Summary of Long-COVID studies open to Welsh participants

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Abstract: Long-COVID is the term used to describe symptoms that continue or develop weeks or months after acute COVID-19 infection. Long-COVID can present as a variety of different symptoms including continuous breathlessness, muscle aches and cognitive impairment. As this is still very much a novel phenomenon, it is important that research is being conducted to further the understanding of this and work towards providing treatment and support to all those affected. A summary of active and prospective NIHR-funded Long-COVID studies was published in 2021 by the Wales COVID-19 Evidence Centre (WCEC) and this report provides an update on the studies highlighted. In addition, this report also includes a further search of an additional ten funding organisations to produce a summary of the new and ongoing studies of long-COVID open to Welsh participants. Whilst 57 studies where identified, only two additional studies were found to be relevant and open to Welsh participants, resulting in a total of five studies currently open to Welsh participants.

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EXECUTIVE SUMMARY

Study Background / Aim

The term 'Long-COVID' refers to the symptoms that continue or develop as a result of COVID-19 infection, weeks or months following the acute infection. These symptoms can be varied across individuals and have been a prevalent topic of research across the world.

In 2021, the Wales COVID-19 Evidence Centre (WCEC) conducted a search of active and prospective NIHR Long-COVID research open to Welsh participants.

The aim of this report is to provide an update on the studies highlighted in that report as well as an updated search of new studies.

Methodology

The updating of the studies identified in the 2021 report was done by searching for the study pages of each study. In the instance that there was no study page available, or insufficient detail, project leads were contacted by email to request an update.

The identification of new studies involved searching through relevant funding bodies, charities and study registries. A total of eleven resources were searched. Each resource was searched in July of 2023 and included all studies that opened from 2021 to 2023. Studies were screened based on titles, then abstract. Those deemed to be potentially relevant were further explored through study pages were available or through contacting project leads via email. Through this, studies that were relevant to those living with Long-COVID, still recruiting and open to those living in Wales were identified.

Key Findings

Of the studies highlighted in 2021, only three were open to Welsh participants at the time of the search. Furthermore, one of these was due to close at the end of July 2023, and another is due to close at the end of August 2023.

The search for additional studies identified 57 potential studies, however after further investigation, it was found that only five were relevant and open to Welsh participants. Similarly to the studies highlighted in 2021, only one will remain open after August 2023.

Conclusions and Potential for Future Research

With only five studies being identified at the time of this search, there is clearly a lack of new or current research into Long-COVID being conducted in Wales.

Many of the UK based studies identified in this search were recruiting participants from specific services local to the research centre carrying out the study. However, in 2021, the Welsh Government published a strategy for the 'Adferiad (Recovery) Long COVID programme', which will work to increase delivery of diagnosis, treatment, support and

care for those in Wales suffering with Long-COVID. This may provide opportunity for more Wales based studies into Long-COVID.

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Background/context:

Long-COVID is the term used to describe symptoms that continue or develop weeks or months after acute COVID-19 infection and can vary greatly from person to person. The national Institute for Health and Care Excellence (NICE) defined Long-COVID as comprising of both ongoing symptomatic COVID-19, which is the presence of signs and symptoms of COVID-19 that persist for four to twelve weeks, and post COVID-19 syndrome which is when signs and symptoms develop or continue more than twelve weeks post initial infection [1]. An NIHR review into Long-COVID conducted in 2020 concluded that there is a significant need for research into this condition.

In 2021, the Wales COVID-19 Evidence Centre (WCEC) published a summary of active and prospective Long-COVID research in Wales[2]. This was produced with the aim of both describing the research climate at that time, and to highlight opportunities for participation for people with Long-COVID, and health care professionals involved in their care. In that summary, 19 ongoing and prospective NIHR-funded studies were identified.

Now, two years on, this report details the updated status of those 19 studies, as well as an updated search of new studies.

Methods:

Updating of 2021 summary:

The update of the status of the 19 studies highlighted in the 2021 summary was conducted in June 2023. This started with the identification of the study pages for each study. In the case that there was no update available, or there was insufficient detail, project leads were contacted by email to request an update.

Search for new studies:

In order to identify any additional studies, an extensive search of relevant funding bodies, charities and study registries was undertaken. The list of searched resources can be seen in table 1. This list was finalised by the team including two public partnership group (PPG) members.

Organisation Name	Weblink
National Institute for Health and Care	https://bepartofresearch.nihr.ac.uk/results/search-
Research (NIHR)	results?query=long-covid&location=
Medical Research Council (MRC)	https://gtr.ukri.org/search/project?term=long+covid
Economic and Social Research Council (ESRC)	https://gtr.ukri.org/search/project?term=long+covid
Biotechnology and Biological Sciences Research Council (BBSRC)	https://gtr.ukri.org/search/project?term=long+covid

Science and Technology Facilities Council (STFC)	https://gtr.ukri.org/search/project?term=long+covid
Medical Research Foundation	https://www.medicalresearchfoundation.org.uk/whatwe-fund/what-weve-funded
Diabetes Research & Wellness Foundation	https://www.drwf.org.uk/news-and- events/news/how-you-can-take-part-in-diabetes- research/
Crohn's in Childhood Research Association (CICRA)	https://www.cicra.org/our-research/current-research/
Alzheimer's Society	https://www.alzheimers.org.uk/research/our- research/research-projects/current-projects
Government Adferiad (recovery) Long COVID Programme	https://www.gov.wales/adferiad-recovery-long-covid-programme-html#73085
Cochrane Trials Registry	https://www.cochranelibrary.com/advanced- search?q=*long%20covid&t=6

Table 1: Resources searched for new studies

Each resource was searched for studies dating from 2021 to 2023. Searches of all databases were run in July of 2023. Studies were first screened based on titles, then abstract. Studies still deemed to be potentially relevant were then further explored through locating study pages or contacting lead investigators via email. This exploration included determining whether or not the study was still recruiting, open to those living in Wales and relevant to those with long-COVID.

Findings:

Of the 19 studies detailed in the 2021 summary, six were still open for recruitment as of the beginning of July 2023. However, two of these studies are due to close recruitment on the 31st of July 2023. Furthermore, of the six still open, only three are recruiting Welsh participants. Table 2 details the recruitment status of all 19 studies.

Study Name	Recruitment Status
Post-hospitalisation COVID-19 study: a national consortium to understand and improve long-term health outcomes (PHOSP-COVID)	Closed
HElping Alleviate the Longer-term consequences of COVID-19 (HEAL-COVID): a national platform trial	Closed
Rehabilitation Exercise and psycholoGical support After covid-19 Infection (REGAIN): a multi-centre randomised controlled trial	Closed
Understanding Experiences of Long COVID in Families	Closed
Long COvid Multidisciplinary Consortium: Optimising Treatments and services acrOss the NHS (LOCOMOTION)	Closed
Long Covid Personalised Self-managemenT support- co-design and EvaluatioN (LISTEN)	Open until 31/08/23 (Welsh participants)

The immunologic and virologic determinants of Long-COVID	Open until 31/07/23 (Welsh participants)
HypErpolarised Xenon magnetic resonance PuLmonary imAging in patieNts with Long COVID (EXPLAIN)	Closed
Cognitive Impairment in long COVID: PhEnotyping and RehabilitatiOn (CICERO)	Open until January 2024 (Welsh participants)
Symptoms, Trajectory, Inequalities and Management: Understanding Long-COVID to Address and Transform Existing Integrated Care Pathways (STIMULATE-ICP)	Closed
ReDIRECT: Remote Diet Intervention to Reduce long Covid symptoms Trial	Closed
Quality-of-life in patients with long COVID: harnessing the scale of big data to quantify the health and economic costs	Open until 31/07/23
Percutaneous Auricular Nerve Stimulation for Treating Post-COVID Fatigue (PAuSing-Post- COVID Fatigue)	Open (end date not specified)
Immune analysis of long COVID to inform rational choices in diagnostic testing and therapeutics	Closed
Understanding and using family experiences of managing long COVID to support self care and timely access to services	Closed
Development of a robust T cell assay to retrospectively diagnose SARS-CoV-2 infection and assays as diagnostic and monitoring tools in long COVID patients	Open until end of September 2023
Using Activity Tracking and Just-In-Time Messaging to Improve Adaptive Pacing: A Pragmatic Randomised Control Trial	Closed
Impact of COVID-19 vaccination on preventing long COVID: a population-based cohort study using linked NHS data	Closed
Long COVID Core Outcome Set (LC-COS) project	Closed
T 2 D 11	

Table 2: Recruitment status of studies highlighted in the 2021 NIHR search

By searching the resources listed in table 1, 57 studies were identified as being potentially relevant through title and abstract screening. Of these 57 studies, only two met the criteria of being relevant for those with Long-COVID and having recruitment open for Welsh participants. A list of the 57 studies identified can be found in appendix a. Overall there are currently five studies into Long-COVID that are open to Welsh participants, but only one will remain open after the end of August 2023. This updated summary is detailed in table 3.

Study Name and Weblink	Study Aim	Eligibility	Recruitment status
Long Covid Personalised Self-managemenT	This study is developing an intervention consisting of	Participants must be aged 18 or over and	Recruitment
support- co-design and EvaluatioN (LISTEN)	a package of self-management support, co-designed	experience persistent illness following COVID-19	open until 31st
	with individuals living with long COVID and other	infection for over 12 weeks.	August 2023
https://www.cardiff.ac.uk/centre-for-trials-	stakeholders. The aim is to compare this intervention		
research/research/studies-and-	with usual care in the NHS to explore whether it can		
trials/view/listen	help patients manage Long COVID symptoms in		
	everyday life. In the first part of this study,		
	participants living with Long COVID will work with		
	researchers to design a package of self-management		
	support personalised to their needs. In the second		
	part of this study, individuals with Long COVID will be		
	recruited to a clinical trial to evaluate the new		
	intervention.		
The immunologic and virologic determinants of	This research aims to provide new insights into the	Study participants should be aged 18 years or over	Study end date
Long-COVID	cause of Long COVID and to explore whether Long	and able to provide informed consent. All	is 31/07/23.
	COVID results from the impact of the coronavirus on	participants should have a clinical diagnosis of	Recruiting until
https://www.cardiff.ac.uk/news/view/2535247-	the body's immune system. The researchers will	Long COVID made through specialist assessment	the end date.
cardiff-university-awarded-major-funding-to-	evaluate whether the virus causes reactive	in a designated Long COVID clinic/service. Those	
research-long-covid	autoimmune diseases (through coronavirus	receiving immunosuppressive medication or	
	stimulation of the body's natural defence systems);	suffering from underlying immunological disease	
	also, they will assess if the virus persists in the body	are not eligible to participate. The Long COVID	
	longer term triggering ongoing immune activation.	clinic at University Hospital of Wales, Cardiff will	
	The project hopes to identify markers to indicate	be participating in this study in Wales. Referrals	
	which patients with COVID-19 subsequently develop	can be made to this clinic via your GP.	
	Long COVID. These biomarkers will, in turn, contribute		
	to the development of new diagnostic tests and		
	treatments for Long COVID.		
Cognitive Impairment in long COVID:	This study will look at why patients develop long term	There are no recruiting sites for this study in	Recruitment
PhEnotyping and RehabilitatiOn (CICERO)	problems with memory, attention or other cognitive	Wales. However, clinics in England recruiting for	open.
	function (sometimes called 'brain fog') following	this study are able to receive referrals from your	Completion

https://fundingawards.nihr.ac.uk/award/COV-	COVID-19 infection. Magnetic Resonance Imaging	GP in Wales. Participants should be aged between	date estimated
LT2-0014	(MRI) scanning will be used to identify affected brain	30 and 60 years, have evidence of prior COVID-19	for January
	networks. The findings will be used to develop and	infection and have cognitive impairment persisting	2024.
	test a new rehabilitation strategy to help people	over 3 months from the acute infection	
	recover from the cognitive aspects of long COVID and		
	return to normal life and working ability		
An investigation to explore the use of a type of	The aim of this study is to further the understanding	Participant is willing and able to give informed	Recruitment
MRI scan using an inhaled gas in identifying lung	of some of the factors that cause symptoms in long	consent for participation in the study. Aged 18	open until 13th
damage associated with long COVID sufferers	COVID and provide a much-needed explanation to	years or above. One of the following criteria:	August 2023
	individuals struggling with breathlessness. Learning	Microbiological evidence of COVID-19 infection	
https://www.isrctn.com/ISRCTN14304264	more about the nature of damage within the lungs	OR Diagnosis of long COVID or 'post-COVID	
	through xenon MRI may help with the future	syndrome' (as defined by NICE 2020) made	
	development of treatments, and provide a reliable	through specialised assessment at a designated	
	way of measuring the treatment response over time.	long COVID clinic	
Ayurveda for promoting recovery in long COVID	APRIL is a randomised, placebo-controlled trial of a	Adults (18 years or older) with the capacity to	Recruitment
	traditional Indian herbal medicine for treating Long	provide informed consent. Have been diagnosed	open. Must
https://www.lshtm.ac.uk/research/centres-	COVID, led by researchers at the London School of	with Long COVID as per the NICE Guidelines	apply through
projects-groups/april	Hygiene & Tropical Medicine, UK, and the All-India	(NG188) that has reduced their ability to carry out	GP. No end
	Institute of Ayurveda, India.	day-to-day activities compared with the time	date specified
		before they had COVID-19. Not taking any other	
		herbal medicines, or willing to stop taking any	
		such medicines for the duration of the trial.	

Table 3: Summary of studies of Long-COVID open to Welsh participants

Conclusion:

Overall, the search conducted has highlighted five studies into Long-COVID that are open to Welsh participants. As three of these are studies from the original 2021 search, this indicates that there is a lack of new or current research being conducted in Wales in this area.

Many of the UK based studies found recruited participants from specific services local to the research centre carrying out the study. Through this search, it was found that there are notably smaller numbers of Wales based research centres conducting studies into Long-COVID. It is currently unknown whether this may be a reflection of services available to those in Wales suffering with Long-COVID.

In 2021, Welsh Government published a policy and strategy for the 'Adferiad (Recovery) Long COVID programme' [3]. In this they detail the use of a £5million package to expand the provision of diagnosis, treatment, rehabilitation and care for those suffering from the long term effects of COVID-19. Although no studies have yet been highlighted, this is a potential area of recruitment for future studies, either experimental or to evaluate these services.

Acknowledgments

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Appendix A: List of studies identified through title and abstract screening

Study Title	Database/Resource
Pausing post-COVID fatigue	Cochrane Trials Registry
Ayurveda for promoting recovery in long COVID	Cochrane Trials Registry
Is Signposting to Online Peer Support Helpful in Decreasing	Cochrane Trials Registry
Loneliness in Parents of Children With Long-term Conditions and	
Disabilities?	
REGAIN: RCT of Oxaloacetate for Fatigue in Long COVID	Cochrane Trials Registry
Developing chamomile as a potential long COVID therapy: clinical	Cochrane Trials Registry
evaluation of Roman chamomile extract in healthy volunteers	
A Randomised Phase II Study to Investigate the Effectiveness of	Cochrane Trials Registry
ACUpuncture for the Relief of Long COVID Related Fatigue	
Tools to help clinicians swiftly diagnose neurological problems in	Medical Research
COVID-19 patients	Foundation
Improving Long COVID patient recovery through voice-based AI	Innovate UK
symptom tracking and personalised rehabilitation	
Genomics of bacterial coinfections from COVID-19 patients: insights	MRC
into disease severity and antimicrobial resistance	

	T
Understanding the importance of inflammasomes and interleukin-1	MRC
to hyper-inflammatory syndromes, including COVID-19	1100
Real-time modelling and inference of Covid-19 transmission and	MRC
control	
Understanding T cell immunity to SARS-CoV-2 natural infection and	MRC
vaccination in healthy and immunocompromised individuals	1400
COVID-19 and lung disease: developing therapy through immune	MRC
cell re-programming (Ref: 3949)	1400
Pain Mechanisms in long-Covid	MRC
"Plugging the holes in COVID-19 therapy"	MRC
Development of an intradermal or inhaled DNA vaccine for COVID-	MRC
19 and beyond	
Childhood evolution of B cell responses to COVID-19 vaccination	1400
Determinants of immune response following COVID-19 natural	MRC
infection and vaccination in elderly residents of UK long term care	
home facilities Evaluing the differential soverity of COVID 10 between Indians in	MDC
Explaining the differential severity of COVID-19 between Indians in	MRC
India and the UK Therenies for Long COVID in non-hospitalised individuals. From	MPC
Therapies for Long COVID in non-hospitalised individuals: From	MRC
symptoms, patient-reported outcomes and immunology to targeted	
therapies (The TLC Study)	MDC
AGILE: Seamless Phase I/IIa Platform for the Rapid Evaluation of	MRC
Candidates for COVID-19 treatment	MDC
REACT Long COVID (REACT-LC)	MRC
Characterisation, determinants, mechanisms and consequences of	MRC
the long-term effects of COVID-19: providing the evidence base for health care	
	MRC
Repurposing approved drugs as potent antiviral combinations to treat COVID-19 disease	IVIRC
COVID-19 therapeutics and beyond: An HTS to identify inhibitors of	MRC
SARS-CoV-2 nsp12 and starting points for other Coronavirus	IVINC
inhibitors	
Non-hospitalised Children & young people (CYP) with Long Covid	MRC
(The CLoCk Study)	IVINC
Genomics of bacterial coinfections from COVID-19 patients: insights	MRC
into disease severity and antimicrobial resistance	IVINC
Covid Social Mobility and Opportunities study (COSMO): Wave	ESRC
Exploring directions for post-pandemic disaster education through	ESRC
interdisciplinary collaboration between the UK and South Korea	Lane
DfT Covid Recovery User Focus ESRC Policy Fellowship	ESRC
The impact of the Covid-19 pandemic on the mental health of	ESRC
workers in health services: building resilience in post-conflict	LUNC
territories	
Inequalities in informal caregiving over the adult life course in	ESRC
Europe: social participation, health and the influence of Covid-19	LSING
Understanding the challenges of living with Parkinson's in a post	ESRC
COVID health and social context: a mixed methods proposal	LSINC
Joint Pain in Long COVID	NIHR
Long COVID and HRQoL v0.1	NIHR
Musculoskeletal Pain in Long COVID	NIHR

Ayurveda for promoting recovery in long COVID	NIHR
COVID-19 hearing loss project v1.8	NIHR
Cognitive Rehabilitation for People With Cognitive Covid19	NIHR
An investigation to explore the use of a type of MRI scan using an	NIHR
inhaled gas in identifying lung damage associated with long COVID	
sufferers	
HEART Rate Variability Biofeedback in LOng COVID-19 (HEARTLOC)	NIHR
Helping alleviate the longer-term consequences of COVID-19	NIHR
The UK Interstitial Lung Disease Long-COVID19 Study (UKILD-Long	NIHR
COVID): Understanding the Burden of Interstitial Lung Disease in	
Long COVID.	
Uninterrupted and Interrupted Sitting in Long COVID-19	NIHR
Health-related Quality of Life and Long COVID	NIHR
Long term effects of COVID-19 in people with diabetes	NIHR
Aerosol clearance in patients with and without long COVID	NIHR
Symptoms, trajectory, inequalities and management: understanding	NIHR
Long COVID to address and transform existing integrated care	
pathways	
Connecting breath and mind for CYP with post-COVID syndrome	NIHR
Randomised Study to Investigate the Effectiveness of Acupuncture	NIHR
for the Relief of Long COVID-19 Related Fatigue	
Feasibility of Personalised Health Behaviour Coaching to Support	NIHR
Symptoms and Activities of Daily Living in Those With Long COVID-	
19.	
MUlti-nuclear MR Imaging Investigation of Respiratory Disease-	NIHR
associated CHanges in Lung Physiology	
Acute kIDnEy Injury in coviD-19	NIHR
MODEL-COV	NIHR
Evaluating video and hybrid group consultations in general practice:	NIHR
Mixed-methods, participatory study	
BEAT-CORONA: Building evidence to advance treatments for COVID-	NIHR
19	
The EPIC Project: the mental and physical health impact of the	NIHR
COVID-19 pandemic on healthcare professionals, patients and the	
general public	

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