COVID-19: updates on follow-up & long-term effects

24th November 2020

**guidance & national develoments**

**Title:** **NATIONAL GUIDANCE FOR POST-COVID SYNDROME ASSESSMENT CLINICS**

**Source**: NHS England, 6th November 2020

Commissioning guidance to assist local healthcare systems to establish post-COVID assessment clinics for patients experiencing long-term health effects following COVID-19 infection.

The purpose of this document is to provide commissioning guidance on the development of a specification to assist local healthcare systems to establish post-COVID assessment clinics for patients experiencing long-term health effects following COVID-19 infection. Clinics will offer physical, cognitive and psychological assessments with the aim of providing consistent post-COVID syndrome services for all who need them, whether they were hospitalised or not and regardless of whether clinically diagnosed or by a SARS-CoV2 test.

This document will be revised further to the release of NICE/SIGN/RCGP guidance for post-COVID syndrome (also known as ‘Long COVID’) in December 2020. Local clinics, referral pathways and protocols will need to be reviewed and potentially updated to reflect the guidance published.

 <https://www.england.nhs.uk/coronavirus/publication/national-guidance-for-post-covid-syndrome-assessment-clinics/>

**TITLE:** **NHS ENGLAND TO LAUNCH 40 GP-STAFFED ‘LONG COVID’ CLINICS ‘WITHIN WEEKS’**

**Source:** Pulse, 16th November 2020

‘NHS England has announced that more than 40 ‘long Covid’ clinics are to open across the country ‘within weeks’.

GPs and other specialists will staff the clinics set up to diagnose and treat patients suffering from the long-term effects of Covid, [backed by £10m of local funding](https://www.pulsetoday.co.uk/news/coronavirus/gps-to-staff-long-covid-specialist-clinics-backed-by-10m/), NHS England previously announced.

It comes as NICE last month published its [definition of ‘long Covid’](https://www.pulsetoday.co.uk/uncategorised/long-covid-can-affect-any-system-in-the-body-for-over-12-weeks-says-nice/), saying that patients with long-term effects of Covid-19 are those with symptoms for more than 12 weeks that ‘can affect any system in the body’.

The network of more than 40 specialist clinics is due to start opening for referrals from GPs and other healthcare professionals at the end of November, NHS England said.  Patients who have been hospitalised, officially diagnosed with a test or ‘reasonably believe they had Covid-19’ will be eligible for referral, it added. Ten clinic sites have been earmarked for the Midlands, seven in the North East, six in the East of England, South West and South East respectively, five in London and three in the North West.

NHS England [guidance](https://www.england.nhs.uk/coronavirus/publication/national-guidance-for-post-covid-syndrome-assessment-clinics/) published earlier this month said that it was up to local commissioners to decide whether clinics will be GP-led and based in practices.

It said: ‘Clinics may be led by secondary, primary or community care clinicians, including integrated care or advanced clinical practitioners, and from a range of specialties, with referral to other specialist teams as needed.

‘Clinic setting is for local determination and may be based in primary, secondary or community services, if there is prompt access to the appropriate diagnostics.’ It added that the clinics could be located either on a single site or delivered across multiple sites or virtually ‘where appropriate’.

<https://www.pulsetoday.co.uk/news/coronavirus/nhs-england-to-launch-40-gp-staffed-long-covid-clinics-within-weeks/?utm_source=pulse%20breaking&utm_medium=newsletter>

**TITLE:** **EXCLUSIVE: MAJOR DELAYS FOR NEW NHS ENGLAND COVID SERVICE**

**Source:** Health Service Journal, 16th November 2020

* Crucial second phase for covid recovery service was due to launch in late summer
* But memo sent to professional bodies suggests the full services will not be available until January 2021 at the earliest
* Comes amid mounting concern over growing rehab waiting lists

**A key expansion of services for patients recovering from coronavirus has been delayed by several months, HSJ has learned.**

In July, NHS England hailed a “ground breaking” new service with the launch of a [website](http://yourcovidrecovery.nhs.uk/) with information for patients on how to recover from covid following hospital discharge. It promised a second phase of the service would allow patients to be connected with health professionals for more tailored support, to be launched [“later this summer”](https://www.england.nhs.uk/2020/07/nhs-to-launch-ground-breaking-online-covid-19-rehab-service/). But in a memo sent to professional bodies on 30 October, NHSE said the national roll-out was delayed until at least January 2021, with no date confirmed for the launch beyond that.

Documents on the website itself said a “first cohort of patients from Leicester will begin to work through the programme” in November, with a further rollout scheduled for early December, followed by a “refresh” in January 2021 and a “full national rollout accessible across the country” at an unspecified date beyond that.

The second phase is seen as vital for ensuring that people with covid receive personalised support to help them recover from its debilitating effects, especially as a separate face-to-face rehabilitation programme was scrapped due to costs. A spokesman for NHS England said: “The Your Covid Recovery online rehabilitation platform was successfully launched at the end of last month, and the first set of patients are already benefiting from the rehab programme, with full national coverage by early December.” He did not explain the discrepancy with the memo.

Ruth Ten Hove, an assistant director at the Chartered Society of Physiotherapy, said: “The implementation of [the platform] is not a really easy thing to do, it’s going to require services to engage with it and really understand how they integrate it into their current service offer. “It’s a different way of working that might bring benefits. It needs resource in order for it to be properly integrated for services.” She also said that while it is the “right approach” to pilot the new service first “the population of people needing rehab continues to rise”. Gail Allsopp, lead for clinical policy at the Royal College of GPs, said: “Online resources are of course important, but only one part of the treatment pathway. Investment is also urgently needed for community-based rehabilitation services.” Sally Singh, head of pulmonary and cardiac rehabilitation at University Hospitals of Leicester Trust and a leader of the site’s development, said the site refresh will “make it more welcoming for people who have had a community infection”. She added the interactive element would take the form of an eight to 12 week programme guided by a health professional who first would be given a two hour training programme on how to use the site.

* On Sunday NHS England announced that more than 40 “long covid” specialist clinics were due to open, starting in late November, which it is funding with £10m. HSJ has previously announced that, contrary to an announcement in the summer by the health secretary, there was only one clinical for “long covid” operating.

**research papers**

**Title: COVID-19 recovery: potential treatments for post-intensive care syndrome**

Source: The Lancet Respiratory Health | 12th October 2020

The long-term effects of surviving COVID-19 have become a new focus of attention for clinicians and researchers. This focus has been driven partly by concerns about late ill-effects of a previously unknown virus, but recognised generic patterns of chronic disease after critical illness also exist.

These patterns are termed PICS, an acronym both for post-intensive care syndrome and for persistent inflammation, immunosuppression, and catabolism syndrome. This comment piece recommends unifying post-COVID-19 research aims with those of PICS research and propose a novel approach to its management by repurposing drugs that are approved, inexpensive, and safe.

[https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30457-4/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600%2820%2930457-4/fulltext)

**title: A Proposed Framework and Timeline of the Spectrum of Disease Due to SARS-CoV-2 Infection. Illness Beyond Acute Infection and Public Health Implications**

Source: JAMA, 18th November 20202

Although much of the response to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has focused on acute coronavirus disease 2019 (COVID-19) illness, accumulating evidence demonstrates morbidity beyond acute SARS-CoV-2 infection.1-4 At least 2 other periods of illness appear to be temporally associated with SARS-CoV-2 infection: a rare postacute hyperinflammatory illness and late inflammatory and virological sequelae. These 3 illness periods not only define the temporal course of SARS-CoV-2 infection at the population level but also capture distinct phases of host-viral interaction.

A theoretical framework describing illness periods of SARS-CoV-2 infection (including clinical presentations and timing of onset), their pathophysiological underpinnings, and associated key laboratory findings may contribute to a more inclusive and ordered understanding of the natural history of SARS-CoV-2 infection and enhance research efforts. Within the proposed framework, a patient may experience any combination of these illnesses or may have asymptomatic infection without illness…

<https://jamanetwork.com/journals/jama/fullarticle/2773338?utm_source=silverchair&utm_campaign=jama_network&utm_content=covid_weekly_highlights&utm_medium=email>

**Title: ‘Long-COVID’: a cross-sectional study of persisting symptoms, biomarker and imaging abnormalities following hospitalisation for COVID-19**

Source: Thorax; 10th November 2020

Abstract:
Large numbers of people are being discharged from hospital following COVID-19 without assessment of recovery. In 384 patients (mean age 59.9 years; 62% male) followed a median 54 days post discharge, 53% reported persistent breathlessness, 34% cough and 69% fatigue. 14.6% had depression. In those discharged with elevated biomarkers, 30.1% and 9.5% had persistently elevated d-dimer and C reactive protein, respectively. 38% of chest radiographs remained abnormal with 9% deteriorating. Systematic follow-up after hospitalisation with COVID-19 identifies the trajectory of physical and psychological symptom burden, recovery of blood biomarkers and imaging which could be used to inform the need for rehabilitation and/or further investigation.

<https://thorax.bmj.com/content/early/2020/11/09/thoraxjnl-2020-215818?utm_source=alert&utm_medium=email&utm_campaign=thorax&utm_content=latest&utm_term=13112020>

**Title: Long term outcomes of critically ill COVID-19 pneumonia patients: early learning (LETTER)**

Source: Intensive Care Medicine; 9th Nov 2020

Author(s): McCue, Claire; Cowan, Richard; Quasim, Tara; Puxty, Kathryn; McPeake, Joanne, Intensive Care Unit, Glasgow Royal Infirmary, Glasgow, UK

‘Patients treated for coronavirus disease 2019 (COVID-19) pneumonia in the intensive care unit (ICU) often experience long periods of ventilation, neuromuscular blockade and sedation [[1](https://link.springer.com/article/10.1007/s00134-020-06313-x#ref-CR1)]. Previous research has demonstrated that patients with similar clinical journeys often have poor long-term health related quality of life (HRQoL) [[2](https://link.springer.com/article/10.1007/s00134-020-06313-x#ref-CR2)]. At present there are limited data describing the long-term outcomes of critically ill COVID-19 survivors. To address this, we report on early data obtained at our ICU follow-up programme in a single centre.

Patients are routinely invited to our multi-disciplinary ICU follow-up clinic between 12–16 weeks post discharge [[3](https://link.springer.com/article/10.1007/s00134-020-06313-x#ref-CR3)]. Information on the format of the clinic is available in S1. Data were collected following attendance at a virtual clinic. HRQoL was measured using the EQ-5D-5L. This tool comprises two sections: a five-question descriptive component which explores health domains and a visual analogue scale about HRQoL. Each question has five possible answers. These answers produce a five-digit sequence which is used to determine a health utility score (HUS). A HUS of 1 equates to the best health state possible, 0 with death and a negative HUS equates to a state worse than death [[4](https://link.springer.com/article/10.1007/s00134-020-06313-x#ref-CR4)]. We also examined return to employment…’

<https://link.springer.com/article/10.1007/s00134-020-06313-x>

**TITLE:** **THERAPY FOR EARLY COVID-19. A CRITICAL NEED**

Source: JAMA; 11th November 2020

Recent attention has been focused on the potential of early treatment for individuals with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection at high risk for serious outcomes. Yet, there is a noteworthy absence of treatments proven to be efficacious for patients with early or mild infection.

Immediate benefits of such treatments include improvement of patient outcomes and prevention of hospitalizations. Longer-term benefits may include prevention of the chronic sequelae of infection as well as prevention of transmission by shortening the period of infectiousness. This article states that interventions that can be administered early during the course of infection to prevent disease progression and longer-term complications are urgently needed, and claims outpatient treatments for COVID-19, coupled with an effective vaccine, would have significant implications for the ability to end this pandemic.

[https://jamanetwork.com/journals/jama/fullarticle/2773058?utm\_source=silverchair&utm\_campaign=jama\_network&utm\_content=covid\_weekly\_highlights&utm\_medium=email#](https://jamanetwork.com/journals/jama/fullarticle/2773058?utm_source=silverchair&utm_campaign=jama_network&utm_content=covid_weekly_highlights&utm_medium=email)

**TITLE: Severe organising pneumonia following COVID-19**

Source: Thorax; 11th November 2020

Various forms of diffuse parenchymal lung disease have been proposed as potential consequences of severe COVID‑19. We describe the clinical, radiological and histological findings of patients with COVID‑19-associated acute respiratory distress syndrome who later developed severe organising pneumonia including longitudinal follow-up. Our findings may have important implications for the therapeutic modalities in the late-phase of severe COVID‑19 and might partially explain why a subgroup of COVID‑19 patients benefits from systemic corticosteroids.

<https://thorax.bmj.com/content/early/2020/11/10/thoraxjnl-2020-216088?utm_source=alert&utm_medium=email&utm_campaign=thorax&utm_content=latest&utm_term=13112020>

**TITLE: Chest CT in COVID-19 pneumonia: what are the findings in mid-term follow-up?**

Source: Emergency Radiology; Nov 2020

Abstract:
PURPOSE The purposes of this study are to investigate mid-term chest computed tomography (CT) findings of coronavirus disease 2019 (COVID-19) pneumonia, assess the rate of complete resolution, and determine the individuals at risk for residual abnormalities. METHODS Fifty-two cases of COVID-19 pneumonia with at least two chest CTs and mean 3-month interval between the initial and follow-up CT were enrolled in this retrospective study. Patients were categorized into two groups: complete resolution and residual disease on follow-up CT. Demographic, clinical, laboratory, and therapeutic data as well as initial and follow-up chest CT scans were compared and analyzed. RESULTS Thirty patients (57.7%) demonstrate complete resolution of pulmonary findings, and 22 patients (42.3%) had residual disease on follow-up CT. The mean time interval between initial and follow-up CT was 91.3 ± 17.2 and 90.6 ± 14.3 days in the complete resolution and residual groups, respectively. The most common radiologic pattern in residual disease was ground-glass opacities (54.5%), followed by mixed ground-glass and subpleural parenchymal bands (31.8%), and pure parenchymal bands (13.7%). Compared to complete resolution group, patients with residual disease had higher CT severity score on initial exam (10.3 ± 5.4 vs. 7.3 ± 4.6, P value = 0.036), longer duration of hospitalization, higher rate of intensive care unit (ICU) admission, more underlying medical conditions, higher initial WBC count, and higher occurrence rate of leukocytosis in the hospitalization time period (all P values < 0.05). CONCLUSION Extensive lung involvement on initial CT, ICU admission, long duration of hospitalization, presence of underlying medical conditions, high initial WBC count, and development of leukocytosis during the course of disease are associated with more prevalence of chronic lung sequela of COVID-19.

<https://link.springer.com/article/10.1007/s10140-020-01869-z#:~:text=Main%20points,month%20follow%2Dup%2C%20respectively>

**TITLE: Long covid: Damage to multiple organs presents in young, low risk patients**

Source: BMJ; 17th Nov 2020

Young, low risk patients with ongoing symptoms of covid-19 had signs of damage to multiple organs four months after initially being infected, a preprint study has suggested. Initial data from 201 patients suggest that almost 70% had impairments in one or more organs four months after their initial symptoms of SARS-CoV-2 infection. The results emerged as the NHS announced plans to establish a network of more than 40 long covid specialist clinics across England this month to help patients with long term symptoms of infection.

The prospective Coverscan study examined the impact of long covid (persistent symptoms three months post infection) across multiple organs in low risk people who are relatively young and had no major underlying health problems. Assessment was done using results from magnetic resonance image scans, blood tests, and online questionnaires. The research has not yet been peer reviewed and could not establish a causal link between organ impairment and infection. But the authors said the results had “implications not only for [the] burden of long covid but also public health approaches which have assumed low risk in young people with no comorbidities.”

<https://www.bmj.com/content/371/bmj.m4470>

**TITLE: Covid-19: Nearly 20% of patients receive psychiatric diagnosis within three months of covid, study finds**

Source: BMJ; 11th Nov 2020

Almost one in five people in the US with covid-19 received a psychiatric diagnosis in the three months afterwards, a study has shown. The rate of diagnosis was significantly higher than that seen after other health events such as other respiratory tract infections, researchers found. For the study published in the Lancet Psychiatry,1 researchers from the University of Oxford, UK, and the health research network TriNetX examined the anonymised patient records of just over 62 000 people with covid-19 diagnosed from 20 January to 1 August 2020. Overall, 18.1% of patients received a psychiatric diagnosis in the 14 to 90 days after covid-19 was confirmed—a quarter of which were the first time a mental health condition had been observed.

The study reported that, in patients with no pre-existing psychiatric conditions, having covid-19 diagnosed was associated with an increased incidence of psychiatric diagnosis in the following 14 to 90 days, when compared with six other health events (hazard ratio 2.1 (95% confidence interval 1.8 to 2.5) v influenza; 1.7 (1.5 to 1.9) v other respiratory tract infections; 1.6 (1.4 to 1.9) v skin infection; 1.6 (1.3 to 1.9) v cholelithiasis; 2.2 (1.9 to 2.6) v urolithiasis; and 2.1 (1.9 to 2.5) v fracture of a large bone; all P<0.001).

<https://www.bmj.com/content/371/bmj.m4386?utm_source=etoc&utm_medium=email&utm_campaign=tbmj&utm_content=weekly&utm_term=20201120>

**title:** **Rehabilitation of a Post–Intensive Care Unit Patient After Severe COVID-19 Pneumonia**

Source: American Journal of Physical Medicine & Rehabilitation; December 2020

The recent novel severe acute respiratory syndrome coronavirus 2 infection resulted in a coronavirus disease 2019 pandemic that significantly strained healthcare systems globally. The early wave of patients in Singapore with severe pneumonia requiring intensive care units are gradually being referred for post–critical illness management with our inpatient medical rehabilitation unit. There is growing information regarding the actual rehabilitation process for patients severely affected by coronavirus disease 2019. This case report shares experiences and challenges faced during rehabilitation of severe coronavirus disease 2019 pneumonia and post–intensive care syndrome. It also describes the post–discharge rehabilitation program in a setting of strict nationwide safe distancing and stay-home policies.

<https://journals.lww.com/ajpmr/Fulltext/2020/12000/Rehabilitation_of_a_Post_Intensive_Care_Unit.3.aspx>

**TITLE: CENTRAL AND PERIPHERAL NERVOUS SYSTEM COMPLICATIONS OF COVID-19: A PROSPECTIVE TERTIARY CENTER COHORT WITH 3-MONTH FOLLOW-UP**

Source: Non peer-reviewed preprint from the medRxiv server | Published online 17th November 2020

[*This article is a preprint and has not been peer-reviewed. It reports new medical research that has yet to be evaluated and so should*not*be used to guide clinical practice.*](https://www.medrxiv.org/content/what-unrefereed-preprint)

Abstract
Objective To systematically describe CNS and PNS complications in hospitalized COVID-19 patients. Methods We conducted a prospective, consecutive, observational study of adult patients from a tertiary referral center with confirmed COVID-19. All patients were screened daily for neurological and neuropsychiatric symptoms during admission, at discharge and at 3-month follow-up. We classified complications as caused by SARS-CoV-2 neurotropism, immune-mediated or critical illness-related. Results From April-September 2020, we enrolled 61 consecutively admitted COVID-19 patients, 35 (57%) of whom were referred to ICU for respiratory failure. Evaluation revealed a higher frequency of CNS/PNS symptoms in ICU patients compared to non-ICU patients. The most common CNS complication was encephalopathy (n=22, 36.1%), which was severe in 13 patients (GCS≤12), including 8 with akinetic mutism. Length of ICU admission was an independent predictor of encephalopathy (OR=1.23). Other CNS complications included ischemic stroke, a biopsy-proven acute necrotizing encephalitis, and transverse myelitis. The most common PNS complication was critical illness polyneuromyopathy (13.1%), with prolonged ICU stay as independent predictor (OR=1.14). Treatment-related PNS complications included meralgia paresthetica. Of 41 complications in total, 3 were classified as para/post-infectious. The remainder included cases secondary to critical illness or other causes (n=34) or without sufficient investigations (n=4). Cerebrospinal fluid was negative for SARS-CoV-2 RNA in all 5 patients investigated.

Conclusions CNS/PNS complications were common in hospitalized COVID-19 patients, particularly in ICU patients, and often attributable to critical illness. In cases with COVID-19 as the primary cause for neurological disease, there were no signs of viral neurotropism, but laboratory changes suggested autoimmune-mediated mechanisms.

<https://www.medrxiv.org/content/10.1101/2020.11.15.20231001v1>

**TITLE: ASSESSMENT OF FUNCTIONAL CAPACITY WITH CARDIOPULMONARY EXERCISE TESTING IN NON-SEVERE COVID-19 PATIENTS AT THREE MONTHS FOLLOW-UP**

Source: Non peer-reviewed preprint from the medRxiv server | Published online 16th November 2020

[*This article is a preprint and has not been peer-reviewed. It reports new medical research that has yet to be evaluated and so should*not*be used to guide clinical practice.*](https://www.medrxiv.org/content/what-unrefereed-preprint)

ABSTRACT
Introduction Long-term effects of Coronavirus Disease of 2019 (COVID-19) and their sustainability in a large number of patients are of the utmost relevance. We aimed to determine: 1)functional capacity of non-severe COVID-19 survivors by cardiopulmonary exercise testing (CPET); 2)those characteristics associated with worse CPET performance. Methods We prospectively enrolled the first 150 consecutive subjects with laboratory-confirmed COVID-19 infection discharged alive from March to April 2020 at Azienda Sanitaria Locale (ASL)3, Genoa, Italy. At 3-month from hospital discharge, complete clinical evaluation, trans-thoracic echocardiography, cardiopulmonary exercise testing (CPET), pulmonary function test (PFT), and dominant leg extension (DLE) maximal strength evaluation were performed.

Results Excluding severe and incomplete/missing cases, 110 patients were analyzed. Median percent predicted peak oxygen uptake (%pVO2) was 90.9(79.2-109.0)%. Thirty-eight(34.5%) patients had %pVO2 below, whereas 72(65.5%) above the 85% predicted value (indicating normality). Median PFT parameters were within normal limits. Eight(21.1%) patients had a mainly respiratory, 9(23.7%) a mainly cardiac, 3(7.9%) a mixed-cardiopulmonary, and 18(47.4%) a non-cardiopulmonary limitation of exercise. Eighty-one(73.6%) patients experimented at least one symptom, without relationship with %pVO2 (p>0.05). Multivariate linear regression analysis showed age (β=0.46, p=0.020), percent weight loss (β=-0.77, p=0.029), active smoke status (β=-7.07, p=0.019), length of hospital stay (β=-0.20, p=0.042), and DLE maximal strength (β=1.65, p=0.039) independently associated with %pVO2.

Conclusions Half of non-severe COVID-19 survivors show functional capacity limitation mainly explained by muscular impairment, albeit cardiopulmonary causes are possible. These findings call for future research to identify patients at higher risk of long-term effects, that may benefit from careful surveillance and targeted rehabilitation. Take-home messages at 3-month cardiopulmonary exercise testing 38/110(34.5%) non-severe COVID-19 survivors had percent predicted peak oxygen uptake (%pVO2) < 85% (indicating normality). Half of them had functional capacity limitation mainly explained by muscular impairment.

<https://www.medrxiv.org/content/10.1101/2020.11.15.20231985v1>

**TITLE: LONG-TERM COVID-19 SYMPTOMS IN A LARGE UNSELECTED POPULATION**

Source: Non peer-reviewed preprint from the medRxiv server | Published online 24th October 2020

[*This article is a preprint and has not been peer-reviewed. It reports new medical research that has yet to be evaluated and so should*not*be used to guide clinical practice.*](https://www.medrxiv.org/content/what-unrefereed-preprint)

Abstract
It is increasingly recognized that SARS-CoV-2 can produce long-term complications after recovery from the acute effects of infection. Here, we report the analysis of 32 self-reported short and long-term symptoms in a general adult population cohort comprised of 233 COVID-19+ cases, 3,652 SARS-CoV-2-negative controls, and 17,474 non-tested individuals. The majority of our COVID-19+ cases are mild, with only 8 of the 233 COVID-19+ cases having been hospitalized. Our results show that 43.4% of COVID-19+ cases have symptoms lasting longer than 30 days, and 24.1% still have at least one symptom after 90 days. These numbers are higher for COVID-19+ cases who were initially more ill, 59.4% at 30 days and 40.6% at 90 days, but even for very mild and initially asymptomatic cases, 14.3% have complications persist for 30 days or longer. In contrast, only 8.6% of participants from the general untested population develop new symptoms lasting longer than 30 days due to any illness during the same study period. The long-term symptoms most enriched in those with COVID-19 are anosmia, ageusia, difficulty concentrating, dyspnea, memory loss, confusion, headache, heart palpitations, chest pain, pain with deep breaths, dizziness, and tachycardia. We additionally observe that individuals who had an initial symptom of dyspnea are significantly more likely to develop long-term symptoms. Importantly, our study finds that the overall level of illness is an important variable to account for when assessing the statistical significance of symptoms that are associated with COVID-19. Our study provides a baseline from which to understand the frequency of COVID-19 long-term symptoms at the population level and demonstrates that, although those most likely to develop long-term COVID-19 complications are those who initially have more severe illness, even those with mild or asymptomatic courses of infection are at increased risk of long-term complications.

<https://www.medrxiv.org/content/10.1101/2020.10.07.20208702v2#:~:text=The%20long%2Dterm%20symptoms%20most,breaths%2C%20dizziness%2C%20and%20tachycardia>.

**podcasts**

**TITLE: HSJ PODCAST: LONG-COVID CARE CANNOT BE DELAYED ANY LONGER**

Source: HSJ | 20th November 2020

With delays to promised support clinics, warnings about the need to protect staff pay, and trusts accused of penalising staff during their recovery, we dig into why the NHS must provide serious support sooner rather than later for debilitating long-covid.

<https://www.hsj.co.uk/hsj-health-check-podcast/hsj-podcast-long-covid-care-cannot-be-delayed-any-longer/7029005.article>

**news & local SERVICE DEVelopments**

**TITLE: REFLECTIONS OF A COVID-19 LONG HAULER**

Source: JAMA | Published online 11th November 2020

Jeffrey N. Siegelman, Emory University School of Medicine, Department of Emergency Medicine, Atlanta, Georgia

‘I awoke on a Monday morning with a headache, and I am not a headache person. Fever followed, and the next morning my blueberry yogurt tasted of nothing. Thick emptiness. I knew I had it. Now, after more than 3 months of living with coronavirus disease 2019 (COVID-19) and the fatigue that has kept me couch-bound, I have had ample time to reflect on what it means to be a patient, how an illness ripples through family and community, and how I will use this experience to be a better physician. Here is what I have learned…’

<https://jamanetwork.com/journals/jama/fullarticle/2773056?utm_source=silverchair&utm_campaign=jama_network&utm_content=covid_weekly_highlights&utm_medium=email>

**TITLE: CLINICS SET UP TO HELP PATIENTS OVERCOME THE EFFECTS OF COVID**

Source: Cambridge University Hospitals NHS Foundation Trust | 20th August 2020

Special clinics to help patients who were hospitalised with Covid-19 overcome the effects of the virus have been set up at Addenbrooke’s Hospital.

Many patients who have recovered from the initial virus are still battling with ongoing health issues. These can range from difficulty swallowing and problems with their speech, to breathlessness and fatigue. Some patients are also struggling to cope with mental health issues associated with having the virus, including survivor guilt.

Addenbrooke’s has set up a number of clinics to specifically help patients address any ongoing health issues. These include a joint clinic set up with ear, nose and throat, speech and language and tracheotomy nurse specialists to see patients who have been in Addenbrooke’s with Covid and, following their illness, are having speech, language and breathing difficulties. Many of the patients being seen by this clinic have spent time in intensive care with a tube helping them to breathe or swallow, or have needed a tracheotomy.

<https://www.cuh.nhs.uk/news/clinics-set-help-patients-overcome-effects-covid/>

**TITLE: ICU FOLLOW-UP CLINIC PROVIDING WIDE RANGING MULTIDISCIPLINARY APPROACH TO CARE OF COVID-19 PATIENTS**

Source: Belfast Health and Social Care Trust, 9th November 2020

Critical illness and treatment in Intensive Care can have long lasting effects on patients, both physically and psychologically, and there has been a long recognised need for holistic follow-up. The Covid-19 pandemic has further highlighted the need to provide this service leading to the ‘Belfast Trust ICU Follow-Up Clinic’ which was established in July 2020. Patients who have received treatment in ICU can have a range of complications that may occur post discharge. Therefore, the clinic consists of a wide-ranging multi-disciplinary team including ICU Nurses and Doctors, Clinical Psychologists, Physiotherapists, Dieticians, Pharmacists, and Speech and Language Therapists.

Patients are reviewed six weeks after their hospital discharge, which currently takes place virtually. This is invaluable in allowing the multidisciplinary team to work collaboratively to plan, gather data and share assessments. Patients are then reviewed twelve weeks after discharge in an outpatient setting and assessed by the entire team in a ‘one stop shop’.

Dr. Rosalind O’Reilly commented: “We had huge engagement with this service with 98% of patients attending. We identified many needs in our patients; the need for ongoing psychological support, requirement for community or specialist physiotherapy, medical needs, and medications requiring alteration, dietetic issues as well as issues with speech and swallowing.” …. [continues….]

<https://belfasttrust.hscni.net/2020/11/09/icu-follow-up-clinic-providing-wide-ranging-multidisciplinary-approach-to-care-of-covid-19-patients/>

**TITLE: POST COVID PULMONARY REHAB**

Source: Royal Berkshire NHS Foundation Trust (RBFT) Respiratory Department, 16TH Nov 2020

‘Graduation today for post COVID Pulmonary Rehab cohort No. 2’
<https://twitter.com/RbhRespiratory/status/1328448669931204610>

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[TRFT Library & Knowledge Service](https://www.trftlibraryknowledge.com/) aim to bring together the latest guidelines, research and news on Covid-19 through our [Covid-19 portal](https://www.trftlibraryknowledge.com/coronavirus.html). For daily updates on Covid-19 visit our '[Latest Health](https://trfthealthweeklydigest.wordpress.com/)' newsfeed, or use the hashtag [#covid19rftlks](https://twitter.com/hashtag/covid19rftlks?src=hashtag_click) to see our latest tweets on Covid-19 research, guidelines and news.

We also produce a range of subject-specific news feeds to ensure our clinical and professional teams stay up to date with developments in their work areas. Please visit our [website](http://www.trftlibraryknowledge.com/) for more information

<https://www.trftlibraryknowledge.com/health-newsfeeds.html>