Author's response to reviews

Title: Economic burden of cholera in the WHO African Region

Authors:

Joses M Kirigia (kirigiaj@afro.who.int)
Alimata J Diarra-Nama (diarraa@afro.who.int)
Allarangar Yokouide (allarangar@afro.who.int)
Edoh Soumbey-Alley (soumbeya@afro.who.int)

Version: 2 Date: 17 December 2008

Author's response to reviews: see over
RESPONSE TO REVIEWERS COMMENTS

Title: Economic burden of cholera in the WHO African Region

Reviewer 1: James R Butler

Background: The last paragraph was revised to clearly indicate that the study was done from the perspectives of health services and the patient (and family). The data obtained from the World Health Survey provided additional informal on all the costs borne by households.

Methods: The following paragraph was added at the end of the conceptual framework: “The current study focuses on cost of “hotel” component, diagnosis, medicines, cost borne by patients and accompanying family members, and productivity losses. It was not possible to obtain the data needed to estimate the losses in tourism incomes and export revenues.”

Analytical model: The formulas were remove and the information presented in textual format. All the assumptions were removed and put into an Appendix.

Results, Table 3: Table 2, 3 and 4 were revised or created.

Minor Essential Revisions: All the minor revisions were made.

Reviewer 2: Eric D Mintz

The author recommended that “..it would be nice if the authors presented (in Key Findings, Page 13) the cost of cholera per surviving patient, and the cost per cholera death”.

Response: All the reviewed had made a similar suggestion. Thus, in order to respond to this important suggestion, we have introduced tables 3 and 4. And reported those results in the Results section.

Reviewer: “The authors should mention that the main driver of the costs of cholera in their study is the premature death of young children, and that many other diarrhoeal, respiratory, and vector borne diseases exact a toll of childhood mortality that surpasses that of cholera”.

Response: The reviewer is right. Under Discussion section, we have inserted two sentences at the end of the first paragraph and the second paragraph.

Table 1 reference: This has been revised.

Reviewer: Discretionary revision 1: “I do not know what the number from 2007 will be, but one could certainly argue that a 3-year average from 2005 through 2007, or three
separate annual calculations would provide a more representative portrayal of the true magnitude of the economic costs of cholera on the continents”.

**Response:** We obtained additional information from WHO website [http://www.who.int/globalatlas/dataQuery/reportData.asp?rpType=1] and made cost estimations for the three years.

**Reviewer:** “Page 14(d). The figure on care seeking behaviour appear to be taken from an article by one of the authors about mental illness….”

**Response:** To overcome the above criticism we used the average household health care costs World Health Survey data on 16 countries of the WHO African Region.

**Reviewer 3: Richard Rheingans**

**Reviewer:** Figure 1 – I don’t find this figure to be useful.

**Response:** We beg to retain Figure 1 since it makes it easier for readers not very familiar with the subject to follow the description of the costs.

**Reviewer:** ..It would be good to have more understanding of the what fraction of cases receive this treatment (standard treatment in guidelines) and the implications of them not receiving it.

**Response:** The reviewer is right. Due to unavailability of information, we have included the concern as a limitation number (a) on page 10.

**Reviewer:** Figure 2 – this does not add much analytical value.

**Response:** Following the above suggestion, we have deleted Figure 1.

**Reviewer:** “For transportation expense, is there an empirical basis for the assumptions about the number of visits or the cost of each visit?”

**Response:** The source has been indicated in the new Appendix table.

**Reviewer:** For productivity losses, clarify whether costs are discounted. Based on best practises, they should be…”

**Response:** We agree with the reviewer that future costs should be discounted to their present values. Initially, we had not discounted the costs. However, we have now discounted the future productivity losses lost due to premature deaths into present values using a discount rate of 3%. Regarding the assumption that those who suffer cholera mortality would have future earnings, we have reflected this concern among the limitation of this study.
Reviewer: The presentation of formulas and data input is a bit confusing. The formulas add transparency, but could be summarized easily without the formula. The actual data input could be presented in a separate Table.

Response: Once again we agree with the reviewer. Accordingly, we have removed all the formulas and expressed everything in text. As suggested we have also included an Appendix Table containing the assumptions and the sources.

Reviewer: My understanding is that WHO costs are by regional and mortality strata.

Response: The WHO costs are for AFRO-D and AFRO-E (epidemiological groupings), we obtained the average of the two.

Reviewer: Do all cholera cases receive a diagnostic test. One hospital charge for the test may not be a very representative value of the opportunity cost throughout the region..”

Response: Regarding the assumption that all cholera cases receive a diagnostic test, under Discussion section, we have included the limitation (c). With regard to the second concern, we agreed with the Reviewer. In order to roughly address that concern, we contacted WHO Country Office health systems advisors in 10 countries (Burkina Faso, Congo, Ghana, Kenya, Malawi, Mauritania, Mauritius, Namibia, Senegal and Zambia) to obtain the cost of cholera diagnosis from private laboratories. This has been explained in the second paragraph of the Conceptual Framework on page 4.

Reviewer: ..In addition, all future costs should be discounted, according to best practises.

Response: The future costs have now been discounted at 3%.

Reviewer: P13. The results are very limited. It may be worthy highlighting costs by age or severity level.

Response: The results in the tables show the cost for mild/moderate and severe cases separately.

Reviewer: Table 3 – These appear to be cost per patient, not cost per capita.

Response: The above concerned has been corrected. Now the costs are per case and per person with cholera – as was also proposed by the other two reviewers.

Reviewer: I don’t find the base year for the analysis stated.

Response: We had not indicated. It is now indicated in the paragraph just before Results section.