
97035	97036	97039	97110	97112	97113	97116	97124
97139	97140	97150	97161	97162	97163	97164	97530
97161	97162	97163	97164	97530	97542	97750	97755
97760	97761	97763	97799	95921	95922	95923	95924
94625	94626	G0422	G0423	S0340	S0341	S9472	G0237
G0238	G0239	S9473	G0151	G0159	S8950	S9131	S9476

Current Procedural Terminology (CPT) copyrighted by American Medical Association. All Rights Reserved.

ICD-10-CM Diagnosis Code						
B94.8	B94.9	G93.31	G93.39	Z86.16	U09.9	

IX. REFERENCES

[TOP](#)

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

1. Wang F, Kream RM, Stefano GB. Long-Term Respiratory and Neurological Sequelae of COVID-19. *Med Sci Monit.* 2020; 26:e928996. Published 2020 Nov 1. doi:10.12659/MSM.928996
2. COVID-19 rapid guideline: managing the long-term effects of COVID-19. NICE guideline [NG188]. Published 12/18/2020
3. McClafferty B, Umer I, Fye G, et al. Approach to critical illness myopathy and polyneuropathy in the older SARS-CoV-2 patients. *J Clin Neurosci.* 2020; 79:241-245. doi:10.1016/j.jocn.2020.07.058
4. Lee KM, Ko HJ, Lee GH, Kim AS, Lee DW. A Well-Structured Follow-Up Program is Required after Recovery from Coronavirus Disease 2019 (COVID-19); Release from Quarantine is Not the End of Treatment. *J Clin Med.* 2021; 10(11):2329. Published 2021 May 26. doi:10.3390/jcm10112329
5. Bowles KH, McDonald M, Barrón Y, Kennedy E, O'Connor M, Mikkelsen M. Surviving COVID-19 After Hospital Discharge: Symptom, Functional, and Adverse Outcomes of Home Health Recipients. *Ann Intern Med.* 2021; 174(3):316-325. doi:10.7326/M20-5206
6. Lam MH, Wing Y, Yu MW, et al. Mental Morbidities and Chronic Fatigue in Severe Acute Respiratory Syndrome Survivors: Long-term Follow-up. *Arch Intern Med.* 2009; 169(22):2142–2147. doi:10.1001/archinternmed.2009.384
7. National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Disease. Using Antibody Tests for Covid-19. Last Updated February 24, 2022. Accessed 2/14/2023
8. Dani M, Dirksen A, Taraborrelli P, et al. Autonomic dysfunction in 'long COVID': rationale, physiology, and management strategies. *Clin Med (Lond).* 2021; 21(1):e63-e67. doi:10.7861/clinmed.2020-0896
9. Felicia Ceban, Susan Ling, Leanna M.W. Lui, Yena Lee, Hartej Gill, Kayla M. Teopiz, Nelson B. Rodrigues, Mehala Subramaniapillai, Joshua D. Di Vincenzo, Bing Cao, Kangguang Lin, Rodrigo B. Mansur, Roger C. Ho, Joshua D. Rosenblat, Kamilla W. Miskowiak, Maj Vinberg, Vladimir Maletic, Roger S. McIntyre. Fatigue and cognitive impairment in Post-COVID-19 Syndrome: A systematic review and meta-analysis, *Brain, Behavior, and Immunity.* Volume 101. 2022. Accessed 2/14/2023
10. Vink M, Vink-Niese A. Could Cognitive Behavioural Therapy Be an Effective Treatment for Long COVID and Post COVID-19 Fatigue Syndrome? Lessons from the Qure Study for Q-Fever Fatigue Syndrome. *Healthcare (Basel).* 2020; 8(4):552. Published 2020 Dec 11. doi:10.3390/healthcare8040552
11. Yasgur, Batya Swift, MA, LSW. Post-COVID Cognitive, EEG Changes Persist Up to 10 Months. March 15, 2022. Accessed 2/14/2023
12. Abenza-Abildúa MJ, Ramírez-Prieto MT, Moreno-Zabaleta R, et al. Neurological complications in critical patients with COVID-19. *Complicaciones neurológicas en pacientes críticos por SARS-CoV-2. Neurologia (Engl Ed).* 2020; 35(9):621-627. doi:10.1016/j.nrl.2020.07.014
13. McClafferty B, Umer I, Fye G, et al. Approach to critical illness myopathy and polyneuropathy in the older SARS-CoV-2 patients. *J Clin Neurosci.* 2020; 79:241-245. doi:10.1016/j.jocn.2020.07.058
14. Nasal and Pulmonary Nitric Oxide Output in COVID-19 Infection. *ClinicalTrials.gov Identifier NCT04728919.* Accessed 2/14/2023

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

15. Neurological and Neuropsychological Sequelae of COVID-19 Infection (NeNeSCo). ClinicalTrials.gov Identifier: NCT0474561. Accessed 2/14/2023
16. Rabinovitz B, Jaywant A, Fridman CB. Neuropsychological functioning in severe acute respiratory disorders caused by the coronavirus: Implications for the current COVID-19 pandemic. *Clin Neuropsychol.* 2020; 34(7-8):1453-1479. doi:10.1080/13854046.2020.1803408
17. Vanderlind WM, Rabinovitz BB, Miao IY, et al. A systematic review of neuropsychological and psychiatric sequelae of COVID-19: implications for treatment. *Curr Opin Psychiatry.* 2021; 34(4):420-433. doi:10.1097/YCO.0000000000000713
18. Calabrese M, Garofano M, Palumbo R, et al. Exercise Training and Cardiac Rehabilitation in COVID-19 Patients with Cardiovascular Complications: State of Art. *Life (Basel).* 2021; 11(3):259. Published 2021 Mar 21. doi:10.3390/life11030259
19. Denny, Morgan. COVID and the Outpatient Physical Therapist: What We Need to Know. Published online 2021, January
20. Dunn, Shannon. Call for National Plan to Address PASC. Published 2021, March 31. Accessed 2/14/2023
21. World Physiotherapy briefing paper focuses on safe rehabilitation for people living with Long COVID. Published 2021, June 16. Accessed 2/14/2023
22. Picchi G, Mari A, Ricciardi A, et al. Three Cases of COVID-19 Pneumonia in Female Patients in Italy Who Had Pulmonary Fibrosis on Follow-Up Lung Computed Tomography Imaging. *Am J Case Rep.* 2020; 21:e926921. Published 2020 Nov 21. doi:10.12659/AJCR.926921
23. Alexander, Walter. Air Trapping: Common in Patients With Long Covid. March 15, 2022. Accessed 2/14/2023
24. Khani E, Khiali S, Beheshtirouy S, Entezari-Maleki T. Potential pharmacologic treatments for COVID-19 smell and taste loss: A comprehensive review. *Eur J Pharmacol.* 2021; 912:174582. doi:10.1016/j.ejphar.2021.174582
25. Post Covid Conditions. Centers for Disease Control and Prevention. Updated September 16, 2021. Accessed 2/14/2023
26. Dani, Melanie, Dirksen, Andreas, Taraborrelli, Patricia, Torocastro, Miriam, Panagopoulos, Dimitrios, Sutton, Richard, Boon Lim, Phang. Autonomic dysfunction in 'long COVID': rationale, physiology, and management strategies. *Clinical Medicine Jan* 2021, 21 (1) e63-e67; DOI: 10.7861/clinmed.2020-0896
27. Frellick, Mark. Tachycardia Syndrome May Be a Distinct Marker for Long Covid. August 13, 2021. Accessed 2/14/2023
28. Vink M, Vink-Niese A. Could Cognitive Behavioural Therapy Be an Effective Treatment for Long COVID and Post COVID-19 Fatigue Syndrome? Lessons from the Qure Study for Q-Fever Fatigue Syndrome. *Healthcare (Basel).* 2020; 8(4):552. Published 2020 Dec 11. doi:10.3390/healthcare8040552
29. McClafferty, Brendan, et al. "Approach to critical illness myopathy and polyneuropathy in the older SARS-CoV-2 patients." *Journal of clinical neuroscience: official journal of the Neurosurgical Society of Australasia* vol. 79 (2020): 241-245. doi:10.1016/j.jocn.2020.07.058
30. Crist, Carolyn. Long COVID Patients May Develop Nerve Damage: Study. March 3, 2021. Accessed 2/14/2023
31. Zhu Y, Wang Z, Zhou Y, et al. Summary of respiratory rehabilitation and physical therapy guidelines for patients with COVID-19 based on recommendations of World Confederation for

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

- Physical Therapy and National Association of Physical Therapy. J Phys Ther Sci. 2020; 32(8):545-549. doi:10.1589/jpts.32.545
32. Trapper, James. 'Like Sewage and rotting flesh': Covid's lasting impact on taste and smell. January 30, 2022. Accessed 2/14/2023
 33. Sloat, Sarah. Genetic Risk Factor Found on Covid-19 Smell and Taste Loss, researchers say. January 17, 2022. Accessed 2/14/2023
 34. Mikkelsen, Mark, Abramoff, Benjamin. Covid-19: Evaluation and Management of Adults Following Acute Viral Illness. Literature review current through: Jun 2021. | This topic last updated: March 31, 2022
 35. Garfield B, McFadyen C, Briar C, et al. Potential for personalised application of inhaled nitric oxide in COVID-19 pneumonia. Br J Anaesth. 2021; 126(2):e72-e75. doi:10.1016/j.bja.2020.11.006
 36. Melanie Dani, Andreas Dirksen, Patricia Taraborrelli, Miriam Torocastro, Dimitrios Panagopoulos, Richard Sutton, Phang Boon Lim. Autonomic dysfunction in 'long COVID': rationale, physiology and management strategies. Clinical Medicine Jan 2021, 21 (1) e63-e67; DOI: 10.7861/clinmed.2020-0896.
 37. Davis HE, McCorkell L, Vogel JM, Topol EJ. Long COVID: major findings, mechanisms and recommendations. Nat Rev Microbiol. 2023;21(3):133-146. doi:10.1038/s41579-022-00846-2
 38. Mathern R, Senthil P, Vu N, Thiyagarajan T. Neurocognitive Rehabilitation in COVID-19 Patients: A Clinical Review. South Med J. 2022;115(3):227-231. doi:10.14423/SMJ.0000000000001371
 39. Scarpelli S, De Santis A, Alfonsi V, et al. The role of sleep and dreams in long-COVID [published online ahead of print, 2022 Nov 18]. J Sleep Res. 2022;e13789. doi:10.1111/jsr.13789
 40. Merikanto I, Dauvilliers Y, Chung F, et al. Sleep symptoms are essential features of long-COVID - Comparing healthy controls with COVID-19 cases of different severity in the international COVID sleep study (ICOSS-II). J Sleep Res. 2023;32(1):e13754. doi:10.1111/jsr.13754
 41. Suni, Eric. Sleep Apnea and Covid. Sleep Foundation. 2023 January 11.

X. POLICY HISTORY

[TOP](#)

MP 2.380	8/11/2021 New policy created
	4/4/2022 Major Review. Cognitive Rehabilitation statement added. Updated description, background, and definitions. Reviewed and updated references.
	8/4/2022 Administrative Review. Added ICD-10 codes G93.31 and G93.39. Removed G93.9. Effective 10/1/2022.
	3/6/2023 Minor Review. Removed statement for antibody testing. Added statement for sleep studies. Updated background, definitions, references and coding.

MEDICAL POLICY

POLICY TITLE	DIAGNOSIS AND TREATMENT OF POST-ACUTE SEQUELAE COVID (PASC)
POLICY NUMBER	MP 2.380

[Top](#)

Health care benefit programs issued or administered by Capital Blue Cross and/or its subsidiaries, Capital Advantage Insurance Company[®], Capital Advantage Assurance Company[®], and Keystone Health Plan[®] Central. Independent licensees of the Blue Cross BlueShield Association. Communications issued by Capital Blue Cross in its capacity as administrator of programs and provider relations for all companies.