Author’s response to reviews

Title: Evaluation of the Mortality Registry in Ecuador (2001 - 2013) - Social and Geographical Inequalities in Completeness and Quality

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Author’s response to reviews:

We thank the reviewers and editor for their comments and suggestions. In the following lines we answer to the comments and suggestions made on September 25, 2018:

Editor:

1) The editor requests that the authors actually compare their findings to the new empirical method suggested by Reviewer #3 and discuss how the findings of this method compare with their reported findings using DDMs. It is not enough to simply acknowledge that such a method exists; they should apply it and compare results.
Even thou the article by Tim Adair and Alan D. López (2018) proposes a new and interesting method to estimate completeness at national and subnational levels; the comparison with our results – as proposed by the editor - is not possible for the following reasons:

1) In the article methods the authors explicitly mention that, for the analyses of national completeness, they had to exclude data from Ecuador because of: “… implausibly high levels of observed completeness based on additional data available…” It can also be observed in supplementary table 1, that Ecuador is not among the countries included in the final study. The authors of the study eliminated the data from Ecuador because they thought the method could not be applied in the country; which means that – even if we reproduced their analyses – the results will be incomparable with ours.

2) For the subnational estimations, the authors use data from Colombia (departamentos and capital district, 2014) and Brazil (States, 2000-2010). For this estimations, authors use – besides mortality data – demographic and health surveys data, and the 5q0 data estimated by the GBD project. If the authors consider data from Ecuador not appropriate for national estimation of completeness using the new empirical method, this also applies to subnational data; and even if the data was good enough for applying the new empirical method, we have no access to some of the necessary data to make this subnational estimations. Obtaining the new data and performing new analyses goes beyond the scope of this study. In the future, when we have access to the necessary data, we will love to implement the proposed method in Ecuador.

3) Even thou the new method proposed is really interesting, it is still new and needs more testing before it is considered to be equal or better than the most widely used methods for adult mortality completeness (DDMs). For this reason we think it is more informative to compare our results with results from other studies that used similar methods as the study by Murray et al. (2010), the UN population division estimates and the Global Burden of Disease study.
As the method is quite interesting and we think that in the future it could be implemented in Ecuador, we added the following text in the discussion section:

"As Hill (2017) points out, even thou in the last decade important developments in analytical strategy have been seen, “…very little in the way of new methodology has emerged…” (13). Exceptions, like the empirical method proposed by Adair and López (2018) have the potential of dealing with some of the limitations of DDMs as the lack of timeliness, complexity and the assumption of no migration (11). New methods could be implemented and compared with existing methods at a subnational level in Ecuador to confirm these potentialities."

Reviewer 3:

The following relate to the Supplementary Text 1:

1) Other DDMs are the Preston-Coale and Brass Growth Balance methods - the authors are referring to inter-cendal DDMs only. Can the authors include this additional information?

We have included this information in Supplementary text as follows:

“There are other indirect methods that assume a stable population - as the Brass Growth Balance Method and the Preston-Coale method - but they are not widely used as their assumptions (stable populations) are source of important bias (3).”

2) The word "timeliness" is mis-spelled.

This has been corrected. Thank you.

3) Table 1 is too small to view without expanding the size manually.

We have made the table much bigger so it can be seen better. Thanks for the suggestion.