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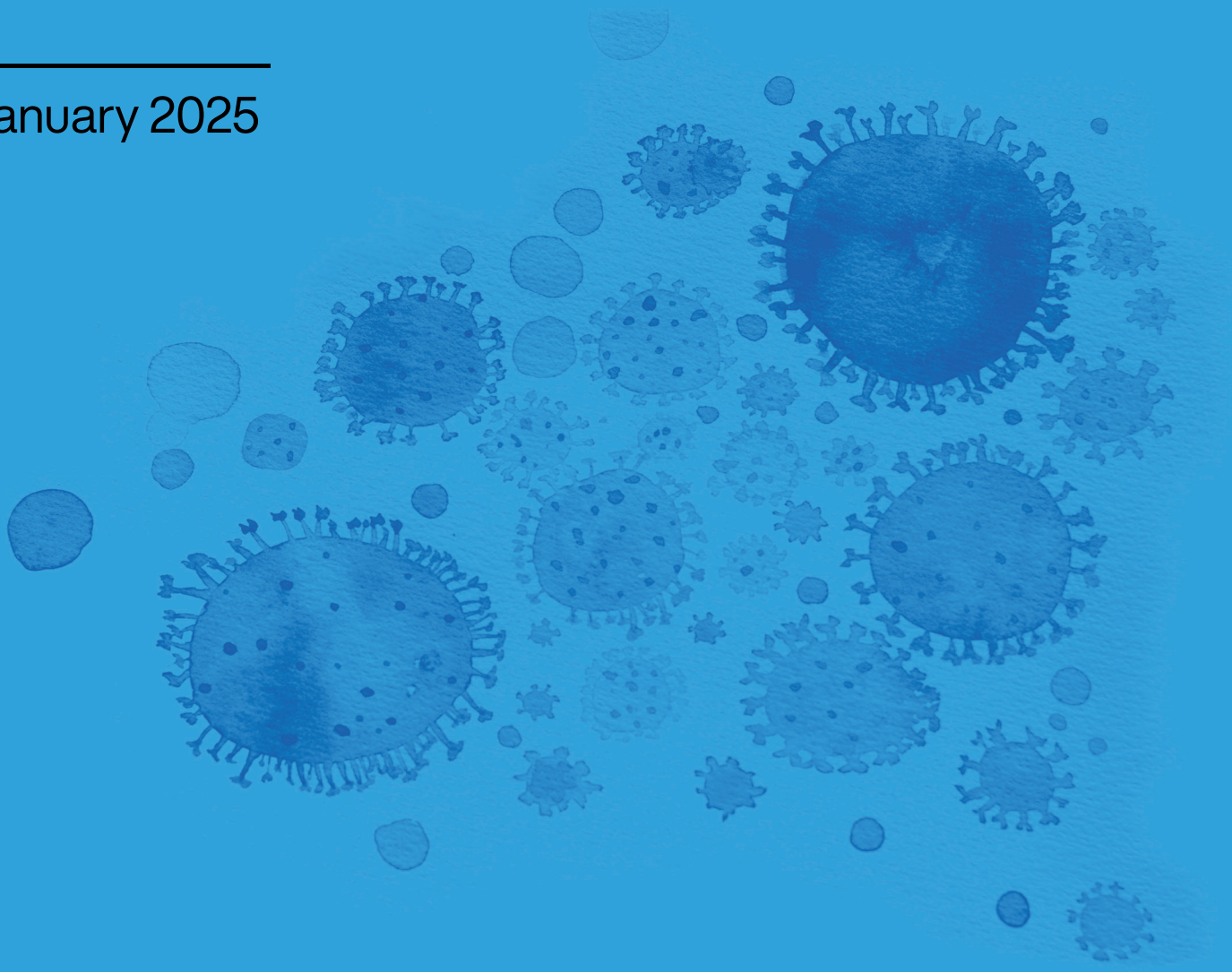
NIHR Policy Research Programme Reviews Facility
Supporting national policy development and implementation

Reviews on Long COVID

A scope of the literature: update

January 2025



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Reviews on Long COVID: A scope of the literature. Update January 2025

Khouja C, Raine G, Harden M, Sutcliffe K, Sowden A
January 2025

EPPI Centre, UCL Social Research Institute
UCL Institute of Education, University College London.

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Summary

- In this update, we identified 33 published reviews and 30 review protocols on Long COVID.
- The number of reviews (n=33) is the same as in July 2024 (n=33), but fewer than in October 2024 (n=38), April 2024 (n=36), and January 2024 (n=42).
- Across updates (with the same search strategy), the number of reviews has ranged from 29 in October 2022 to 50 in January 2023.
- The largest categories of reviews were treatment or rehabilitation only (12/33), and the prevalence of symptoms or effects only (10/33); these two categories were largest in most previous updates.
- The number of protocols (n=30) identified is fewer than in previous updates; as was the case in our last update (October 2024, n=35).
- The largest category of protocols focused on the prevalence of symptoms or effects only (10/30), with treatment or rehabilitation only (5/30) being the next largest category.

Introduction

This is the twelfth update (thirteenth report) in an ongoing series of quarterly evidence scans, for published and ongoing systematic reviews related to Long COVID, requested by the Department of Health and Social Care. The last update covered the period from July to October 2024.[1]

For the current update, we identified systematic reviews and review protocols focused on Long COVID that were published between early October 2024 and early January 2025. Long COVID was conceptualised broadly as any symptoms or effects that persist or develop after acute COVID-19 infection.

Methods

Identification of reviews

The Cochrane Database of Systematic Reviews (CDSR; via Wiley) and Epistemonikos were searched to identify reviews about Long COVID. In addition, MEDLINE (via Ovid) and CINAHL (via EBSCO) were searched with retrieval limited to systematic reviews.[2,3] The searches took place on 6th January, 2025 and were limited by date to capture those records added to the databases since the last searches in October 2024. No language restrictions were applied. A further search of PROSPERO was undertaken, by the review team, up to the 6th January, 2025 to identify any new ongoing reviews. Due to the rapid nature of the project, the database searches were designed to balance the need to retrieve as many relevant systematic reviews as possible against the limited time available for screening. The search strategies can be found in Appendix 1 (page 21).[4]

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[1] Khouja C, Raine G, Harden M, Sutcliffe K, Sowden A (2024) Reviews on Long COVID: A scope of the literature. Update October 2024. London: EPPI Centre, UCL Social Research Institute, UCL Institute of Education, University College London.

[2] Navarro-Ruan T, Haynes RB. Preliminary comparison of the performance of the National Library of Medicine's systematic review publication type and the sensitive clinical queries filter for systematic reviews in PubMed. J Med Libr Assoc. 2022;110:43-46.

[3] Booth A. Chapter 3: Searching for Studies. In: Noyes J, Booth A, Hannes K, Harden A, Harris J, Lewin S, Lockwood C (editors), Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions. Version 1 (updated August 2011). Cochrane Collaboration Qualitative Methods Group, 2011.

[4] Due to resource limitations and speed of the review, we have not searched the Long COVID living map which may include further relevant systematic reviews.

Study selection

To be included, reviews needed to have a primary focus on Long COVID (however conceptualised and defined) and be systematic in nature. A review was considered systematic if it reported some search terms and inclusion criteria, as well as the number of references found and studies included, and identified or referenced the included studies. Reviews could focus on adults and/or children and include primary studies of any design or other reviews (i.e., reviews of reviews). We did not apply criteria relating to the length of time after infection owing to variation in how Long COVID has been defined in the literature. Reviews were only included if the full text was readily available, and we excluded pre-prints. Titles and abstracts were screened by one reviewer; two reviewers screened the full text of each retrieved paper.

Key findings

From the database searches, 1,176 records were identified in total, and after duplicates were removed, 660 records were screened in EPPI-reviewer.[5] From PROSPERO, we identified158 records, two of which were duplicates. We included **33 published reviews, two protocols for completed reviews, and 28 protocols for ongoing reviews**. The flowchart of studies is shown in Appendix 2, page 28. Table 1 provides a summary of reviews identified for this update by focus. The full reference and aim or research questions for each included review are provided on pages 10 to 15, and for the protocols on pages 15 to 20. Table 2 (Appendix 3, page 29) provides a summary of the reviews identified across all 13 reports we have produced to date, by focus. Figure 1 summarises the numbers of reviews and protocols across reports.

Table 1: Summary of reviews (October 2024 to January 2025)

Review status Primary focus	Systematic review	Evidence map	Living review
Published reviews (n=33)			
Treatment or rehabilitation	10	1	1
Treatment[2] and Prevention	1		
Prevention	1		
Prevalence of symptoms or effects	9	1	
Prevalence and Pathobiology	1		
Risk factors +/- prevalence	3		
Risk factors[1] and Treatment[2]	2		
Pathobiology or mechanisms	2		
Experiences	1		
Completed not published reviews (n=2)			
Risk factors +/- prevalence	1		
Pathobiology	1		
Protocols - ongoing reviews (n=28)			
Treatment or rehabilitation	5		
Prevention	1		
Prevalence of symptoms or effects	10*	1*	
Prevalence and Treatment[2]	1		
Prevalence and Prevention	1		

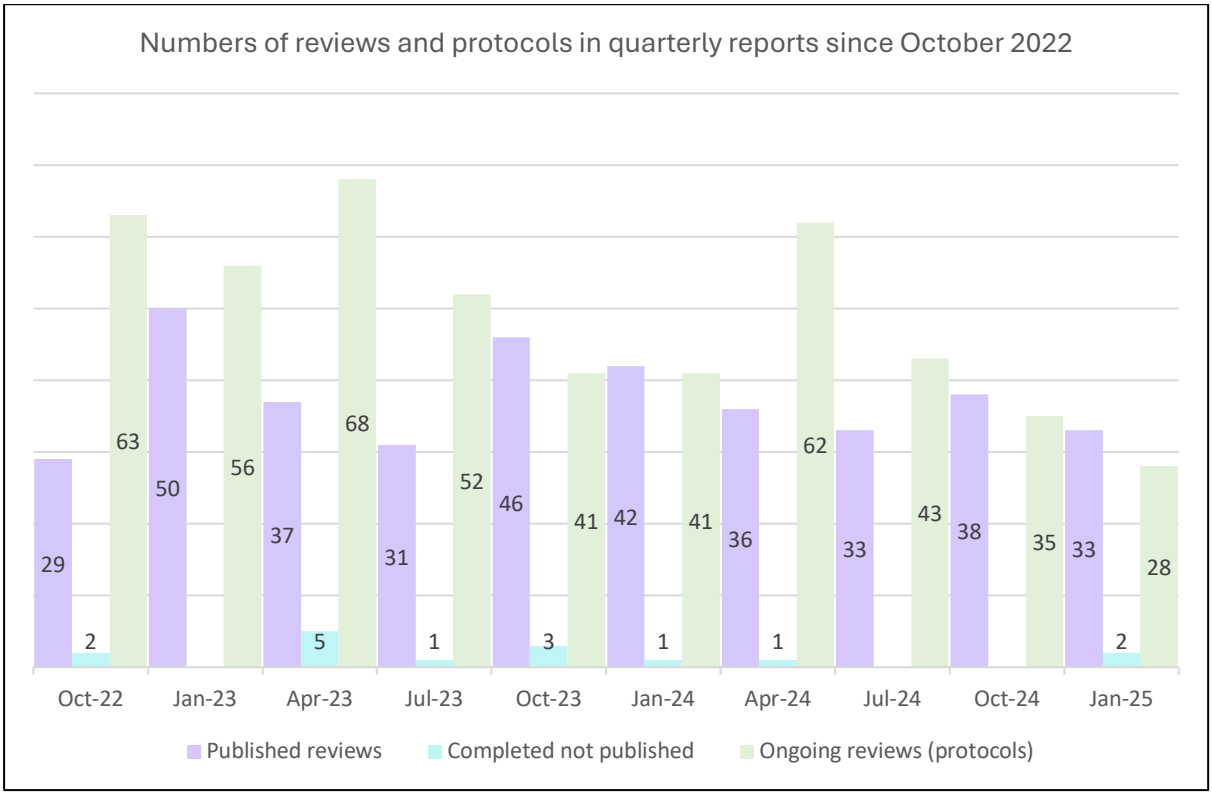
[5] Thomas, J., Graziosi, S., Brunton, J., Ghouze, Z., O'Driscoll, P., Bond, M. & Koryakina, A. (2023) EPPI-Reviewer: advanced software for systematic reviews, maps and evidence synthesis. EPPI Centre, UCL Social Research Institute, University College London.

Risk factors +/- prevalence	2		
Pathobiology or mechanisms	4		
Diagnosis or monitoring tools	1		
Health and social or economics	1		
Experiences	2		

* One protocol was for both a full review and a map

[1] with or without prevalence; [2] or rehabilitation

Figure 1: Summary of reviews and protocols across all reports Oct 2022 to Jan 2025



Published reviews

For this update, we identified 33 published reviews, which was the same as in the July 2024 update (n=33), but fewer than in the other three quarterly updates last year (October 2024, n=38; April 2024, n=36; and January 2024, n=42). These updates were based on the same databases and search strategy. Most published reviews in this update focused on treatment or rehabilitation (n=12) or the prevalence of symptoms or effects (n=10); these two categories were the largest across most previous reports, although prevalence was usually a larger category than treatment or rehabilitation. Three reviews were focused on risk factors with or without prevalence, two were on pathobiology or mechanisms, and two were on risk factors and treatment. The remaining four reviews were on treatment and prevention (n=1), prevention (n=1), prevalence and pathobiology (n=1), or experiences (n=1).

Treatment or rehabilitation (n=12)

Twelve reviews focused solely on treatment or rehabilitation. This amount is similar to the numbers in our previous two reports (October 2024, n=11; July 2024, n=13), but more than in the April 2024 (n=5) and January 2024 (n=7) reports. One review was a living review of interventions to manage Long COVID, which might be updated for up to two years (#1 Zeraatkar,

et al., 2024); and another was a map of evidence on physical rehabilitation for Long COVID and the reporting of co-morbidities (#2 Gardiner, et al., 2024).

Five reviews were focused on treatments for Long COVID patients. Two were on olfactory dysfunction: one on any treatment (#8 Mehraeen, et al., 2024); and the other on olfactory training (#12 Treder-Rochna, et al., 2024). Two other reviews included any treatment: for autonomic dysfunction (#11 Treadwell, et al., 2024); or for mental health and cognition (#6 Hawke, et al., 2024). The fifth review was on nutrition interventions for loss of muscle mass (#3 Araujo, et al., 2024).

Four reviews were on rehabilitation for Long COVID. One was on rehabilitation for pulmonary fibrosis (#10 Sanclemente-Cardoza, et al., 2024). Another was on physiotherapy for dyspnoea (#9 Romanet, et al., 2024); and one was on exercise therapy and the moderators of outcomes (#7 Kruger, et al., 2024). The fourth review was on spirometry respiratory training for any Long COVID symptoms (#4 Chen, et al., 2024).

One review covered both treatment and rehabilitation interventions, focusing on qualitative studies of health care and services provided for Long COVID patients (#5 Curvelo, et al., 2024).

Treatment or rehabilitation and Prevention (n=1)

One review focused on treatments other than antivirals, given during COVID-19 infection or for continuing symptoms, to prevent or treat Long COVID (#13 Livieratos, et al., 2024).

Prevention (n=1)

One review focused on prevention using vaccination before, during or after COVID infection, but before a diagnosis of Long COVID (at least three months after infection; #14 Chow, et al., 2024). Across reports from October 2022 to date, over half of the reviews with a focus on prevention were on vaccination (14/23; 60%); the others were on antivirals (n=5), or other interventions (n=9, some reviews covered more than one topic).

Prevalence of symptoms or effects (n=10)

Ten reviews had a primary focus on the prevalence of symptoms or effects. This is more than we included in the July 2024 report (n=6), but fewer than in the other three quarterly reports of 2024 (October, n=14; April, n=21; and January, n=18). One review was a map of evidence on Long COVID fatigue (#15 Thomas, et al., 2024).

The other nine reviews all focused on specific symptoms or effects associated with Long COVID. Two were on fatigue: post-exertional malaise (#17 An, et al., 2024) and myalgic encephalitis (ME) or chronic fatigue syndrome (CFS) diagnoses (#20 Dehlia and Guthridge, 2024). Two were on problems with the heart or circulation: myocardial function (#19 Dehghan, et al., 2024) and cardiovascular symptoms (#24 Stimart and Hipkins, 2024). The remaining five were on bone mineral density, bone biomarkers and joint symptoms (#16 Alghamdi, et al., 2024); dermatological symptoms (#18 Cayon, et al., 2025); gastrointestinal symptoms (#21 Mohammed, et al., 2024); liver injury (#22 Mundra, et al., 2024); and new-onset dementia in older adults (#23 Shan, et al., 2024).

Prevalence of symptoms or effects and Pathobiology or mechanisms (n=1)

One review covered both prevalence and pathobiology, specifically on the immune response and cognitive impairments in post-COVID syndrome (#25 Holland, et al., 2024).

Risk factors with or without prevalence of symptoms or effects (n=3)

Three reviews focused on risk factors for Long COVID and its prevalence, or just risk factors. This is fewer than in each of our four previous reports (October 2024, n=8; July 2024, n=4; April 2024, n=5; and January 2024 n=9).

One review investigated the risk factors and prevalence of Long COVID in pregnant women (#26 Georgakopoulou, et al., 2025). The second review investigated the risk factors and prevalence of cognitive and functional changes in elderly patients (#28 Rodrigues, et al., 2024). The third review investigated severity as a risk factor for, and the prevalence of, lung complications visible on ultrasound (#27 Navarro-Romero, et al., 2024).

Risk factors with or without prevalence and Treatment or rehabilitation (n=2)

Two reviews were on risk factors and treatment. One focused on digital health technology in assessing the risks and prevalence of Long COVID, and in treating the symptoms (#29 Mfouth, et al., 2024). The other was on the risks, prevalence and treatment of Long COVID in children in the USA (#30 Miller, et al., 2024).

Pathobiology or mechanisms (n=2)

Two reviews were on pathobiology or the mechanisms of Long COVID. This is a similar number to the previous four reports (October 2024, n=3; July 2024, n=3; April 2024, n=2; and January 2024, n=2).

One review was on the tryptophan catabolite (or kynurenine) pathway in Long COVID (#31 Almulla, et al., 2024); this pathway is associated with inflammation, immune function, and neurological conditions. The other was on epigenetic changes in Long COVID (#32 Shekhar, et al., 2024).

Experiences (n=1)

One review was on the psychosocial experiences of living with Long COVID (#33 Eberhardt, et al., 2024).

Protocols for completed reviews not yet published (n=2)

Two PROSPERO protocols had the status of completed but not published. One was on risk factors and the prevalence of any Long COVID symptoms in healthcare workers (#34 Lim, et al., 2024). The other protocol was on the pathobiology of corneal nerve fibre loss in patients with Long COVID (#35 Abbas and Abbas, 2024).

Protocols - ongoing reviews (n=28)

We identified 28 protocols for ongoing reviews, which is the fewest across all reports to date (range 35 to 68), where the search strategy was the same. As in most of the previous reports, the largest category of protocols in this update focused on the prevalence of symptoms or effects (n=10). Five protocols were on treatment or rehabilitation; four were on pathobiology or mechanisms; two were on risk factors with or without prevalence; and two were on experiences. The remaining five protocols were on prevention (n=1), prevalence and treatment (n=1), prevalence and prevention (n=1), diagnosis or monitoring tools (n=1), or societal effects or economics (n=1).

Treatment or rehabilitation (n=5)

Five protocols were on treatment or rehabilitation. Across all our previous reports, this is the smallest percentage of protocols by topic at 16% (5/31); range 20% (8/41 in October 2023) to 50% (26/52 in July 2023).

Three of the five protocols were on treatments. One was on acupuncture for Long COVID symptoms (#40 Zhang, et al., 2024). Another was on immunomodulatory therapy for children with multisystem inflammatory syndrome associated with COVID-19 (MIS-C; #36 Ayyan, et al., 2024). The third was on acceptance and compassion interventions for post-viral fatigue, with a planned subgroup analysis for Long COVID (#37 Clark and McGrath, et al., 2024).

The other two protocols were on rehabilitation interventions. One was a protocol for a synthesis of qualitative evidence on breathing exercises for Long COVID, comparing remote versus in-person delivery (#39 Pimblett, et al., 2024). The other was on inspiratory muscle training (#38 Da Silva Mendonca, et al., 2024).

Prevention (n=1)

One protocol was on prevention. In previous reports, we have consistently included few protocols on prevention alone (for example, in 2024, October, n=0; July, n=4; April, n=3; and January, n=2). The protocol in this update was on nirmatrelvir-ritonavir (Paxlovid; an antiviral treatment for COVID-19) in the prevention of Long COVID (#41 Bergroth, et al., 2024). Most previous protocols on prevention focused on either vaccination or antivirals, or both.

Prevalence of symptoms or effects (n=10)

Ten protocols were for reviews of the prevalence of symptoms or effects. This is the fewest protocols on this topic across all reports. The last four reports included 13 (October 2024), 16 (July 2024), 24 (April 2024), and 14 (January 2024) protocols on prevalence.

One protocol was for both a review and an evidence map on mental health symptoms (#42 Adeyinka, et al., 2024).

Two protocols were on the prevalence of any Long COVID symptoms, in specific populations or compared with other infections. One was on the prevalence of Long COVID in the USA (#45 Lai and Chen, 2024). The other was on the prevalence compared with sequelae after severe acute respiratory syndrome (SARS) or Middle East respiratory syndrome (MERS; #46 Ma, et al., 2024).

The other seven protocols on prevalence focused on specific Long COVID symptoms, groups of symptoms or diagnoses. Two of the seven were on heart or circulation symptoms: one was on heart disease in Long COVID patients in South America (#49 Tuy Batista, et al., 2024); and the other was on cardiovascular performance and effects in athletes after recovering from infection (#50 Wen, et al., 2024). The remaining five protocols were on cognitive function (#43 Borrero Sanchez, et al., 2024); mental health and quality of life (#47 Oyelade and Arowosegbe, 2024); new-onset autoimmune disease (#44 Grima, et al., 2024); non-fungal osteonecrosis of the jaw (due to treatment or infection; #48 Shafiei, et al., 2024); and ophthalmic symptoms (#51 Zare, et al., 2025), after COVID-19 infection.

Prevalence of symptoms or effects and Treatment or rehabilitation (n=1)

One protocol was on the prevalence of neuropsychiatric symptoms and their treatment, in people with autism spectrum disorder, after COVID-19 infection (#52 Gallardo Herrerias and Castillo Palmero, 2024).

Prevalence of symptoms or effects and Prevention (n=1)

One protocol was on the prevalence of neurological symptoms, and whether vaccination was associated with their prevalence (prevention of Long COVID; #53 Akumbom, et al., 2024).

Risk factors with or without prevalence of symptoms or effects (n=2)

Two protocols were for ongoing reviews of risk factors, with or without the prevalence of symptoms, for Long COVID. This is the fewest across all reports in 2023 and 2024 (range 4 to 13). The 2024 report numbers were six in October, six in July, eight in April, and seven in January.

One protocol was on the risk factors and prevalence of olfactory and gustatory symptoms (#54 Deravi, et al., 2024). The other was on the severity of COVID-19 infection as a risk factor for depression, anxiety and stress after recovery (#55 Ventura Botome, et al., 2024).

Pathobiology or mechanisms (n=4)

Four protocols for ongoing reviews were on pathobiology or mechanisms of Long COVID. Across previous reports with the same search strategy, the number of protocols focusing on pathobiology has ranged from none (October 2022 and 2023), to five (October 2024).

The four protocols were on the mechanisms underlying Long COVID (#56 Daodu and Kayyali, 2024); the mechanisms linking biomarkers and cognitive decline in Long COVID (#58 Kumar Endukuru, et al., 2024); inflammatory markers (#57 dos Santos de Amorim, et al., 2024); and autonomic, cardiovascular and respiratory responses in Long COVID patients during orthostatic stress testing (#59 Olarinde, et al., 2024).

Diagnosis or monitoring tools (n=1)

One protocol was on various tools for diagnosing Long COVID and their performance (#60 Mustafa, et al., 2024); the tools included C-reactive protein, D-dimers, electrocardiograms, computed tomography, and validated tests of functional status, among others.

Health and social or economics (n=1)

One protocol was on societal effects and economics, assessing the epidemiology and financial burden of Long COVID on the health system in India (#61 Shinde, et al., 2024).

Experiences (n=2)

Two protocols were on the experiences of patients with Long COVID. One was on their care experiences in outpatient settings (#63 Schulze, et al., 2024). The other protocol was for a review of qualitative studies of the experiences of children and young people living with Long COVID (#62 Domanska, et al., 2024).

Published reviews (n=33)

Treatment or rehabilitation (n=12)

Living review

1. Zeraatkar D, Ling M, Kirsh S, et al. Interventions for the management of Long COVID (post-COVID condition): living systematic review. *BMJ* 2024;387:e081318. doi: https://dx.doi.org/10.1136/bmj-2024-081318

Review aim: *To compare the effectiveness of interventions for the management of Long COVID (post-COVID condition)*

Evidence map

2. Gardiner L, Young HML, Drover H, et al. Reporting of pre-existing multiple long-term conditions in physical rehabilitation for Long COVID: a scoping review. *Eur Respir Rev* 2024;33 doi: https://dx.doi.org/10.1183/16000617.0123-2024

Review aim: *To identify the evidence describing physical rehabilitation interventions for adults living with Long COVID, to systematically map the reporting of pre-existing multiple long-term conditions (LTCs), and to describe the characteristics of physical rehabilitation interventions used in adults with both pre-existing LTCs and Long COVID*

Standard systematic reviews

3. Araujo Hana Gabriela S, Nunes Barbara Thiffani F, Toffolo Mayla Cardoso F, et al. Nutritional management of muscle mass loss in patients with post-COVID-19 syndrome: a scoping review. *HSJ* 2024;14:1-11. doi: https://dx.doi.org/10.21876/hsjhci.v14.2024.e1518

Review aim: *To review and map scientific evidence on nutritional management in the loss of muscle mass in patients with post-COVID syndrome*
NB this has a synthesis of findings and is not classified as a map

4. Chen YH, Hsieh YS. A narrative review of impact of incentive spirometer respiratory training in Long COVID. *Int J Gen Med* 2024;17:5233-46. doi: https://dx.doi.org/10.2147/IJGM.S492772

Review aim: *To explore the effectiveness of incentive spirometer respiratory training in alleviating symptoms among individuals recovering from Long COVID, and list assessment tools*

5. Curvelo RD, Ribeiro AC, da Silva Andre Uehara SC. Health care for patients with Long COVID: a scoping review. *Rev Esc Enferm USP* 2024;58:e20240056. doi: https://dx.doi.org/10.1590/1980-220X-REEUSP-2024-0056en

Review aim: *To assess how care for patients with Long COVID is being directed in health services*
NB a review of qualitative studies

6. Hawke LD, Nguyen ATP, Wang W, et al. Systematic review of interventions for mental health, cognition and psychological well-being in Long COVID. *BMJ Mental Health* 2024;27:09. doi: https://dx.doi.org/10.1136/bmjment-2024-301133

Review aim: *To synthesise the literature on publicly available interventions for mental health, cognition and psychological well-being among individuals with Long COVID*

7. Kruger AL, Haiduk B, Grau M. Identifying factors that might affect outcomes of exercise-based therapies in Long-COVID. *Diseases* 2024;12:15. doi: https://dx.doi.org/10.3390/diseases12110293

Review aim: *To examine changes in symptom severity, physical fitness, respiratory symptoms and quality of life during training, and identify factors that might influence the respective outcomes in Long COVID patients*

8. Mehraeen E, Yarmohammadi S, Mirzapour P, et al. Treatments for olfactory dysfunction in COVID-19: a systematic review. *Int Arch Otorhinolaryngol* 2024;28:e728-e43. doi: 10.1055/s-0044-1786046

Review aim: *To review the recent evidence on treatments for olfactory dysfunction (OD) in COVID-19*

9. Romanet C, Wormser J, Cachanado M, et al. Effectiveness of physiotherapy modalities on persisting dyspnoea in Long COVID: a systematic review and meta-analysis. *Respir Med* 2024;236:107909. doi: https://dx.doi.org/10.1016/j.rmed.2024.107909

Review aim: *To assess different physiotherapy treatments and their specific effects on dyspnoea among people presenting with persisting respiratory symptoms, following a SARS-CoV-2 infection, after being discharged from hospital*

10. Sanclemente-Cardoza V, Payan S, Harold A, et al. Approach to post-COVID-19 pulmonary fibrosis through out-of-hospital pulmonary rehabilitation. *Respirar* 2024;16:395-404. doi: https://dx.doi.org/10.55720/respirar.16.4.7

Review aim: *To describe the approach to post-COVID-19 pulmonary fibrosis through out-of-hospital pulmonary rehabilitation*

11. Treadwell JR, Wagner J, Reston JT, et al. Treatments for Long COVID autonomic dysfunction: a scoping review. *Clin Auton Res* 2024;10:10. doi: https://dx.doi.org/10.1007/s10286-024-01081-w

Review aim: *To summarise published effectiveness evidence, clinical practice guidelines, and unpublished/ongoing effectiveness studies, on treatment for Long COVID autonomic dysfunction*

12. Treder-Rochna N, Mankowska A, Kujawa W, et al. The effectiveness of olfactory training for chronic olfactory disorder following COVID-19: a systematic review. *Front Hum Neurosci* 2024;18:1457527. doi: https://dx.doi.org/10.3389/fnhum.2024.1457527

Review aim: *To assess the effectiveness of olfactory training for chronic olfactory disorder persisting for 30 days or longer after COVID-19 (alone or with pharmacological interventions and/or nutritional supplements)*

Treatment or rehabilitation and Prevention (n=1)

Standard systematic reviews

13. Livieratos A, Gogos C, Akinosoglou K. Beyond antivirals: alternative therapies for Long COVID. *Viruses* 2024;16:19. doi: https://dx.doi.org/10.3390/v16111795

Review aim: *To synthesise the current evidence on non-antiviral treatments for Long COVID, highlighting potential therapeutic options and identifying areas where further research is urgently needed*

Prevention (n=1)

Standard systematic reviews

14. Chow NKN, Tsang CYW, Chan YH, et al. The effect of pre-COVID and post-COVID vaccination on Long COVID: a systematic review and meta-analysis. *J Infect* 2024;89:106358. doi: https://dx.doi.org/10.1016/j.jinf.2024.106358

Review aim: *To investigate the effect of pre-COVID and post-COVID vaccination on Long COVID*

Prevalence of symptoms or effects (n=10)

Evidence map

15. Thomas B, Pattinson R, Edwards D, et al. Defining and measuring Long COVID fatigue: a scoping review. *BMJ Open* 2024;14:e088530. doi: https://dx.doi.org/10.1136/bmjopen-2024-088530

Review aim: *To identify the definitions of fatigue used in Long COVID research, and the dimensions of fatigue and fatigability they consider*

Standard systematic reviews

16. Alghamdi F, Mokbel K, Meertens R, et al. Bone mineral density, bone biomarkers, and joints in acute, post, and Long COVID-19: a systematic review. *Viruses* 2024;16:30. doi: https://dx.doi.org/10.3390/v16111694

Review aim: *To explore the effects of COVID-19 on bone mineral density (BMD), bone turnover markers (BTM), and joints*

17. An Y, Guo Z, Fan J, et al. Prevalence and measurement of post-exertional malaise in post-acute COVID-19 syndrome: a systematic review and meta-analysis. *Gen Hosp Psychiatry* 2024;91:130-42. doi: https://dx.doi.org/10.1016/j.genhosppsych.2024.10.011

Review aim: *To determine the prevalence of post-exertional malaise (PEM) in patients with post-acute COVID-19 syndrome (PACS)*

18. Cayon F, B A, Mendoza R, et al. Dermatological complications due to post-COVID-19 syndrome: a systematic review. *Med Int (Lond)* 2025;5:9. doi: https://dx.doi.org/10.3892/mi.2024.208

Review aim: *To conduct a systematic review of the dermatological lesions and symptoms presented during post-COVID syndrome, to detail the clinical spectrum of this condition and guide the therapeutic needs of those affected*

19. Dehghan M, Mirzohreh ST, Kaviani R, et al. A deeper look at long-term effects of COVID-19 on myocardial function in survivors with no prior heart diseases: a GRADE approach systematic review and meta-analysis. *Front Cardiovasc Med* 2024;11:1458389. doi: https://dx.doi.org/10.3389/fcvm.2024.1458389

Review aim: *To assess echocardiographic imaging to study the long-term impact of SARS-CoV-2 infection on heart function and the risk of future cardiac complications*

20. Dehlia A, Guthridge MA. The persistence of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) after SARS-CoV-2 infection: a systematic review and meta-analysis. *J Infect* 2024;89:106297. doi: https://dx.doi.org/10.1016/j.jinf.2024.106297

Review aim: *To determine the proportion of Long COVID patients that satisfy myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) diagnostic criteria*

21. Mohammed I, Podhala S, Zamir F, et al. Gastrointestinal sequelae of COVID-19: investigating post-infection complications - a systematic review. *Viruses* 2024;16:25. doi: https://dx.doi.org/10.3390/v16101516

Review aim: *To provide a comprehensive overview of the current understanding of gastrointestinal complications of COVID-19, their clinical implications, and the challenges they pose in the diagnosis and management of post-COVID-19 patients presenting with abdominal symptoms*

22. Mundra P, Kailani Z, Yaghoobi M, et al. Liver injury in post-acute COVID-19 syndrome: a systematic review and meta-analysis of early observational studies. *Can Liver J* 2024;7:470-89. doi: https://dx.doi.org/10.3138/canlivj-2024-0010

Review aim: *To assess the odds of liver injury in earlier experiencers of post-acute COVID-19 syndrome (PACS; Long COVID)*

23. Shan D, Wang C, Crawford T, et al. Association between COVID-19 infection and new-onset dementia in older adults: a systematic review and meta-analysis. *BMC Geriatr* 2024;24:940. doi: https://dx.doi.org/10.1186/s12877-024-05538-5

Review aim: *To ascertain the degree to which COVID-19 infection could impact the risk of subsequent new-onset dementia (NOD) development over time in older adults*

24. Stimart HL, Hipkins B. The negative effects of Long COVID-19 on cardiovascular health and implications for the presurgical examination. *J Osteopath Med* 2024;17:17. doi: https://dx.doi.org/10.1515/jom-2024-0109

Review aim: *To highlight what is known about the long-term cardiovascular sequelae of COVID-19 and implications on the presurgical cardiac evaluation in an adult patient*

Prevalence of symptoms or effects and Pathobiology or mechanisms (n=1)

Standard systematic reviews

25. Holland J, Sheehan D, Brown S, et al. Immune response and cognitive impairment in post-COVID syndrome: a systematic review. *Am J Med* 2024;02:02. doi: https://dx.doi.org/10.1016/j.amjmed.2024.09.022

Review aim: *To examine differences in immune response and cognition associated with post-COVID syndrome, and to explore whether these cognitive deficits were influenced by elevation in immune markers*

Risk factors with or without prevalence of symptoms or effects (n=3)

Standard systematic reviews

26. Georgakopoulou VE, Taskou C, Spandidos DA, et al. Long COVID-19 and pregnancy: a systematic review. *Biomed Rep* 2025;22:15. doi: https://dx.doi.org/10.3892/br.2024.1893

Review aim: *To synthesise the evidence on the prevalence, risk factors and clinical outcomes of Long COVID in pregnant women to improve understanding of its burden and implications for maternal health*

27. Navarro-Romero F, Olalla-Sierra J, Martin-Escalante MD. Potential role of lung ultrasonography in outpatient follow-up of patients with COVID-19: a systematic review. *Rev Clin Esp (Barc)* 2024;28:28. doi: https://dx.doi.org/10.1016/j.rceng.2024.11.006

Review aim: *To investigate the persistence of alterations in lung ultrasound of patients who have had COVID-19 pneumonia*

28. Rodrigues IFA, Silva KHCV e, Stephanus AD, et al. Cognitive and functional changes found in post-COVID-19 syndrome in elderly people: integrative review. *Cogitare Enferm* 2024;29:e93477-e77. doi: https://dx.doi.org/10.1590/ce.v29i0.93477

Review aim: *To identify the most frequent cognitive and functional changes in elderly people after the acute phase of COVID-19, and to identify possible risk factors that impact quality of life and functional capacity*

Risk factors with or without prevalence and Treatment or rehabilitation (n=2)

Standard systematic reviews

29. Mfouth K, Mbanya A, Coppieters Y. Digital approaches in post-COVID healthcare: a systematic review of technological innovations in disease management. *Biol Methods Protoc* 2024;9:bpae070. doi: https://dx.doi.org/10.1093/biomethods/bpae070

Review aim: *To critically assess the use of digital health technologies (DHTs), artificial intelligence (AI), and infodemiology in diagnosing, predicting, estimating prevalence, monitoring, and treating post-COVID conditions while addressing the associated ethical and practical challenges*

30. Miller CM, Borre C, Green A, et al. Postacute sequelae of COVID-19 in pediatric patients within the United States: a scoping review. *Am J Med Open* 2024;12:100078. doi: https://dx.doi.org/10.1016/j.ajmo.2024.100078

Review aim: *To synthesise the clinical epidemiology of paediatric post-acute sequelae of COVID-19 (PASC) in the USA*

Pathobiology or mechanisms (n=2)

Standard systematic reviews

31. Almulla AF, Thipakorn Y, Zhou B, et al. The tryptophan catabolite or kynurenine pathway in Long COVID disease: a systematic review and meta-analysis. *Neuroscience* 2024;563:268-77. doi: https://dx.doi.org/10.1016/j.neuroscience.2024.10.021

Review aim: *To investigate peripheral tryptophan (TRP) and TRP catabolite (TRYCAT) levels and the TRYCAT pathway in patients with Long COVID disease*

32. Shekhar P, Richter E, Fanning L, et al. Epigenetic changes in patients with post-acute COVID-19 symptoms (PACS) and Long-COVID: a systematic review. *Expert Rev Mol Med* 2024;26:e29. doi: https://dx.doi.org/10.1017/erm.2024.32

Review aim: *To summarise the available literature exploring epigenetic changes associated with post-acute COVID-19 symptoms (PACS) or Long COVID*

Experiences (n=1)

Standard systematic reviews

33. Eberhardt J, Gibson B, Portman RM, et al. Psychosocial aspects of the lived experience of Long COVID: a systematic review and thematic synthesis of qualitative studies. *Health Expect* 2024;27:e70071. doi: https://dx.doi.org/10.1111/hex.70071

Review aim: *To identify and explore key themes illustrating the psychosocial aspects of the lived experience of Long COVID*

2) Completed but not published reviews (n=2)

Risk factors with or without prevalence of symptoms or effects (n=1)

Standard systematic reviews

34. Lim, et al. Systematic review of risk factors and signs and symptoms of Long COVID among healthcare workers. PROSPERO 2024 CRD42024595317 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024595317

Review question: *What are the risk factors and signs and symptoms of Long COVID among healthcare workers?*

Pathobiology or mechanisms (n=1)

Standard systematic reviews

35. Abbas and Abbas. Corneal nerve fibre loss in patients with Long COVID identified through corneal confocalmicroscopy: a systematic review and meta-analysis. PROSPERO 2024 CRD42024598621 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024598621

Review question: *What is the effect of Long COVID infection on conreal neuron density?*

3) Protocols for ongoing reviews related to Long COVID (n=28)

Treatment or rehabilitation (n=5)

Standard systematic reviews

36. Ayyan, et al. Immunomodulatory therapy in children with pediatric multisystem inflammatory syndrome (PIMS, MIS-C): a systematic review and meta-analysis. PROSPERO 2024 CRD42024608094 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024608094

Review question: What is the efficacy and safety of immunomodulatory therapy in children with paediatric multisystem inflammatory syndrome (PIMS, MIS-C)?

37. Clark and McGrath. The efficacy of acceptance and compassion-based interventions for post-viral fatigue (including Long COVID and chronic fatigue syndrome/myalgic encephalomyelitis): a systematic review. PROSPERO 2024 CRD42024629759 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024629759

Review question: *Is there evidence to support the use of third-wave psychological therapies (i.e., therapies which take an acceptance and compassion-based approach) in the treatment of post-viral fatigue syndrome?*

38. Da Silva Mendonca, et al. The repercussions of inspiratory muscle training on exercise tolerance in patients with post-COVID syndrome: a systematic review. PROSPERO 2024

CRD42024599413 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024599413

Review question: *Is inspiratory muscle training capable of generating improvements in exercise tolerance in patients with Long COVID?*

39. Pimblett, et al. The effects of breathing exercises delivered face to face compared to those delivered remotely in patients diagnosed with Long COVID-19: a mixed qualitative evidence synthesis. PROSPERO 2024 CRD42024602330 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024602330

Review question: *What are the differences in face-to-face versus remote delivery of breathing exercises for Long COVID patients?*

40. Zhang, et al. Acupuncture for post-acute COVID-19 syndrome: a systematic review and meta-analysis. PROSPERO 2024 CRD42024590615 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024590615

Review question: *What is the clinical effect of acupuncture on post-acute COVID-19 syndrome?*

Prevention (n=1)

Standard systematic reviews

41. Bergroth, et al. A systematic literature review of the effectiveness of nirmatrelvir-ritonavir against post-acute COVID-19 outcomes. PROSPERO 2024 CRD42024606896 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024606896

Review question: *What is the published data on the effectiveness of Paxlovid treatment used during the acute phase of SARS-CoV-2 infection against post-acute outcomes, defined as any COVID-related clinical outcome that continues or develops four or more weeks after SARS-CoV-2 infection, compared to no treatment or standard care?*

Prevalence of symptoms or effects (n=10)

Standard systematic review and Evidence map

42. Adeyinka DA, Amah A, Husband A, et al. Mapping the landscape of mental health and Long COVID: a protocol for scoping review. *BMJ Open* 2024;14:e087436. doi: https://dx.doi.org/10.1136/bmjopen-2024-087436

Review aim: *To map and summarise the existing research on mental health conditions among Long COVID patients and highlight the knowledge gaps*

Standard systematic reviews

43. Borrero Sanchez, et al. Assessment of mental functions through the MOCA instrument in post-COVID syndrome: systematic review. PROSPERO 2024 CRD42024598065 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024598065

Review question: *What is the use of the Montreal Cognitive Assessment (MoCA) instrument in the assessment of mental function in subjects with post-COVID syndrome?*

44. Grima, et al. New onset autoimmune disease following a SARS-CoV-2 infection: a systematic review. PROSPERO 2024 CRD42024594446 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024594446

Review question: *What is the risk of incident (i.e., new onset) autoimmune disease following a SARS-CoV-2 infection among adults (≥18 years)?*

45. Lai and Chen. The prevalence of Long COVID in the United States: a systematic review and narrative synthesis. PROSPERO 2024 CRD42024612070 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024612070

Review question: *To raise awareness of Long COVID's prevalence in the United States, particularly concerning cardiovascular, pulmonary, and neuropsychiatric organ symptoms*

46. Ma, et al. What is the difference between SARS, MERS, and COVID-19 sequelae in adults: answer based on systematic review and meta-analysis. PROSPERO 2024 CRD42024594087 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024594087

Review question: *What is the difference in the incidence of sequelae among adults who recovered from severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and coronavirus disease 2019 (COVID-19)?*

47. Oyelade and Arowosegbe. Effect of Long COVID on mental health and quality of life: a systematic review and meta-analysis. PROSPERO 2024 CRD42024604847 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024604847

Review questions: *1. What is the effect of Long COVID on the mental health of patients? 2. What is the effect of Long COVID on the quality of life of patients? 3. How are quality of life and mental health measured in Long COVID patients?*

48. Shafiei, et al. Non-infectious COVID-19-related osteonecrosis of the jaws: a systematic review. PROSPERO 2024 CRD42024569252 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024569252

Review question: *Does COVID-19 and its treatment drugs affect the occurrence of non-fungal osteonecrosis of the jaw (ONJ) in patients without a history of bone cancer or bisphosphonate intake?*

49. Tuy Batista, et al. Occurrence of heart disease in post-COVID conditions: a systematic review in South America. PROSPERO 2024 CRD42024615618 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024615618

Review question: *What is the incidence or prevalence of cardiac sequelae or worsening in post-COVID conditions among patients with or without a history of heart disease in South America?*

50. Wen, et al. The effect of SARS-CoV-2 on cardiovascular performance in athletes: a systematic review. PROSPERO 2024 CRD42024601161 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024601161

Review question: *1. How does SARS-COV-2 affect athletes' physical performance or sporting activity longer than an acute period? 2. Are there lingering side-effects?*

51. Zare, et al. Ophthalmic complications associated with Long COVID: a systematic review of the literature. PROSPERO 2025 CRD42025632238 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42025632238

Review question: *What are the reported ophthalmic complications in the patients with Long COVID based on existing evidence?*

Prevalence of symptoms or effects and Treatment or rehabilitation (n=1)

Standard systematic reviews

52. Gallardo Herrerias and Castillo Palmero. Long-term neuropsychiatric impact of COVID-19 on individuals with autism spectrum disorders: a systematic review and meta-analysis. PROSPERO 2024 CRD42024627815 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024627815

Review question: *To investigate the long-term neuropsychiatric impacts of COVID-19 on individuals with autism spectrum disorders (ASD) to develop effective treatments and intervention approaches*

Prevalence of symptoms or effects and Prevention (n=1)

Standard systematic reviews

53. Akumbom, et al. Neurological symptom burden in Long COVID and associations with COVID-19 vaccine uptake: a systematic review and meta-analysis. PROSPERO 2024 CRD42024629280 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024629280

Review question: *To estimate the prevalence of neurological symptoms in adults with Long COVID-19; and to determine the association between COVID-19 vaccine uptake and neurological symptoms of Long COVID*

Risk factors with or without prevalence of symptoms or effects (n=2)

Standard systematic reviews

54. Deravi, et al. Olfactory and gustatory recovery time evaluation of COVID-19: a systematic review and meta-analysis. PROSPERO 2024 CRD42024623799 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024623799

Review question: *What is the duration of olfactory and gustatory recovery in individuals who have experienced COVID-19, and are there factors that influence the recovery time?*

55. Ventura Botomé, et al. Relationship between the severity of SARS-CoV-2 infection and symptoms of depression, anxiety and stress: a systematic review. PROSPERO 2024 CRD42024611798 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024611798

Review question: *What is the relationship between the severity of SARS-CoV-2 infection and symptoms of anxiety, stress and depression?*

Pathobiology or mechanisms (n=4)

Standard systematic reviews

56. Daodu and Kayyali. Deciphering Long COVID: a systematic review and meta-analysis of hypothesised mechanisms. PROSPERO 2024 CRD42024613544 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024613544

Review question: *What are the proposed mechanisms underlying Long COVID, and how do these mechanisms contribute to the persistence and variability of symptoms in affected individuals?*

57. dos Santos de Amorim, et al. Inflammatory markers in post-acute COVID syndrome: systematic review and meta-analysis of interleukins IL-1β, IL-6 and IL-8. PROSPERO 2024 CRD42024610712 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024610712

Review question: *Would the incorporation of the measurement of interleukins IL-1β, IL-6 and IL-8 into clinical practice be relevant as possible biomarkers of post-COVID-19?*

58. Kumar Endukuru, et al. A systematic review of mechanistic insights linking circulatory biomarkers to cognitive decline in Long COVID-19 syndrome. PROSPERO 2024 CRD42024581186 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024581186

Review question: *What are the key circulatory biomarkers associated with cognitive decline in Long COVID-19 syndrome, and how do they mechanistically influence cognitive function?*

59. Olarinde, et al. Autonomic, cardiovascular and respiratory responses in individuals with Long-COVID during an orthostatic stress test - a systematic review. PROSPERO 2024 CRD42024615872 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024615872

Review question: *In individuals experiencing Long COVID, do autonomic, cardiovascular, respiratory responses differ from non-Long COVID during orthostatic stress testing?*

Diagnosis or monitoring tools (n=1)

Standard systematic review

60. Mustafa, et al. Post COVID-19 condition: diagnostic guidelines. PROSPERO 2024 CRD42024526430 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024526430

Review questions: *In people with suspected post-COVID condition (PCC), should we use C-reactive protein (CRP), and D-dimers or not? In people with suspected PCC who have fatigue or dizziness, should we use validated tests to assess functional status or not? In people with suspected PCC who have respiratory or cardiac complaints: should we use Troponin; computed tomography of the chest (CT Chest); B-type natriuretic peptide (BNP)/ NT-proBNP; electrocardiogram (ECG); ambulatory oximetry; a Holter monitor; an echocardiogram; a chest x-ray; or spirometry and full lung function tests (PFTs) or not? In people with suspected PCC who have fatigue or dizziness, should we use Vitamin B12 or not? In people with suspected PCC, should we use iron studies or not? In people with suspected PCC who have dizziness, should we use the 10-minute standing test or not?*

Health and social or economics (n=1)

Standard systematic review

61. Shinde, et al. Assessing the epidemiological and financial burden of Long COVID: a systematic review from India. PROSPERO 2024 CRD42024596439 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024596439

Review question: *The aim of this systematic literature review is to assess the epidemiology of Long COVID and analyse its financial impact on the Indian healthcare system.*

Experiences (n=2)

Standard systematic review

62. Domanska, et al. Experiences of children and young people living with Long COVID: a systematic review and meta-synthesis of qualitative research. PROSPERO 2024 CRD42024607831 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024607831

Review question: *What themes emerge from qualitative studies exploring the impact of Long COVID on the daily lives of children and young people?*

63. Schulze, et al. Healthcare pathways and patient experiences in the ambulatory treatment of Long-COVID: a systematic review. PROSPERO 2024 CRD42024615709 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024615709

Review question: *What are the care experiences and pathways of Long COVID patients in outpatient settings?*

Appendix 1: Search strategies

MEDLINE ALL

(includes: Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE Daily and Ovid MEDLINE)
via Ovid http://ovidsp.ovid.com/
Date range: 1946 to January 03, 2025
Date searched: 6th January 2025
Records retrieved: 240

1 Post-Acute COVID-19 Syndrome/ (4052)
2 COVID-19 post-intensive care syndrome.mp. (6)
3 COVID-19/ or SARS-CoV-2/ (290260)
4 Syndrome/ (124814)
5 Survivors/ (32228)
6 4 or 5 (156917)
7 3 and 6 (1238)
8 1 or 2 or 7 (5192)
9 ((long adj (covid$ or covid-19 or covid19 or coronavirus)) or longcovid$).ti,ab,kf,ot,bt. (6664)
10 ((post adj (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) or postcovid$).ti,ab,kf,ot,bt. (12925)
11 ((post acute or postacute) adj2 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (1299)
12 PASC.ti,ab,kf,ot,bt. (1182)
13 (sequela$ adj6 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (3499)
14 (chronic adj2 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (413)
15 ((long$ term or longterm) adj3 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (2849)
16 (persist$ adj6 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (5258)
17 ((post discharg$ or postdischarg$) adj5 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (153)
18 ((long haul$ or longhaul$) adj6 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (297)
19 (surviv$ adj3 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (3640)
20 (after adj (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (11507)
21 ((ongoing or lasting or prolonged or fluctuat$ or residual$ or continu$ or linger$) adj6 (symptom$ or effect$ or complication$ or sequela$ or syndrome or illness$ or disorder$ or dysfunction$ or impair$ or impact$ or consequence$) adj6 (covid$ or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)).ti,ab,kf,ot,bt. (3550)
22 or/9-21 (37923)
23 8 or 22 (38467)
24 systematic review.mp,pt. (377031)
25 search:.tw. (739806)
26 meta analysis.mp,pt. (325007)
27 review.pt. (3434109)
28 24 or 25 or 26 or 27 (4024327)
29 23 and 28 (6149)

30 qualitative review$.ti,ab,kf,ot,bt. (1998)
31 realist synthes$.ti,ab,kf,ot,bt. (477)
32 realist review$.ti,ab,kf,ot,bt. (830)
33 (meta-synthes$ or metasynthes$).ti,ab,kf,ot,bt. (2547)
34 (living adj2 (review$ or map$)).ti,ab,kf,ot,bt. (875)
35 pooled analysis.ti,ab,kf,ot,bt. (14364)
36 or/30-35 (20860)
37 23 and 36 (80)
38 29 or 37 (6160)
39 (202410$ or 202411$ or 202412$ or 202501$).dt. (402869)
40 38 and 39 (240)
41 exp animals/ not humans.sh. (5293727)
42 40 not 41 (240)
43 preprint.pt. (34082)
44 42 not 43 (240)

CINAHL Plus
via EBSCO https://www.ebsco.com/
Date range: Inception to 20250103
Date searched: 6th January 2025
Records retrieved: 254

S1	(MH "Post-Acute COVID-19 Syndrome")	1,673
S2	TI (long N1 (covid* or covid-19 or covid19 or coronavirus) or longcovid*) OR AB (long N1 (covid* or covid-19 or covid19 or coronavirus) or longcovid*)	2,008
S3	TI (post N1 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2) or postcovid*) OR AB (post N1 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2) or postcovid*)	2,118
S4	TI (("post acute" or post-acute or postacute) N3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB (("post acute" or post-acute or postacute) N3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	451
S5	TI PASC OR AB PASC	134
S6	TI (sequela* N6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB (sequela* N6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	708
S7	TI (chronic N2 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB (chronic N2 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	312
S8	TI ((long* N1 term or long-term or longterm) N3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB ((long* N1 term or long-term or longterm) N3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	1,244
S9	TI (persist* N6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB (persist* N6 (covid*	1,147

	or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	
S10	TI ((post N1 discharg* or post-discharg* or postdischarg*) N4 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB ((post N1 discharg* or post-discharg* or postdischarg*) N4 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	57
S11	TI ((long N1 haul* or long-haul* or longhaul*) N6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB ((long N1 haul* or long-haul* or longhaul*) N6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	88
S12	TI (surviv* N3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB (surviv* N3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	1,214
S13	TI (after N1 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB (after N1 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	5,082
S14	TI ((ongoing or lasting or prolonged or fluctuat* or residual* or continu* or linger*) N6 (symptom* or effect* or complication* or sequela* or syndrome or illness* or dysfunction* or disorder* or impair* or impact* or consequence*) N6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)) OR AB ((ongoing or lasting or prolonged or fluctuat* or residual* or continu* or linger*) N6 (symptom* or effect* or complication* or sequela* or syndrome or illness* or dysfunction* or impair* or impact* or consequence*) N6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2))	1,034
S15	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14	12,847
S16	(MH "Systematic Review")	140,238
S17	(ZT "systematic review")	167,153
S18	(ZT "meta analysis")	60,035
S19	(MH "Meta Analysis")	76,182
S20	TI (meta-analys* or metaanaly*) OR AB (meta-analys* or metaanaly*)	123,215
S21	TI systematic* N1 review* OR AB systematic* N1 review*	174,686
S22	S16 OR S17 OR S18 OR S19 OR S20 OR S21	286,936
S23	(ZT "review")	373,601
S24	AB systematic* or AB methodologic* or AB quantitative* or AB research* or AB literature* or AB studies or AB trial* or AB effective*	2,935,200
S25	(S23 AND S24)	173,900
S26	S22 OR S25	451,739
S27	S15 AND S26	778
S28	(MH "Meta Synthesis")	2,445
S29	TI qualitative N1 review* OR AB qualitative N1 review*	4,396
S30	TI (realist N1 (review* or synthes*)) OR AB (realist N1 (review* or synthes*))	666
S31	TI (meta-synthes* or metasynthes*) OR AB (meta-synthes* or metasynthes*)	2,101

S32	TI (living N2 (review* or map*)) AND (living N2 (review* or map*))	245
S33	TI pooled N1 analys* OR AB pooled N1 analys*	8,797
S34	S28 OR S29 OR S30 OR S31 OR S32 OR S33	16,833
S35	S15 AND S34	33
S36	S27 OR S35	790
S37	EM 202409-	77,490
S38	(ZD "in process")	1,690,084
S39	S37 OR S38	1,767,574
S40	S36 AND S39	254

Cochrane Database of Systematic Reviews (CDSR)
via Wiley http://onlinelibrary.wiley.com/
Issue: Issue 1 of 12, January 2025
Date searched: 6th January 2025
Records retrieved: 1

ID	Search	Hits
#1	MeSH descriptor: [Post-Acute COVID-19 Syndrome] this term only	305
#2	MeSH descriptor: [COVID-19] this term only	8450
#3	MeSH descriptor: [SARS-CoV-2] this term only	3667
#4	MeSH descriptor: [Syndrome] this term only	6886
#5	MeSH descriptor: [Survivors] this term only	1841
#6	#2 or #3	8712
#7	#4 or #5	8721
#8	#6 and #7	108
#9	#1 or #8	389
#10	(long next (covid* or covid-19 or covid19 or coronavirus) or longcovid*):ti,ab,kw	616
#11	(post next (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2) or postcovid*):ti,ab,kw	963
#12	((post acute or postacute) near/2 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	1725
#13	PASC:ti,ab,kw	86
#14	(sequela* near/6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	207
#15	(chronic near/2 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	46
#16	((long* term or longterm) near/3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	1035
#17	(persist* near/6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	338
#18	((post discharg* or postdischarg*) near/5 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	1712
#19	((long haul* or longhaul*) near/6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	847
#20	(surviv* near/3 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	227
#21	(after next (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	375
#22	((ongoing or lasting or prolonged or fluctuat* or residual* or continu* or linger*) near/6 (symptom* or effect* or complication* or sequela* or syndrome or illness* or dysfunction* or disorder* or impair* or impact* or consequence*)	214

	near/6 (covid* or covid-19 or covid19 or coronavirus or SARS-CoV-2 or SARS-CoV2 or SARSCoV2 or SARSCoV-2)):ti,ab,kw	
#23	{OR #10-#22}	3309
#24	#9 or #23 with Cochrane Library publication date Between Oct 2024 and Jan 2025, in Cochrane Reviews, Cochrane Protocols	1

Epistemonikos
https://www.epistemonikos.org/
Date searched: 6th January 2025
Records retrieved: 681

1. (title:((title:("long covid" OR long-covid OR longcovid OR "long covid 19" OR long-covid-19 OR longcovid19 OR "long covid19" OR long-covid19 OR "longcovid 19" OR longcovid-19 OR "long coronavirus" OR long-coronavirus OR longcoronavirus) OR abstract:("long covid" OR long-covid OR longcovid OR "long covid 19" OR long-covid-19 OR longcovid19 OR "long covid19" OR long-covid19 OR "longcovid 19" OR longcovid-19 OR "long coronavirus" OR long-coronavirus OR longcoronavirus)) OR (title:("post covid" OR post-covid OR postcovid OR "post covid 19" OR post-covid-19 OR postcovid19 OR "post covid19" OR post-covid19 OR "postcovid 19" OR postcovid-19 OR "post coronavirus" OR post-coronavirus OR postcoronavirus OR "post SARS CoV 2" OR post-SARS-CoV-2 OR postSARSCoV2 OR "post SARS CoV2" OR "post-SARS CoV2" OR "postSARS CoV2" OR "post SARS-CoV2" OR post-SARS-CoV2 OR postSARS-CoV2 OR "post SARSCoV 2" OR "post-SARSCoV 2" OR "postSARSCov 2" OR "post SARSCoV-2" OR "post-SARSCoV-2" OR "postSARSCoV-2" OR PASC) OR abstract:("post covid" OR post-covid OR postcovid OR "post covid 19" OR post-covid-19 OR postcovid19 OR "post covid19" OR post-covid19 OR "postcovid 19" OR postcovid-19 OR "post coronavirus" OR post-coronavirus OR postcoronavirus OR "post SARS CoV 2" OR post-SARS-CoV-2 OR postSARSCoV2 OR "post SARS CoV2" OR "post-SARS CoV2" OR "postSARS CoV2" OR "post SARS-CoV2" OR post-SARS-CoV2 OR postSARS-CoV2 OR "post SARSCoV 2" OR "post-SARSCoV 2" OR "postSARSCov 2" OR "post SARSCoV-2" OR "post-SARSCoV-2" OR "postSARSCoV-2" OR PASC))) OR abstract:((title:("long covid" OR long-covid OR longcovid OR "long covid 19" OR long-covid-19 OR longcovid19 OR "long covid19" OR long-covid19 OR "longcovid 19" OR longcovid-19 OR "long coronavirus" OR long-coronavirus OR longcoronavirus) OR abstract:("long covid" OR long-covid OR longcovid OR "long covid 19" OR long-covid-19 OR longcovid19 OR "long covid19" OR long-covid19 OR "longcovid 19" OR longcovid-19 OR "long coronavirus" OR long-coronavirus OR longcoronavirus)) OR (title:("post covid" OR post-covid OR postcovid OR "post covid 19" OR post-covid-19 OR postcovid19 OR "post covid19" OR post-covid19 OR "postcovid 19" OR postcovid-19 OR "post coronavirus" OR post-coronavirus OR postcoronavirus OR "post SARS CoV 2" OR post-SARS-CoV-2 OR postSARSCoV2 OR "post SARS CoV2" OR "post-SARS CoV2" OR "postSARS CoV2" OR "post SARS-CoV2" OR post-SARS-CoV2 OR postSARS-CoV2 OR "post SARSCoV 2" OR "post-SARSCoV 2" OR "postSARSCov 2" OR "post SARSCoV-2" OR "post-SARSCoV-2" OR "postSARSCoV-2" OR PASC) OR abstract:("post covid" OR post-covid OR postcovid OR "post covid 19" OR post-covid-19 OR postcovid19 OR "post covid19" OR post-covid19 OR "postcovid 19" OR postcovid-19 OR "post coronavirus" OR post-coronavirus OR postcoronavirus OR "post SARS CoV 2" OR post-SARS-CoV-2 OR postSARSCoV2 OR "post SARS CoV2" OR "post-SARS CoV2" OR "postSARS CoV2" OR "post SARS-CoV2" OR post-SARS-CoV2 OR postSARS-CoV2 OR "post SARSCoV 2" OR "post-SARSCoV 2" OR "postSARSCov 2" OR "post SARSCoV-2" OR "post-SARSCoV-2" OR "postSARSCoV-2" OR PASC))))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 6, SR = 115

2. (title:("post acute" OR post-acute OR postacute) OR abstract:("post acute" OR post-acute OR postacute)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR

SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 0, SR = 13

3. (title:("long haul" OR "long hauler" OR "long haulers" OR long-haul* OR longhaul*) OR abstract:("long haul" OR "long hauler" OR "long haulers" OR long-haul* OR longhaul*)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 0, SR = 0

4. (title:(sequela*) OR abstract:(sequela*)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 3, SR = 39

5. (title:("chronic covid" OR "chronic covid-19" OR "chronic covid19" OR "chronic coronavirus" OR "chronic SARS CoV 2" OR "chronic SARS-CoV-2" OR "chronic SARSCoV2" OR "chronic SARS CoV2" OR "chronic SARS-CoV2" OR "chronic SARSCoV 2" OR "chronic SARSCoV-2") OR abstract:("chronic covid" OR "chronic covid-19" OR "chronic covid19" OR "chronic coronavirus" OR "chronic SARS CoV 2" OR "chronic SARS-CoV-2" OR "chronic SARSCoV2" OR "chronic SARS CoV2" OR "chronic SARS-CoV2" OR "chronic SARSCoV 2" OR "chronic SARSCoV-2"))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 0, SR = 0

6. (title:("long term" OR "longer term" OR long-term OR longer-term) OR abstract:("long term" OR "longer term" OR long-term OR longer-term)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 15, SR = 103

7. (title:(persist*) OR abstract:(persist*)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 6, SR = 72

8. (title:("post discharge" OR post-discharge OR postdischarge) OR abstract:("post discharge" OR post-discharge OR postdischarge)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 1, SR = 3

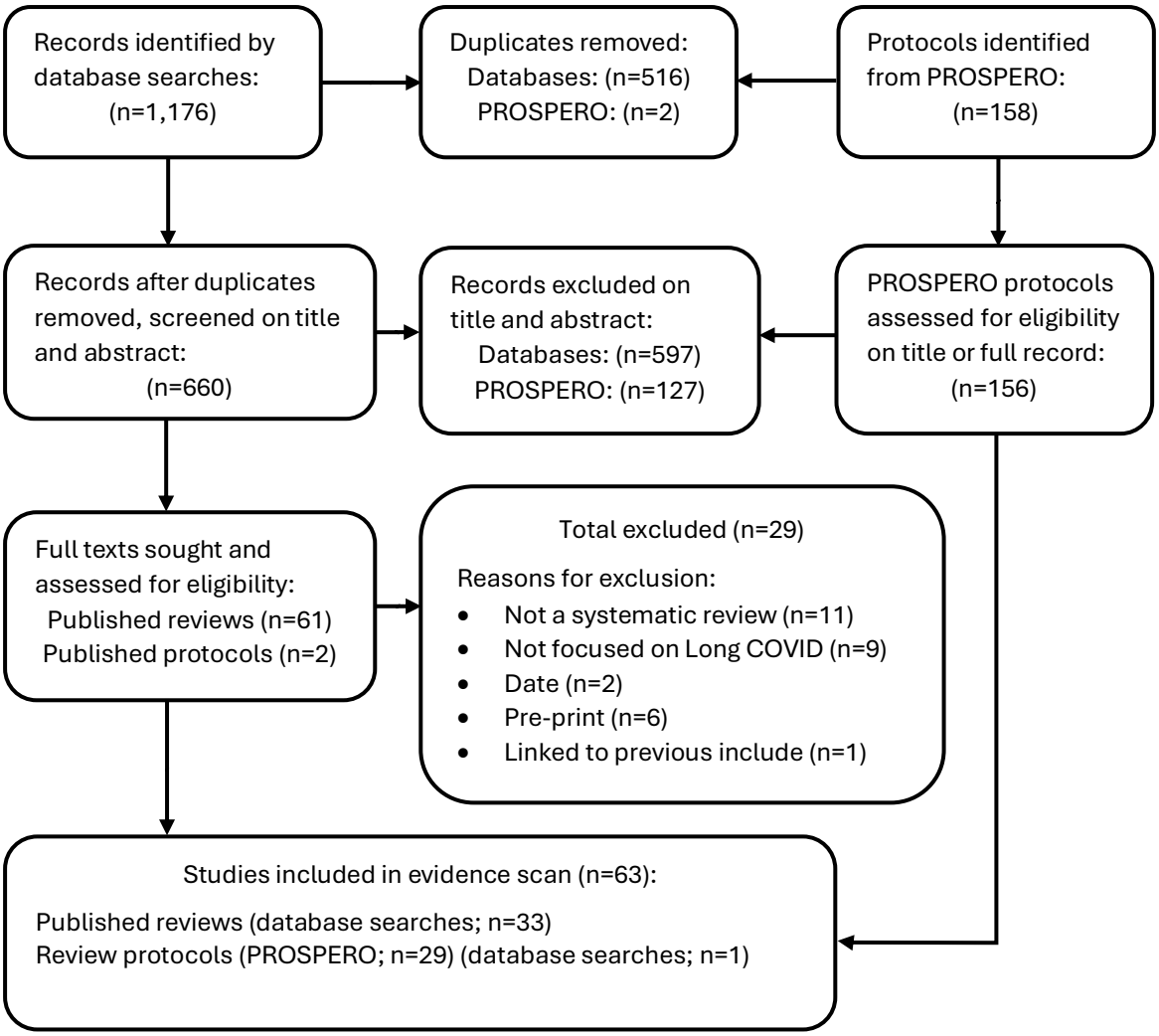
9. (title:(survivor* OR survived) OR abstract:(survivor* OR survived)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 0, SR = 38

10. (title:(ongoing OR lasting OR prolonged OR fluctuat* OR residual* OR continu* OR linger*) OR abstract:(ongoing OR lasting OR prolonged OR fluctuat* OR residual* OR continu* OR linger*)) AND (title:(symptom* OR effect* OR complication* OR sequela* OR syndrome OR illness* OR disorder* OR dysfunction* OR impair* OR impact* OR consequence* OR manifest*) OR abstract:(symptom* OR effect* OR complication* OR sequela* OR syndrome OR illness* OR disorder* OR dysfunction* OR impair* OR impact* OR consequence* OR manifest*)) AND (title:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2) OR abstract:(covid OR covid-19 OR covid19 OR coronavirus OR "SARS CoV 2" OR SARS-CoV-2 OR SARSCoV2 OR "SARS CoV2" OR SARS-CoV2 OR "SARSCoV 2" OR SARSCoV-2))
Limits = added to database from 03/10/2024 onwards, broad synthesis = 33, SR = 234

PROSPERO search strategy
https://www.crd.york.ac.uk/prospero/
Searched from 3rd October, 2024 to 6th January, 2025
Records identified: 158

#1	long COVID OR post COVID OR PASC NOT Animal DB WHERE CD FROM 03/10/2024 TO 06/01/2025	56
#2	persisting OR persistent OR long term OR ongoing OR prolonged OR lingering OR dysfunction OR recovered OR survivors OR long haul OR long hauler OR long haulers OR post discharge OR postdischarge OR sequela OR sequelae OR chronic OR post-acute NOT Animal DB WHERE CD FROM 03/10/2024 TO 06/01/2025	6708
#3	COVID OR COVID-19 OR COVID19 OR coronavirus OR SARS-CoV-2 OR SARS-CoV2 OR SARSCoV2 OR SARSCoV-2 OR 2019-nCoV NOT Animal DB WHERE CD FROM 03/10/2024 TO 06/01/2025	320
#4	#2 AND #3	140
#5	#1 OR #4	158

Appendix 2: Flow of studies through the review



Appendix 3: Summary of reports and updates

Table 2: Summary of reviews (November 2021 to January 2025)

Report date	**Jan 2025**	**Oct 2024**	**July 2024**	**Apr 2024**	**Jan 2024**	**Oct 2023**	**July 2023**	**Apr 2023**	**Jan 2023**	**Oct 2022**	**July 2022**	**Apr 2022**	**Nov 2021**
Period searched	Oct '24 to Jan '25	Jul to Oct '24	Apr to Jul '24	Jan to Apr '24	Oct '23 to Jan '24	Jul to Oct '23	Apr to Jul '23	Jan to Apr '23	Oct '22 to Jan '23	Jul to Oct '22	Apr to Jul '22	Nov '21 to Apr '22	Up to Nov '21
Main focus by review type													
Published reviews	**33**	**38**	**33**	**36**	**42**	**46**	**31**	**37**	**50**	**29**	**28**	**54**	**51**
Treatment[1]	12	11	13	5	7	11	5	5	5	5	3	11	3
Treatment[1] and prevention	1		1			1	1	2		2			
Treatment[1] and pathobiology[4]						1							
Treatment,[1] prevention and prevalence[2]						1							
Prevention	1	1	2	1	3			1	2	1			1
Prevalence[2]	10	14	7	21	18	20	16	21	31	19	22	38	47
Prevalence[2] and treatment[1]			2	1	2		1						
Prevalence[2] and pathobiology[4]	1						1	1					
Prevalence,[2] treatment[1] and economics						1							
Prevalence,[2] treatment,[1] and pathobiology[4]				1									
Risk factors[3]	3	8	4	5	9	1	6	3	8		3		
Risk factors[3] and treatment[1]	2		1		1				1	1			
Risk factors[3] and prevention									1				
Pathobiology[4]	2	3	3	2	2	6	1	3	2				
Risk factors[3] and pathobiology[4]						2						5	
Health and social or economics						1				1			
Experiences[5]	1												
Public, patient involvement						1							
Diagnosis or monitoring tools		1											
Treatment,[1] prevention, prevalence,[2] pathobiology[4] and diagnosis								1					

Completed not published	**2**			**1**	**1**	**3**	**1**	**5**		**2**		**5**	**9**
Treatment[1]				1			1	2				1	1
Prevalence[2]					1	2		3		2		4	7
Risk factors[3]	1					1							
Pathobiology[4]	1												
Experiences[5]													1
Ongoing reviews (protocols)	**28**	**35**	**43**	**62**	**41**	**41**	**52**	**68**	**56**	**63**	**59**	**73**	**77**
Treatment[1]	5	10	11	20	13	8	26	27	33	24	12	17	15
Treatment[1] and prevention						1		1		4			
Prevention	1		4	3	2	2	2		1		2	4	
Prevalence[2]	10	13	16	24	14	22	12	18	13	30	31	47	59
Prevalence[2] and treatment[1]	1		1		3		1		1				
Prevalence[2] and pathobiology[4]						1							
Prevalence[2] and prevention	1												
Risk factors[3]	2	6	6	8	7	6	6	13	4		10		
Risk factors[3] and treatment[1]					1								
Risk factors[3] and prevention				2					1				
Pathobiology[4]	4	5	1	4	1		3	4	3		3		
Pathobiology[4] and treatment[1]			1										
Risk factors[3] and pathobiology[4]							1			4		5	
Diagnosis or monitoring tools	1	1						3					
Health and social or economics	1			1		1	1	1		1	1		3
Experiences[5]	2		3					1					

1. Treatment = treatment or rehabilitation. 2. Prevalence = prevalence of symptoms or effects. 3. Risk factors = risk factors with or without prevalence of symptoms or effects. 4. Pathobiology = pathobiology or mechanisms. 5. Experiences = experiences with or without prevalence of symptoms or effects.

NB: Caution is required in drawing direct comparisons across time. Records for the October 2022 and subsequent updates were identified using a more comprehensive search strategy and a different combination of databases, compared with the April and July 2022 reports. Pre-prints and early online versions of reviews were also included in the April and July 2022 reports. The November report searched the COVID-19 living map, as the main source, and covered a longer period than other reports.

The NIHR Policy Research Programme Reviews Facility aims to put the evidence into development and implementation of health policy through:

- Undertaking policy-relevant systematic reviews of health and social care research
- Developing capacity for undertaking and using reviews
- Producing new and improved methods for undertaking reviews
- Promoting global awareness and use of systematic reviews in decision-making

The Reviews Facility is a collaboration between the following centres:
EPPI Centre (Evidence for Policy and Practice Information Centre),
UCL Institute of Education, University College London;
CRD (Centre for Reviews and Dissemination), University of York;
and the London School of Hygiene and Tropical Medicine.

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The views expressed in this work are those of the authors and do not necessarily reflect the views of the collaborating centres or the funder. All errors and omissions remain those of the authors.

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