PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Impact of the COVID-19 pandemic on utilisation of healthcare services: a systematic review
AUTHORS	Moynihan, Ray; Sanders, Sharon; Michaleff, Zoe; Scott, Anna Mae; Clark, Justin; To, Emma; Jones, Mark; Kitchener, Eliza; Fox, Melissa; Johansson, Minna; Lang, Eddy; Duggan, Anne; Scott, Ian; Albarqouni, Loai

VERSION 1 – REVIEW

REVIEWER	Theo Georghiou Nuffield Trust, UK
REVIEW RETURNED	23-Nov-2020

GENERAL COMMENTS	This is a very interesting and timely study. It has been thoughtfully designed and carefully carried out, and has been pragmatic in addressing its constraints. It has also been clearly written up - with only minor exceptions. These are addressed by the following comments: 1. The secondary outcome might benefit from more consistent language throughout the paper (or other clarification). It's described as "change in the proportions of people using the service, across different levels of disease severity" (P6, also similar in abstract), and this is consistent with the information in supplementary table 5.3. But when introducing the data synthesis categories (P8), and reporting results (P11/12, and Figure 4), the authors switch to talking about relative differences in the magnitude of changes in service activity between groups, where there is a difference, or 'no change' where there isn't. I understand that the authors are translating the category 'increase in the proportion of severe patients' to something that fits more closely with the language describing the primary outcome ('larger reductions for milder cases'), but I feel that they should then also translate 'no change' to 'no difference' (in magnitude of change between mild/severe groups). Especially as 'no change' could possibly be interpreted (e.g. by someone quickly reading the abstract results) as 'no change in utilisation'. 2. Two linked points: P9 line 33 "report on more than 6.9 million ... and over 11 million …" - what? Presumably 'services', in the language of p12 line 37. But then there's a discrepancy between these two lines: 'over 6.9 + 11 million' in the first, and 'over 19.8 million' in the second. This would benefit from clarification. 3. P6 line 27 "corresponding period at least one year before the pandemic" I risk being pedantic here, but this phrasing arguably excludes reasonable 2019 comparator periods. For example, where the intervention period is the month of April 2020, then April

	2019 is not at least one year before the pandemic, and so could be excluded as a comparator. Do the authors mean 'in at least the year before the pandemic'?

REVIEWER	Tracy Pellatt-Higgins University of Kent
REVIEW RETURNED	06-Dec-2020

GENERAL COMMENTS	Very well written, and clear paper. It would benefit from including the rationale for reporting the secondary outcomes in a different way from the primary outcome. In some of the text percentage differences in utilisation for milder and more severe conditions was highlighted, but the overall analysis was based on categorising into three categories, please give reasons for this for completeness.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Theo Georghiou

Comments to the Author
This is a very interesting and timely study. It has been thoughtfully designed and carefully carried out, and has been pragmatic in addressing its constraints.

It has also been clearly written up - with only minor exceptions. These are addressed by the following comments:

Response: Thank you for these comments.

1. The secondary outcome might benefit from more consistent language throughout the paper (or other clarification). It's described as "change in the proportions of people using the service, across different levels of disease severity" (P6, also similar in abstract), and this is consistent with the information in supplementary table 5.3.

But when introducing the data synthesis categories (P8), and reporting results (P11/12, and Figure 4), the authors switch to talking about relative differences in the magnitude of changes in service activity between groups, where there is a difference, or 'no change' where there isn't. I understand that the authors are translating the category 'increase in the proportion of severe patients' to something that fits more closely with the language describing the primary outcome ('larger reductions for milder cases'), but I feel that they should then also translate 'no change' to 'no difference' (in magnitude of change between mild/severe groups). Especially as 'no change' could possibly be interpreted (e.g. by someone quickly reading the abstract results) as 'no change in utilisation'.

Response: Thank you for this comment. We have taken your suggestion and used "no difference" in Abstract, P3, on P8, on P12, and in Figure 4.

2. Two linked points: P9 line 33 "report on more than 6.9 million ... and over 11 million …" - what? Presumably 'services', in the language of p12 line 37. But then there's a discrepancy between these two lines: 'over 6.9 + 11 million' in the first, and 'over 19.8 million' in the second. This would benefit from clarification.

Response: Thank you for pointing this out. We have revised the number in the first line of the Discussion, to remove discrepancy.

3. P6 line 27 “corresponding period at least one year before the pandemic” I risk being pedantic here, but this phrasing arguably excludes reasonable 2019 comparator periods. For example, where the intervention period is the month of April 2020, then April 2019 is not at least one year before the pandemic, and so could be excluded as a comparator. Do the authors mean ‘in at least the year before the pandemic’?

Response: Thanks for comment, and we have revised wording on P6 to make clearer. “with a corresponding period in the year/s before the pandemic”

Reviewer: 2
Reviewer Name: Tracy Pellatt-Higgins

Comments to the Author
Very well written, and clear paper. It would benefit from including the rationale for reporting the secondary outcomes in a different way from the primary outcome. In some of the text percentage differences in utilisation for milder and more severe conditions was highlighted, but the overall analysis was based on categorising into three categories, please give reasons for this for completeness.

Response: We thank the reviewer for the positive comment and the suggestion re: a rationale for reporting secondary outcome in a different way to the primary outcome. We have added a rational on P8, “For the secondary outcome, given the wide variation if how severity was reported in the primary studies, we developed...” As to your second suggestion, we have added some words to try and clarify, on p12 “No studies reported a smaller reduction among those with milder forms of illness.”

Thanks again for opportunity to revise. I will be on leave between December 17 and January 22, so during that time it may be best to email Dr Loai Albarqouni, senior and last author. Loai Albarqouni