Author's response to reviews

Title: A national survey of the prevalence of schistosomiasis and soil transmitted helminths in Malawi

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Cover note
Introduction
We are most grateful for all the helpful comments from reviewers. All points have been addressed and details are provided below.

Point by point response to reviewer's comments
Dirk Engels
1. Geometric means deleted
2. Heavy intensity of infection now defined for STHs as well as Schistosomiasis
3. Section on categorisation deleted as suggested
4. improved wording of first paragraph and last sentence of discussion made as suggested
5. paragraph on historical studies moved as suggested
6. core result of student paper added
7. climatic changes have been variable but not massive and unlikely to have had an effect
8. reference to WHO documents updated as suggested

Mamadou Traore
1. sentence on limited data on control measures in country added as suggested
2. core result of student paper indicating extensive use of antischistosomiasis drugs added

Alan Fenwick
1. Expert statistical advice obtained on sampling method and statistical analysis. Regarding the sample selection she said:
"This study was designed to provide a national estimate of the population prevalence of these specific parasites. In order to obtain an accurate estimate of the country-wide prevalence, it is important to select a random sample of the entire population. The combination of stratification and cluster sampling used here, would be expected to provide unbiased estimates of national prevalence rates, when appropriate weighting of the regional and school specific rates are used. Targeted sampling methods might be of interest in order to find regions of high prevalence but would not be expected to provide unbiased national estimates. This study randomly selected 6 schools in each of 5 regions. WHO recommends sampling 8 schools per cluster, The selection of a smaller sample would increase the variance of the estimates but would not introduce bias. Thus the estimates provided in this paper would have narrower confidence intervals, had larger samples been selected. The point estimates would be expected to be similar to those achieved here, however."
2. In addition, she recommended we incorporate the sampling weights into the computation of the estimated prevalences. In this process we discovered a coding error for a few of respondents. The revised estimates are very similar to those reported in previous versions, but the confidence intervals are wider. This is what would be expected (Levy & Lemeshow, 1991). The methods and results have been revised to reflect the changes.

Michael Pearce
1. Comments are numbered in relation to r Pearce's paragraphs
2. Results section reordered; discussion section improved with clearer identification of whether sentence dealing with schistosomiasis or STHs. Statistics method section expanded.
3. Description of sampling method improved
4. impact of omitting Karonga Study results considered
5. large numbers reformatted
6. References placed in correct sequence
7. statistical methods used for
a. red urine question - odds ratio 8.1 (95% CIs 5.4-12.1)
b. school prevalence comparison using CIs
c. infection and intensity - chi squared - Fischer exact p=.01
8. sampling method made explicit
9. method of weighting now described
10. headings in bold
11. species names correctly formatted
12.
13. p3 para 1 re-phrased
14. reference added
15. p4 para 1 re-phrased
16. high intensity of STHs defined
17. p7 para 2 clarified
18. 36-71 children is correct - amended
19. p9 para 2 clarified
20. p9 para 3 re-phrased
21. prevalence made explicit
22. Table 2 provides confidence intervals; p10 para 1 provides ranges
23. p10 para 3 re-phrased
24. p11 para 2 re-phrased
25. exclusion of Northern lake children made explicit
26. reference provided
27. p2 para 1 re-phrased
28. type of infection made explicit
29. explanation provided in body of paper
30. references 7 and 8 added
31. sentence moved
32. p5 para 2 re-phrased
33. p6 para 3 re-phrased
34. description added
35. p8 para 2 re-phrased
36. p10 para 2 re-phrased
37. p10 para 3 re-phrased
38. p10 para 3 re-phrased
39. a large number of schools throughout were free of STHs
40. sentence added on predictive value at two prevalences

Again, many thanks to all referees.