02-Apr-2021
BMJ-2021-065501 entitled "Declines in U.S. Life Expectancy in the Wake of COVID-19: Differences by Race/Ethnicity and Relative to Other High-Income Countries"

Dear Dr. Woolf,

Thank you for sending us your paper. We sent it for external peer review and discussed it at our manuscript committee meeting. We recognise its potential importance and relevance to general medical readers, but I am afraid that we have not yet been able to reach a final decision on it because several important aspects of the work still need clarifying.

We hope very much that you will be willing and able to revise your paper as explained below in the report from the manuscript meeting, 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.

Please remember that the author list and order were finalised upon initial submission, and reviewers and editors judged the paper in light of this information, particularly regarding any competing interests. If authors are later added to a paper this process is subverted. In that case, we reserve the right to rescind any previous decision or return the paper to the review process. Please also remember that we reserve the right to require formation of an authorship group when there are a large number of authors.

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Regards,
Timothy Feeney MD MS MPH
Research Editor
The BMJ
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Report from The BMJ's manuscript committee meeting

These comments are an attempt to summarise the discussions at the manuscript meeting. They are not an exact transcript.

Members of the committee were: John Fletcher (Chair), Gary Collins (Statistician), Tiago Villanueva, Di Wang, Wim Weber, Nazrul Islam, Elizabeth Loder, Helen Macdonald, David Ludwig, Joseph Ross, Jessica Kimpton, Timothy Feeney

Decision: Put points

Detailed comments from the meeting:

First, please revise your paper to respond to all of the comments by the reviewers. Their reports are available at the end of this letter, below.

Please also respond to these additional comments by the committee:

We are very interested in the results of this study. However, we feel the more critically important aspect is the focus on disparities in the US and not the comparison to peer countries. We have listed multiple queries and suggestions for revisions, which we think quite necessary to move forward with publication.

John Fletcher (Chair), Gary Collins (Statistician), Tiago Villanueva, Di Wang, Wim Weber, Nazrul Islam, Elizabeth Loder, Helen Macdonald, David Ludwig, Joseph Ross, Jessica Kimpton, Timothy Feeney

* You categorise people from the US into 3 race-ethnicity categories, which perhaps does not represent how racially and ethnically diverse the population is.

* We are sure there will be ramifications on life expectancy but isn't it rather soon to characterise this? And wouldn't we need a longer run in?

* In your limitations you state that 'race-ethnicity data for the U.S. population and for 2020 deaths were incomplete.' It would be interesting to know how incomplete it was.

* The lack of 2019 comparison data is critical. Were there changes in life expectancy over the last decade? For instance did life expectancy decrease mid-decade in the US, then began to trend back up? Will this skew the results we are seeing?The editors think this underscores why the trend should be compared rather than a single data point (e.g., 2019 or 2015) or an average of the last few years (then the average will essentially be close to the LE estimate somewhere in 2015)

* If the interest is in the impact of COVID-19 then isn't the interest in peak months as well as the year as a whole year? Further, is 2020 a complete picture of the impact of COVID-19? How does this study fit in that context? Would waiting until a later time provide a more complete picture?

* For many reasons we think the comparison to peer countries is not optimal. We don't think the peer countries are necessarily comparable and averaging over multiple countries is problematic, in our minds. This is particularly because the race/ethnicity data is not comparable between the US and other countries. To move forward we would want that replaced and have several suggestions we hope the authors will consider.

1) Change the focus on just the United States, and examine the disparities deeper by race/ethnicity and sex in the context of historical trends within the US.

2) Add more data from the US. The Life Table, disaggregated by race/ethnicity, which is available from the CDC since 2011 and at least up to 2017.

3) Add at least the additional race of Asian/Pacific Islander, and please reconsider how you operationalized race and ethnicity--it is possible to be both Black and Hispanic, for instance, but that doesn't seem to be covered here.

4) Add additional life tables for years 2018 & 2019, which could be estimated (the way you estimated for the year 2020) from the mortality data available at, for example, CDC Wonder. This way, the analysis will cover the trend for the last decade, and the results for 2020 would be better put into context.

5) Consider presenting the age-and-sex-specific Covid-19 mortality by race/ethnicity to provide additional insights on the effect of that on the estimated changes in LE.

6) Perform analyses for overall estimates and compare those to stratified results in the paper.

7) As a validity check, please compare the LE estimates from your simulation model to those reported by the CDC Life Tables (from .

Additionally:

* Please address this criticism made of the CDC estimates previously: https://www.statnews.com/2021/02/25/cdc-one-year-decline-life-expectancy-really-five-days/

* Please take out statements in the paper such as ...."are products of policy choices and systemic racism." This is not necessarily data driven an is conjecture.

* Please change your title so that it addresses what was done, but not necessarily advertising the results. For instance, using "changes" instead of "declines."

In your response please 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.

Comments from Reviewers

Reviewer: 1

Comments:
BMJ-2021-065501 presents results for life expectancy related to the COVID-19 pandemic. While some parts of this manuscript were interesting, other areas could be improved. I hope the authors consider my feedback.

MAJOR COMMENTS

• Methods: You may want to clarify how Hispanic, White, and Black were operationalized. For example, was it possible for persons to identify as Hispanic and White/Black given that race and ethnicity are not the same? This should be better specified because these groups should be mutually exclusive.
• Methods: This reviewer is confused about why direct sources for Israel and New Zealand were used to abridge 5-year lifetables for the male and female population of the peer countries when these countries were already included in the Human Mortality Database.
• Methods: It might be worth explaining why the age groups for weekly death counts by country differ from age-specific death rates.
• While the authors have acknowledged the limitations of their study, it could be challenging to make bolder conclusions with these data because they were simulated (2020 life expectancies) and acquired from various sources. Thus, this reviewer is concerned the results are premature.
• Table 1: Interestingly, in 2020 total life expectancy at birth was about 76.9 years. Likewise, total life expectancy at age 25 was about 52.9 years (25.0 + 52.9 = 77.7 years (about the same as at birth)). However, total life expectancy at age 65 is about 18.3 years (65.0 + 18.3 = 83.3 years), which seems to drastically exceed the life expectancy at birth. Why might this be the case?
• While this research question is interesting in concept, it might be challenging for us at this time to factor in how COVID-19 will longitudinally influence life expectancy given that COVID-19 deaths in 2020 and 2021 may overall inflate COVID-19 deaths on a longer-term COVID-19 timeline.

MINOR COMMENTS

• Introduction: “That the United States…” reads awkward. Consider revision.
• Introduction: Consider revising “People of color…” to “Certain races, ethnicities, and age groups…” or similar. This comment may generalize to other locations in the manuscript.
• Introduction: “affected life expectancy” could be “affects” because the sentence implies non-past tense language.

• Methods: “However, observed changes in life expectancy between 2017 and 202 were largely attributable to the events of 2020” Consider adding a supporting citation or tone down language a little.
• Results: Adding relevant confidence intervals where appropriate in the text would help for providing the necessary details regarding differences.
• Figures: While this provides a nice data visualization for the findings, some of the information repeats what is already provided in the tables in a relatively non-unique fashion (i.e., bar chart).
• Tables: The decision to present confidence intervals for 2020, and 2020 vs. 2017 seems incomplete. Consider revising to include consistent information.
• Abstract: Make any relevant changes to the abstract that align with those from the main text.

Additional Questions:
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