

-----  
04-Feb-2021  
BMJ-2021-064273.R1

Post-COVID syndrome in individuals hospitalised with COVID-19: a retrospective cohort study

Dear Mr. Ayoubkhani

Thank you for sending us your revised paper. We appreciate your attempts to respond to our comments and suggestions, as well as those of the external peer reviewers, and we still recognise its potential importance and relevance to general medical readers. However, we are concerned that our prior decision letter was not clear, as we had attempted to explain that we did not believe an analysis that uses the general population as a control is sufficiently rigorous and reliable for the BMJ. We explain our concern in greater detail below.

We hope very much that you will be willing and able to revise your paper as explained below so that we will be in a better position to understand your study and decide whether the BMJ is the right journal for it. We are looking forward to reading the revised version and, we hope, reaching a decision. Because this manuscript is being considered on a Fast Track basis, we expect the revision within 10-14 days.

When you return your revised manuscript, please note that The BMJ requires an ORCID ID for corresponding authors of all research articles. If you do not have an ORCID ID, registration is free and takes a matter of seconds.

Yours sincerely,

Joseph S Ross MD MHS  
Associate Editor BMJ  
joseph.ross@yale.edu

To start your revision, please click this link or log in to your account: \*\*\* PLEASE NOTE: This is a two-step process. After clicking on the link, you will be directed to a webpage to confirm. \*\*\*

[https://mc.manuscriptcentral.com/bmj?URL\\_MASK=7929fa71c22d45f19a5a3e8f0593ebbf](https://mc.manuscriptcentral.com/bmj?URL_MASK=7929fa71c22d45f19a5a3e8f0593ebbf)

Editor's comments:

Revision of the study we are considering on a Fast Track basis, an observational, retrospective, matched cohort study of patients admitted to NHS hospitals in the UK for COVID-19 (and discharged alive) in order to characterize the epidemiology of post-COVID syndrome by quantifying rates of organ-specific impairment following recovery from COVID-19 compared to controls.

First, we are concerned that we were not explicit enough in asking for a more apples-to-apples comparison, comparing longitudinal outcomes among patients hospitalized for COVID to patients hospitalized for other lung infections (either viral or bacterial). The authors explain that an analysis of this type was already done and published as a research letter in JAMA (<https://jamanetwork.com/journals/jama/fullarticle/2774380>). However, we still believe this is the right approach for this study and that this study, using the broader swatch of data, examining a broader range of outcomes, and for a longer period of time (ie, not just readmission or death within 60 days after discharge) will be sufficiently novel and important. We are not interested in an analysis that compares hospitalized COVID patients to the general population, since we don't believe you can adequately match to draw meaningful inferences, and it is not a fair assessment of "covid" since 80% of

individuals who are infected are never hospitalized. As we said before, a control group in which we would have confidence is patients hospitalized for other pneumonias, viral or bacterial.

Second, we asked for standardized differences between the matched groups, those with COVID and the controls. Instead, the authors provided standardized differences only for those with COVID who could and could not be matched. It's not clear to us if this was a misunderstanding, but the purpose of the standardized differences is to demonstrate that your case and control populations are sufficiently balanced on all characteristics used for matching that we can infer that any difference in outcomes experienced is a consequence of COVID. Table 1 should not be a report of the characteristics of the full sample, only the propensity matched sample being used for the analysis. If the propensity match is not adequate ( $SMD < 0.1$  - for more information consider this article: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3472075/>), there can be little confidence in the analysis.

Finally, given the anticipated impact of these two comments, please update your response letter to all previous comments made by the peer reviewers and editors accordingly. In your response, please be sure to provide, point by point, your replies to the comments made by the reviewers and the editors, explaining how you have dealt with them in the paper.

A minor point, please do not use the acronym 'PCS', which will not be widely understood. Instead, please write out 'post-covid syndrome'.