Reviewer's report

Title: Mortality profiles in a country facing different stages of epidemiological transition: An analysis of registered data

Version: 2 Date: 6 December 2008

Reviewer: Nawi Ng

Reviewer's report:

Title: Mortality profiles in a country facing different stages of epidemiological transition – An analysis of registered data (Revision)

The authors are to be congratulated on revising their manuscript substantially and present a highly informative work on an important area of characterizing the epidemiological transition in Peru.

The authors have addressed most of the reviewer’s comments, and the following are some comments based on the revised manuscript.

Major Compulsory Revisions

1. The reviewer would like to challenge the authors’ claim that different stages of epidemiological transition are ongoing in Peru (as reflected in the Title, and throughout the manuscript). Figure 3 clearly shows that the proportion attributable to communicable diseases, injury, chronic diseases ex. Cardiovascular diseases are quite similar in all regions. The reviewer thinks that a claim that different stages of epidemiological transition are ongoing in Peru cannot be justify by the data presented.

2. The reviewer finds that Figure 3 is more informative than Table 2, and thus suggests the deletion of Table 2. Both of them convey the same message on the common causes of death in different geographical region. Table 2 shows the ten leading causes of death, out of 64 causes used in the analysis. Using too many categories of causes of death led to small proportion of death accounted by each causes as shown in Table 2. The other problem with Table 2 is a lot of “Remained of diseases of … system” or “All other diseases of … system” are listed as leading causes of death, but these simply convey blur messages on the causes. See Point 4 on Major Compulsory Revisions in the first review, part of which is pasted below. When responded to this critique, the authors mentioned “we think we avoided too many categories while keeping the table informative”. The reviewer thinks that the table becomes not-informative not because the number of categories presented, but rather due to the number of categories used in the analysis, 64 categories are just too many and not informative for policy maker.

Minor Essential Revisions

1. In their methods section when discussing “Mortality and cause of death
estimates”, the authors have not provided any information on how was the cause of death determined (last paragraph in Page 8). Were the causes of death based on clinical diagnosis prior to death, or medical autopsy or verbal autopsy? In their discussion (2nd paragraph in Page 21), the authors tried to address low quality of mortality information as one limitation of this study, but there is also no information on how the cause of death was ascertained.

2. 2nd paragraph in Page 9: Shouldn’t it be “for estimating age-standardized number of deaths”, instead of “for estimating age-standardized death rates”?

3. 1st sentence in Page 10: Shouldn’t it be “total mortality due to an individual cause of death in a specific age group was divided by the total population in the same age-group”?

4. 2nd paragraph in Page 10: It is not clear what the authors meant by “convenience thresholds for the different causes of death”?

5. 1st and 2nd paragraphs in Results (Page 12): Instead of listing out all the numbers and percentages for the five years of observation, the reviewer suggests the authors to present the data in average and/or range for the study periods.

6. 3rd paragraph in Results (Page 12-13): This paragraph is better fit under the heading “Main causes of death at national level…” in Page 13.

7. 1st paragraph in Page 15: The paragraph which starts with “Tuberculosis is the sixth cause …”

8. The message of the whole paragraph is not clear. The reviewer cannot understand the differential importance of comparing cirrhosis and other chronic liver diseases to be on 6th and 8th leading causes of death in coastal area and rain forest, respectively, while they accounted for almost similar burden of death (3.2% and 4.4% of total death in respective area). More synthesis of the data is needed.

9. Last paragraph in Page 15: The paragraph which starts with “Figure 4 shows changes …”
The authors need to cross-check the data presented here with data in Figure 4. Some discrepancies in the number of departments are observed.

10. As the authors compared the cause-specific mortality over time, it is important to discuss the validity and reliability of cause-of-death used in the analysis.

11. The authors need to consider the selection of words used in this manuscript. For example:

   a. Mid part of Page 16: “Huancavelica and Puno, placed in the highland mountainous region of Peru”. Who placed those two regions in the mountainous area?

   b. Mid part of Page 21: “we found out that the proportion of garbage codes was
still …”. What are garbage codes? Did the author refer to “undetermined cause of death”?

c. 2nd paragraph in Page 22: “while efforts are in progress for improving quality of certification and coding at health services”. What is a coding of health services?

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests