

Supplementary Data 1. Search Strategy

Embase

'coronavirus disease 2019'/exp
((long OR 'long term' OR 'long lasting' OR Prolonged) NEAR/3 ('2019 ncov' OR ncover OR covid OR 'sars cov 2')):ti,ab
(('long* haul*' OR longhaul* OR 'long* tail*' OR longtail* OR longduration* OR 'long duration*' OR longest* OR 'long last*') NEAR/3 ('2019 ncov' OR ncover OR covid OR 'sars cov 2')):ti,ab
((chronic OR post-infect* OR 'post acute' OR persistent) NEAR/6 ('2019 ncov' OR ncover OR covid OR 'sars cov 2')):ti,ab
('post covid' OR postcovid OR 'Post acute covid*' OR 'postacute covid*'):ti,ab
#1 OR #2 OR #3 OR #4 OR #5
'hospital discharge'/exp
((long OR 'long term' OR 'long lasting' OR post-acute OR post-covid OR Postdischarge OR Post-discharge OR chronic OR persist* OR linger*) NEAR/3 (effect* OR symptom* OR recover* OR therapy OR sequelae OR complication* OR consequence* OR syndrome* OR outcome*)):ti,ab
((prolong* OR longer OR extended OR lengthy OR lengthen OR increase* OR drawn-out OR protracted) NEAR/4 recover*):ti,ab
#7 OR #8 OR #9
'fatigue'/de OR 'exhaustion'/de OR 'fatigue assessment scale'/exp OR 'fatigue assessment instrument'/exp OR 'postviral fatigue syndrome'/exp OR 'Fatigue Severity Scale'/exp OR 'Fatigue Impact Scale'/exp
(fatigue* OR tired* OR exhaustion OR exhausted OR lethargy OR sluggish OR 'postviral syndrome' OR 'post viral syndrome' OR 'fatigue severity scale' OR 'myalgic encephalomyelitis'):ti,ab
#11 OR #12
#6 AND #10 AND #13

MEDLINE

COVID-19/
((long OR long term OR long lasting OR Prolonged) adj3 (2019 ncov OR ncover OR covid OR sars cov 2)).ti,ab.
((long* haul* OR longhaul* OR long* tail* OR longtail* OR longduration* OR long duration* OR longest* OR long last*) adj3 (2019 ncov OR ncover OR covid OR sars cov 2)).ti,ab.
((chronic OR post infect* OR post acute OR persistent) adj6 (2019 ncov OR ncover OR covid OR sars cov 2)).ti,ab.
(post covid OR postcovid OR Post acute covid* OR postacute covid*).ti,ab.
or/1-5
Patient Discharge/
((long OR long term OR long lasting OR post acute OR post covid OR Postdischarge OR Post discharge OR chronic OR persist* OR linger*) adj3 (effect* OR symptom* OR recover* OR therapy OR sequelae OR complication* OR consequence* OR syndrome* OR outcome*)).ti,ab.
((prolong* OR longer OR extended OR lengthy OR lengthen OR increase* OR drawn out OR protracted) adj4 recover*).ti,ab.
or/7-9
Fatigue/ OR Fatigue Syndrome, Chronic/ OR Muscle Weakness/
(fatigue assessment scale OR fatigue assessment instrument OR Fatigue Severity Scale OR Fatigue Impact Scale).ti,ab.
(fatigue* OR tired* OR exhaustion OR exhausted OR lethargy OR sluggish OR postviral syndrome OR post viral syndrome OR fatigue severity scale OR myalgic encephalomyelitis).ti,ab.
or/11-13
6 AND 10 AND 14

Coronavirus Research Database (ProQuest)

TI ((long OR "long term" OR "long lasting" OR Prolonged) N2 ("2019 ncov" OR ncov OR covid OR "sars cov 2")) OR AB ((long OR "long term" OR "long lasting" OR Prolonged) N3 ("2019 ncov" OR ncov OR covid OR "sars cov 2"))

TI (("long* haul*" OR longhaul* OR "long* tail*" OR longtail* OR longduration* OR "long duration*" OR longlast* OR "long last*") N2 ("2019 ncov" OR ncov OR covid OR "sars cov 2")) OR AB (("long* haul*" OR longhaul* OR "long* tail*" OR longtail* OR longduration* OR "long duration*" OR longlast* OR "long last*") N2 ("2019 ncov" OR ncov OR covid OR "sars cov 2"))

TI ((chronic OR post-infect* OR "post acute" OR persistent) N5 ("2019 ncov" OR ncov OR covid OR "sars cov 2")) OR AB ((chronic OR post-infect* OR "post acute" OR persistent) N5 ("2019 ncov" OR ncov OR covid OR "sars cov 2"))

TI ("post covid" OR postcovid OR "Post acute covid*" OR "postacute covid*") OR AB ("post covid" OR postcovid OR "Post acute covid*" OR "postacute covid*")

1 OR 2 OR 3 OR 4

TI ("fatigue assessment scale" OR "fatigue assessment instrument" OR "postviral fatigue syndrome" OR "Fatigue Severity Scale" OR "Fatigue Impact Scale") OR AB ("fatigue assessment scale" OR "fatigue assessment instrument" OR "postviral fatigue syndrome" OR "Fatigue Severity Scale" OR "Fatigue Impact Scale")

TI (fatigue* OR tired* OR exhaustion OR exhausted OR lethargy OR sluggish OR "postviral syndrome" OR "post viral syndrome" OR "fatigue severity scale" OR "myalgic encephalomyelitis") OR AB (fatigue* OR tired* OR exhaustion OR exhausted OR lethargy OR sluggish OR "postviral syndrome" OR "post viral syndrome" OR "fatigue severity scale" OR "myalgic encephalomyelitis")

6 OR 7

S5 AND S8

Google Scholar

2019nCoV|"2019 nCoV|CoV|coronavirus"|"2019 novel|new coronavirus|cov"|"wuhan coronavirus|cov|ncov|outbreak"|"wuhan*coronavirus|cov|ncov|outbreak"|"wuhan**coronavirus|cov|ncov|outbreak"|"coronavirus|cov|ncov*wuhan" fatigue|exhaustion

LitCovid

("long term"[tiab] OR "long lasting"[tiab] OR Prolonged[tiab] OR chronic[tiab] OR post-infect*[tiab] OR "post acute"[tiab]) AND (fatigue*[tiab] OR tired*[tiab] OR exhaustion[tiab] OR exhausted[tiab] OR lethargy[tiab] OR "postviral syndrome"[tiab] OR "post viral syndrome"[tiab] OR "myalgic encephalomyelitis"[tiab])

Supplementary Data 2. Data extraction tool

First Author	Date	Country of Authorship	Primary Topic	Specific Topic(s)	Study Design (re. long COVID)	N	Age (Years)	Gender (% Female)	Eligibility Criteria*	COVID Hospital Status	Time Post-COVID (from recovery/onset)	Weeks from COVID Onset	Fatigue Measurement Tool (FMT)*	Method of FMT Administration
Arnold	Apr-21	United Kingdom	Symptomatology	1) Symptomatology; 2) Respiratory functioning; 3) Quality of life; 4) Haematology	Cross-Sectional	110	M = 60 IQR = 46-73	38%	-	Inpatient	M = 83 days IQR = 74-88 All ~ 4 months	16 weeks	SF-36 GSQ	Summed rating scale in-person
Bellani	Jan-21	Italy	Respiratory	1) Respiratory functioning; 2) Symptomatology	Cross-Sectional	238	M = 61 IQR = 50-71	40%	-	Inpatient (+ICU)		21 weeks	Novel GSQ	Binary scale (Y/N) via phone
Carli	Jul-20	Italy	Symptomatology	1) Symptomatology	Short Study	143	\bar{X} = 56.5 SD = 14.6	37%	-	Inpatient (+ICU)	\bar{X} = 36.1 days SD = 12.9	9 weeks	Novel GSQ	Binary scale (Y/N) in-person
Carvalho-Schneider	Oct-20	France	Symptomatology	1) Symptomatology	Longitudinal	150	\bar{X} = 49.0 SD = 15.0	56%	Excl: ICU or residential care	Mixed (-ICU)	T1: \bar{X} = 32.7 days, SD = 2.5* T11: \bar{X} = 59.7 days, SD = 1.7*	5 weeks 9 weeks	-	-
Cheng	Jan-21	United Kingdom	Symptomatology	1) Symptomatology; 2) Respiratory functioning	Cross-Sectional	113	M = 73 IQR = 57-84	44%	-	Inpatient (+ICU)		13 weeks	Novel GSQ	Binary scale (Y/N) in-person
Chopra	Nov-20	USA	Symptomatology	1) Symptomatology	Short Study	488	M = 62 IQR = 50-72	48%	-	Inpatient (+ICU)	All ~ 60 days	13 weeks	-	-
Cortés-Telles	Jun-20	Mexico	Symptomatology	1) Symptomatology; 2) Respiratory functioning	Cross-Sectional	186	\bar{X} = 47.0 SD = 13.0	39%	Excl: Critical cases	Mixed	\bar{X} = 59.5 days* SD = 13.5	9 weeks	Novel GSQ	Binary scale (Y/N) in-person
Daher	Oct-20	Germany	Respiratory	1) Symptomatology; 2) Respiratory functioning; 3) Cognitive/Psych func.; 4) Inflamm. response	Cross-Sectional	33	\bar{X} = 64.0 SD = 3.0	33%	Incl: Severe COVID diagnosis Excl: ARDS diagnosis & ICU	Inpatient	M = 56 days IQR = 48-71	12 weeks	Novel GSQ	Binary scale (Y/N) in-person
D'Cruz	Jan-21	United Kingdom	Symptomatology	1) Symptomatology; 2) Respiratory functioning	Cross-Sectional	119	\bar{X} = 58.7 SD = 14.4	38%	-	Inpatient (+ICU)	M = 61 days IQR = 51-67	13 weeks	Novel GSQ	Binary scale (Y/N) in-person
De Lorenzo	Oct-20	Italy	Symptomatology	1) Symptomatology	Cross-Sectional	185	M = 57 IQR = 48-67	34%	-	Mixed	M = 23 days IQR = 20-29	7 weeks	-	-
Froidure	Apr-21	Belgium	Respiratory	1) Respiratory functioning; 2) Symptomatology	Cross-Sectional	134	M = 60 IQR = 53-68	41%	Excl: Follow-ups 60<x<120 days	Inpatient (+ICU)	M = 95 days IQR = 86-107	18 weeks	Novel GSQ	Binary scale (Y/N) in-person
Garrigues	Aug-20	France	Symptomatology	1) Symptomatology	Short Study	120	\bar{X} = 63.2 SD = 15.7	37%	-	Multiple Cohorts: Inpatient ICU	\bar{X} = 110.9 days* SD = 11.1	16 weeks	Novel GSQ	Binary scale (Y/N) via phone
Halpin	Feb-21	United Kingdom	Symptomatology	1) Symptomatology; 2) Rehabilitation needs; 3) Psych. wellbeing; 4) Quality of life; 5) Other	Cross-Sectional	100	M = 70.5 / 58.5 R = 20-93 / 34-84	46%	Incl: Discharged Excl: Comorbid neuro. condition	Multiple Cohorts: Inpatient ICU	\bar{X} = 48.0 days R = 29-71	11 weeks	Novel GSQ	Likert scale via phone
Huang (I)	Jan-21	China	Symptomatology	1) Symptomatology; 2) Respiratory functioning; 3) Quality of life; 4) Bloods	Cross-Sectional	1,733	M = 57 IQR = 47-65	48%	Excl: Comorbid psych. Condition; Re-admission; Immobility issues	Inpatient (+ICU)	M = 153 days IQR = 146-160	26 weeks	Novel GSQ	Binary scale (Y/N) in-person
Huang (II)	Jun-20	China	Respiratory	1) Respiratory functioning	Cross-Sectional	57	\bar{X} = 46.7 SD = 13.8	54%	Excl: Previous pulmonary resection, neurological disease, or mental illness	Inpatient	All ~ 30 days	8 weeks	-	-
Iqbal	Feb-21	Pakistan	Symptomatology	1) Symptomatology	Cross-Sectional	158	\bar{X} = 32.1 SD = 12.4	55%	Excl: Psychiatric Illness	Mixed	\bar{X} = 38.1 days SD = 20.0	7 weeks	Novel GSQ	Binary scale (Y/N) via phone
Jacobs	Dec-20	USA	Symptomatology	1) Symptomatology; 2) Quality of life	Longitudinal	183	M = 57 IQR = 48-68	38%	Incl: Hospital for 3+ days Excl: Dementia/Delirium	Inpatient	T1 = 0 days T2 = 14 days T11 = 21 days T11 = 35 days (IQR=30-40)	4 weeks 6 weeks 7 weeks 9 weeks	PROMIS GSQ	Likert scale via phone/email
Lerum	Apr-21	Norway	Respiratory	1) Respiratory functioning	Cross-Sectional	103	M = 59 IQR = 49-72	48%	-	Multiple Cohorts: Inpatient ICU	M = 83 days* IQR = 73-90	12 weeks	-	-
Liang	Oct-20	China	Symptomatology	1) Symptomatology; 2) Respiratory functioning	Cross-Sectional	76	M = 41.3 IQR = 13.8	72%	Excl. Comorbid neuro. condition; Underwent pulmonary resection	Inpatient (+ICU)	T1 = 1 month, T1 = 2 months, T11 = 3 months; SD = 1	5 weeks 13 weeks 17 weeks	Novel GSQ	Binary scale (Y/N) in-person
Loerinc	Mar-21	USA	Other	1) Transition of COVID care at discharge; 2) Symptomatology	Cross-Sectional	310	M = 58 Range = 23-99	51%	-	Inpatient (+ICU)	All = Discharge	4 weeks	Novel GSQ	Obtained from physician discharge notes
Mandal	Sep-20	United Kingdom	Symptomatology	1) Long COVID; 2) Respiratory functioning	Cross-Sectional	384	\bar{X} = 59.9 SD = 16.1	38%	-	Inpatient (+ICU)	M = 54 days IQR = 47-59	12 weeks	Novel GSQ	Likert scale via phone / in-person
Miyazato	Oct-20	Japan	Symptomatology	1) Symptomatology	Longitudinal	63	\bar{X} = 48.1 SD = 18.5	33%	-	Inpatient	\bar{X} = 108.0 days, SD = 23.0 (T1 ~ 60 days, T11 ~ 120 days)*	9 weeks 17 weeks	Novel GSQ	Binary scale (Y/N) via phone
Mo	Jun-20	China	Respiratory	1) Respiratory functioning	Short Study	110	\bar{X} = 49.1 SD = 4.0	50%	Excl: Critical cases	Inpatient	All = Discharge	4 weeks	-	-
Moreno-Pérez	Mar-21	Spain	Symptomatology	1) Symptomatology; 2) Respiratory functioning	Cross-Sectional	277	M = 62 IQR = 53-72	47%	-	Mixed	M = 77 days* IQR = 71-85	11 weeks	Novel GSQ	Binary scale (Y/N) in-person
Osikomaya	Mar-21	Nigeria	Symptomatology	1) Symptomatology	Cross-Sectional	274	\bar{X} = 41.8 SD = 11.8	34%	-	Outpatient	M = 15 days IQR = 14-17	6 weeks	Novel GSQ	Binary scale (Y/N) in-person
Prieto	Mar-21	Argentina	Symptomatology	1) Symptomatology	Cross-Sectional	85	\bar{X} = 43.0 SD = 13.0	45%	-	Mixed	M = 53 days* IQR = 31-65	8 weeks	Novel GSQ	Binary scale (Y/N) in-person
Raman	Nov-20	United Kingdom	Symptomatology	1) Symptomatology; 2) Neurological functioning; 3) Respiratory func.; 4) Psych. Wellbeing; Other	Cross-Sectional	58	\bar{X} = 55.4 SD = 13.2	41%	Incl: Moderate-to-severe COVID	Inpatient (+ICU)	M = 2.3 months* IQR = 2.06-2.53	10 weeks	Fatigue Severity Scale	Likert scale in-person
Rosales-Castillo	Jan-21	Spain	Symptomatology	1) Symptomatology; 2) Psychological wellbeing	Cross-Sectional	118	\bar{X} = 60.2 SD = 15.1	44%	-	Inpatient	\bar{X} = 50.8 days SD = 6.0	11 weeks	Novel GSQ	Binary scale (Y/N) in-person
Shah	Mar-21	Canada	Respiratory	1) Respiratory functioning; 2) Symptomatology	Cross-Sectional	60	M = 67 IQR = 54-74	32%	-	Inpatient	\bar{X} = 11.7 weeks* SD = n/a	12 weeks	-	-
Simani	Feb-21	Iran	Symptomatology	1) Symptomatology; 2) Psychological wellbeing	Cross-Sectional	120	\bar{X} = 54.6 SD = 16.9	33%	Excl: Previous life-threatening infection	Inpatient (+ICU)	All ~ 6 months	30 weeks	Fukuda questionnaire	Likert scale via phone
Syles	Apr-21	United Kingdom	Symptomatology	1) Symptomatology; 2) Haematology; 3) Respiratory functioning	Cross-Sectional	134	M = 58 R = 25-89	34%	Excl: Mild symptoms or frail	Multiple Cohorts: Inpatient ICU	M = 113 days, R = 46-167 (T1~61, T11~88, T11~113, T11~147)	13 weeks 17 weeks 20 weeks 25 weeks	Novel GSQ	Binary scale (Y/N) in-person
Taboada	Dec-20	Spain	Quality of Life	1) Quality of life; 2) Symptomatology	Cross-Sectional	91	\bar{X} = 65.5 SD = 10.4	35%	-	ICU	All ~ 6 months	30 weeks	-	-
Townsend (I)	Nov-20	Ireland	Symptomatology	1) Symptomatology; 2) Haematology	Cross-Sectional	128	\bar{X} = 49.5 SD = 15.0	54%	Incl: 6+ weeks post-COVID	Mixed	M = 72 days IQR = 62-87	14 weeks	Chalder Fatigue Scale (incl. Psych/Phys sub-scales)	Likert scale in-person
Venturelli	Jan-21	Italy	Respiratory	1) Symptomatology	Cross-Sectional	767	\bar{X} = 63.0 SD = 13.6	33%	-	Inpatient (+ICU)	M = 105 days* IQR = 94-127	15 weeks	Novel GSQ	Binary scale (Y/N) in-person
Walle-Hansen	Mar-21	Norway	Quality of Life	1) Quality of life	Cross-Sectional	106	\bar{X} = 74.3 R = 60-96	43%	-	Inpatient (+ICU)	M = 186 IQR = n/a	31 weeks	-	-
Wang	May-20	China	Symptomatology	1) Symptomatology; 2) Respiratory functioning; 3) Haematology	Longitudinal	131	M = 49 IQR = 36-62	55%	Incl: Objective improvements (incl. fever, chest CT, respiratory symptoms)	Inpatient	T1 = 0 days, T11 = 7-14 days T11 = 21-28 days	4 weeks 6 weeks 8 weeks	Novel GSQ	Binary scale (Y/N) in-person
Wong	Nov-20	Canada	Symptomatology	1) Symptomatology	Short Study	78	\bar{X} = 62.0 SD = 16.0	36%	-	Inpatient	M = 13 weeks* IQR = 11-14	13 weeks	-	-
Xiong	Sep-20	China	Symptomatology	1) Symptomatology; 2) Psychological wellbeing	Cross-Sectional	538	M = 52 IQR = 41-62	55%	Incl: 3+ months post-COVID	Inpatient	M = 97 days IQR = 95-102	18 weeks	Novel GSQ	Binary scale (Y/N) via phone
Yu	Mar-20	China	Respiratory	1) Respiratory functioning	Cross-Sectional	32	M = 44.4 IQR = N/A	31%	Incl: 3 chest CT scans (2-hospital; 1-post)	Inpatient (+ICU)	M = 9 days IQR = N/A	5 weeks	Novel GSQ	Binary scale (Y/N) in-person

excl. COVID test result, age & hospital status

* = from symptom onset or hospitalisation

[blank] = from hospital discharge or COVID recovery

From COVID onset = +28 days until "recovery"

Novel GSQ = Novel general symptom questionnaire