

eAppendix 1

Follow-up Questions

a) Have you recovered from your coronavirus?

1. Yes, I have fully recovered.
2. I am mostly recovered.
3. No, I am still experiencing symptoms

Participants were considered fully recovered when they chose option 1 in the above question.

b) How many days were you affected by the virus?

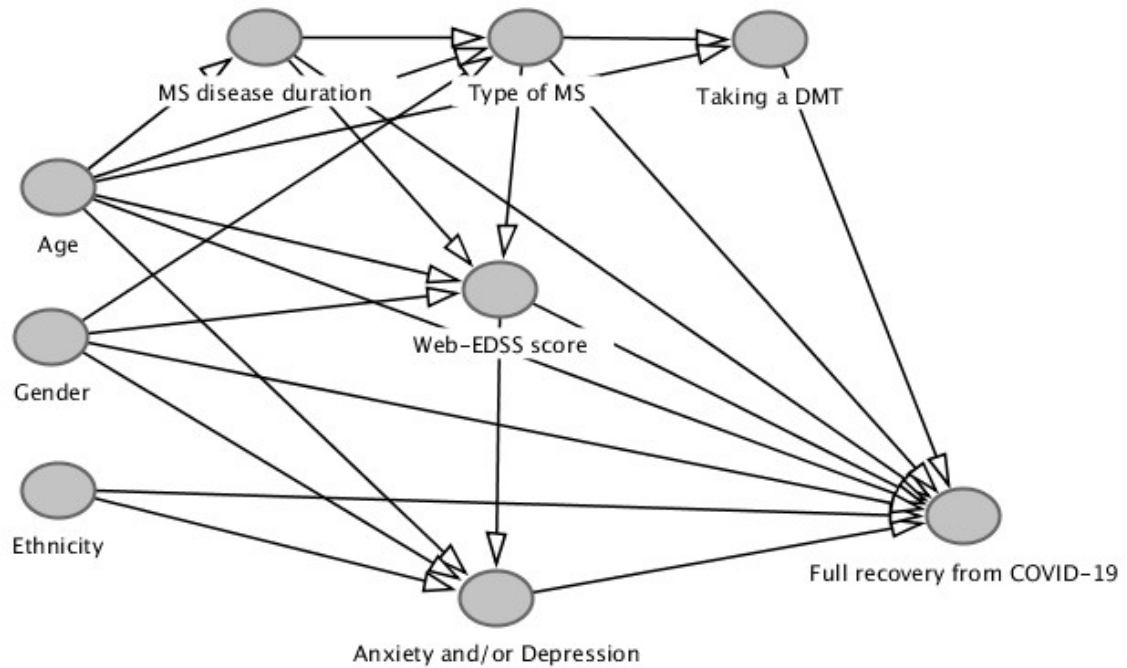
c) Which of the following symptoms do you still have? (Tick all that apply)

1. High temperature
2. Coughs
3. Breathing difficulties
4. Chest tightness
5. Sore throat
6. Runny nose
7. Sneezing
8. Headache
9. Change of taste or smell
10. Feeling queasy or throwing up
11. Diarrhoea
12. Stomach ache
13. New or worse fatigue
14. New muscle aches

eAppendix 2

A directed acyclic graph (DAG; eFigure 1) was used to identify potential confounding factors for inclusion in the multivariable Cox regression analysis.

eFigure 1. The directed acyclic graph used for identifying confounding factors.



The following code can be used at “<http://www.dagitty.net/dags.html>” to replicate the DAG:

```
dag {  
  
bb="0,0,1,1"  
  
"Anxiety and/or Depression" [pos="0.284,0.611"]  
  
"Full recovery from COVID-19" [pos="0.518,0.549"]  
  
"MS disease duration" [pos="0.168,0.184"]  
  
"Taking a DMT" [pos="0.421,0.186"]
```

"Type of MS" [pos="0.299,0.184"]

"Web-EDSS score" [pos="0.286,0.376"]

Age [pos="0.065,0.299"]

Ethnicity [pos="0.065,0.529"]

Gender [pos="0.062,0.412"]

"Anxiety and/or Depression" -> "Full recovery from COVID-19"

"MS disease duration" -> "Full recovery from COVID-19"

"MS disease duration" -> "Type of MS"

"MS disease duration" -> "Web-EDSS score"

"Taking a DMT" -> "Full recovery from COVID-19"

"Type of MS" -> "Full recovery from COVID-19"

"Type of MS" -> "Taking a DMT"

"Type of MS" -> "Web-EDSS score"

"Web-EDSS score" -> "Anxiety and/or Depression"

"Web-EDSS score" -> "Full recovery from COVID-19"

Age -> "Anxiety and/or Depression"

Age -> "Full recovery from COVID-19"

Age -> "MS disease duration"

Age -> "Taking a DMT"

Age -> "Type of MS"

Age -> "Web-EDSS score"

Ethnicity -> "Anxiety and/or Depression"

Ethnicity -> "Full recovery from COVID-19"

Gender -> "Anxiety and/or Depression"

Gender -> "Full recovery from COVID-19"

Gender -> "Type of MS"

Gender -> "Web-EDSS score"

}

eTable 1. Characteristics of MS patients with COVID-19 who updated (participants) or did not update (non-participants) their recovery status.

	Participants n=571	Participants with confirmed COVID-19 ^a n=187	Non-participants n=489	p value ^b
Age, mean (SD), years	49 (11)	48 (11)	48 (11)	0.254
Women, No. (%)	441 (77.2)	145 (77.5)	390 (79.8)	0.260
White ethnicity, No. (%)	541 (94.7)	178 (95.2)	454 (92.8)	0.198
Comorbidities^c, No. (%)				
Diabetes	17 (3.8) n=443	4 (2.9) n=136	8 (2.4) n=332	0.266
Heart disease	8 (1.8) n=443	2 (1.5) n=136	5 (1.5) n=332	0.748
Hyperlipidemia	30 (6.8) n=443	8 (5.9) n=136	23 (6.9) n=332	0.932
Hypertension	48 (10.8) n=443	10 (7.4) n=136	54 (16.3) n=332	0.027
Peripheral vascular disease	1 (0.2) n=443	0 (0) n=136	0 (0) n=332	Not applicable
Kidney disease	7 (1.6) n=443	2 (1.5) n=136	5 (1.5) n=332	0.934
Liver disease	1 (0.2) n=443	0 (0) n=136	2 (0.6) n=332	Not applicable
Lung disease	51 (11.5) n=443	11 (8.1) n=136	53 (16) n=332	0.072
Anxiety and/or Depression ^d	147 (38.1) n=386	47 (33.8) n=139	118 (37.2) n=317	0.815
Web-EDSS score ^e , median (IQR)	4 (3-6.5) n=397	4 (3-6.5) n=147	4 (3-6.5) n=288	0.872
Web-EDSS score = 0–2.5, No. (%)	92 (23.2)	30 (20.4)	71 (24.7)	0.909

eTable 2. Results of the univariable Cox regression analysis of pre-COVID-19 factors associated with recovery from COVID-19.

	Included in the analysis, No.	Censored, No.	HR	Lower 95% CI	Upper 95% CI
Age (one-year increase)	556	115	0.996	0.988	1.005
Women vs men	556	115	0.756	0.609	0.937
All other ethnicities vs White ethnicity	556	115	1.374	0.937	2.016
MS disease duration (one-year increase)	538	112	0.994	0.984	1.004
Anxiety and/or depression ^{a, b}	314	65	0.668	0.512	0.871
Web-EDSS ^b	380	74	-	-	-
Score = 0–2.5 (reference)	-	-	1	1	1
Score = 3–3.5	-	-	1.083	0.758	1.548
Score = 4–5.5	-	-	0.794	0.597	1.090
Score = 6–6.5	-	-	0.775	0.558	1.077
Score ≥ 7	-	-	0.795	0.532	1.187
MS type	538	112	-	-	-
RRMS (reference)	-	-	1	1	1
SPMS	-	-	0.958	0.743	1.235
PPMS	-	-	1.263	0.852	1.873
Taking a DMT	556	115	0.978	0.812	1.179
<p>HR = unadjusted hazard ratio; 95% CI = 95% confidence interval; DMT = disease-modifying therapy; MS = multiple sclerosis; PPMS = primary progressive MS; RRMS = relapsing remitting MS; SPMS = secondary progressive MS; Web-EDSS = web-based Expanded Disability Status Scale</p> <p>^a Participants with Hospital Anxiety and Depression Scale scores ≥11 for anxiety or depression were considered as having probable anxiety or depression, respectively.</p> <p>^b Prior to COVID-19 onset</p>					

eAppendix 3

COVID-19 symptom duration among participants with confirmed COVID-19

In the UK, mass testing for COVID-19 was implemented on May 28, 2020. Three hundred and one participants (52.7%) had reported COVID-19 before this date, when they could not have been tested outside of hospital admission. A total of 187 participants (32.7%) had their diagnosis confirmed by a healthcare provider or testing. A hundred and thirty participants with confirmed COVID-19 (69.5%) reported full recovery. Their median (IQR) symptom duration was 10 (7–20.5) days (n=129) with 20 experiencing symptoms for ≥ 4 weeks and 2 for ≥ 12 weeks. Participants with confirmed COVID-19 and persistent symptoms at their last follow-up had been followed up for a median (IQR) of 49 (35.5–151.25) days (n=52) with 41 having lasting symptoms for ≥ 4 weeks and 19 for ≥ 12 weeks. As a result, at least 33.7% of participants with confirmed COVID-19 (n=61) had lasting COVID-19 symptoms for ≥ 4 weeks and 11.6% (n=21) for ≥ 12 weeks.