

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/140490/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Garjani, Afagh, Middleton, Rodden, Tuite-Dalton, Katherine, Coles, Alasdair, Dobson, Ruth, Duddy, Martin, Hughes, Stella, Pearson, Owen, Rog, David, Tallantyre, Emma, das Nair, Roshan, Nicholas, Richard and Evangelou, Nikos 2021. COVID-19 is associated with new symptoms of multiple sclerosis that are prevented by disease modifying therapies. Multiple Sclerosis and Related Disorders 52, 102939. 10.1016/j.msard.2021.102939

Publishers page: <http://dx.doi.org/10.1016/j.msard.2021.102939>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



Appendix A



Your MS and COVID-19 Questionnaire

You had previously reported that you have experienced symptoms of coronavirus infection.

In this brief questionnaire, we would like to ask you about your recovery.

- As part of your coronavirus infection, did you experience fever?

- ☐ Yes, but I have recovered now
- ☐ No
- ☐ Yes, and I still have a fever

- At worst, how disabling was your coronavirus infection?

- ☐ It was not disabling at all
- ☐ I was unwell, but I could look after myself
- ☐ I received help for everyday activities even before the infection, and my needs did not change
- ☐ I received more help from my family/friends/carers, but I could have done without help
- ☐ I needed more help and could not have managed without it

- Most people with MS experience some worsening of their pre-existing MS symptoms

during infections such as a cold, flu, or urinary infection. Compared to the last infection you remember before the coronavirus, how did your coronavirus infection affect your pre-existing MS symptoms:

- ☐ My MS symptoms were no worse during the coronavirus infection
- ☐ My MS symptoms were worse during the coronavirus infection, but it was the same as my last infection
- ☐ My MS symptoms were worse during the coronavirus infection, but it was less than my last infection

☐ My MS symptoms were worse during the coronavirus infection, and it was worse than my last infection

☐ I cannot remember

- Have your pre-existing MS symptoms gone back to how they were before the coronavirus infection?

☐ Yes

☐ No

If “Yes”: How long did the worsening of your pre-existing MS symptoms last before improving to the state before the coronavirus infection?

☐ 1-3 days

☐ 4-6 days

☐ A week

☐ Two weeks

☐ Three weeks

☐ Four weeks

☐ More than four weeks

- Did you experience any new MS symptoms during/since your coronavirus infection that you had not experienced before?

☐ Yes

☐ No

If “Yes”: What were the new MS symptoms? (please tick only those symptoms that are new, and you had not experienced before, and please tick all that apply)

☐ New weakness

Was this new weakness:

☐ Mild (did not limit my daily activities)

☐ Moderate (limited my daily activities, but less than 50%)

- Severe (limited my daily activities more than 50%)
- New sensory symptoms (numbness, pins and needles, pain)
 - Were these new sensory symptoms (numbness, pins and needles, pain)
 - Mild (did not limit my daily activities)
 - Moderate (limited my daily activities, but less than 50%)
 - Severe (limited my daily activities more than 50%)
- New loss of balance
 - Was this new loss of balance:
 - Mild (did not limit my daily activities)
 - Moderate (limited my daily activities, but less than 50%)
 - Severe (limited my daily activities more than 50%)
- New bladder/bowel problems
 - Were these new Bladder/bowel problems:
 - Mild (did not limit my daily activities)
 - Moderate (limited my daily activities, but less than 50%)
 - Severe (limited my daily activities more than 50%)
- New problems with eyesight (blurred vision, double vision)
 - Were these new problems with eyesight (blurred vision, double vision):
 - Mild (did not limit my daily activities)
 - Moderate (limited my daily activities, but less than 50%)
 - Severe (limited my daily activities more than 50%)
- New fatigue (Not worsening fatigue)
 - Was this new fatigue (not worsening fatigue):
 - Mild (did not limit my daily activities)
 - Moderate (limited my daily activities, but less than 50%)
 - Severe (limited my daily activities more than 50%)
- New memory problems
 - Were these new memory problems:
 - Mild (did not limit my daily activities)
 - Moderate (limited my daily activities, but less than 50%)
 - Severe (limited my daily activities more than 50%)
- New mobility problems

Were these new mobility problems:

- ☐ Mild (did not limit my daily activities)
- ☐ Moderate (limited my daily activities, but less than 50%)
- ☐ Severe (limited my daily activities more than 50%)
- ☐ Other (If your new MS symptom is not list above, please let us know more)

Were these new other MS symptoms:

- ☐ Mild (did not limit my daily activities)
- ☐ Moderate (limited my daily activities, but less than 50%)
- ☐ Severe (limited my daily activities more than 50%)

- Have you recovered from these new MS symptoms?

- ☐ Yes
- ☐ No

- How long did these new MS symptoms go on for?

- ☐ Less than a day
- ☐ 1-3 days
- ☐ 4-6 days
- ☐ A week
- ☐ Two weeks
- ☐ Three weeks
- ☐ Four weeks
- ☐ More than four weeks

- What was the outcome of these new symptoms?

- ☐ Treated with a steroid
- ☐ Admitted to hospital
- ☐ I self-managed
- ☐ Other