06-Jun-2020 BMJ-2020-055647.R1 Heterogeneous Trends in Burden of Heart Disease Mortality by Subtypes in the United States, 1999-2018: Observational Analysis of Vital Statistics

Dear Dr. Shah

Thank you for sending us revised paper, which we sent for additional external peer review. Most of the issues have been resolved, but we would like to request another revision, taking into account several remaining issues of one reviewer.

Please either change your manuscript to address these points, or let us know in your response letter why you disagree.

Yours sincerely,

David Ludwig Professor David Ludwig Associate Research Editor The BMJ dludwig@bmj.com

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. ***

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** Comments from the external peer reviewers**

Reviewer: 1

Recommendation:

Comments:

This is an interesting paper showing recent trends in different types of heart disease in the US, which is very clear and comprehensive, and draws attention to an important public health issue.

The authors have explained why they used the term "race" and added an analysis by region. Race is a term widely used in the US, it still seems a very "loaded" term, whose use needs to be contextualized further.

The authors continue to use "race" specific life expectancy to calculate years of potential life lost (YPLL), but have added an analysis by region. Life expectancy in the US is longer for white people than black people. Using race specific YPLL gives more YPLL if a white person dies prematurely than if a black person dies prematurely at exactly the same age. Use of race specific life expectancy could be construed as normalizing systematic disadvantages by race and more importantly as devaluing black lives. If resources are directed to the groups with the greatest per capita YPLL based on race specific life expectancy then relatively more resources would go to white people than black people, because black people have shorter lives and lower YPLL. However, most resources should go to black people to address their overall shorter lives.

I wonder whether the analysis of disease and race specific YPLL using average US life expectancy would give different results and interpretation. Analysis by region does not address this issue.

It would be helpful to be clearer that fewer deaths from early onset types of cardiovascular disease might inevitably result in more deaths from late onset types of cardiovascular disease, so it might still save most YPLL to focus on preventing early onset cardiovascular disease.

CM Schooling 27th May 2020

Additional Questions:

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Comments: The authors have adequately addressed all of my comments.

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Job Title: Epidemiologist

Institution: Centers for Disease Control and Prevention

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Recommendation:

Comments: The authors have adequately addressed concerns

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Please enter your name: Angie Wade

Job Title: Professor of Medical Statistics

Institution: UCL Great Ormond Street Institute of Child Health

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