Reviewer's report

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

Version: 1 Date: 14 May 2004

Reviewer: Alan Fenwick

Reviewer's report:

General At my first review of this data, I wrote "The authors do not say how many schools were available for selection" - they have now told us that they selected 30 out of 3,900. They state that this is sufficient to give statistical confidence in their overall prevalence so long as the schools were chosen randomly. This sentence is not justified. They have given no calculations to indicate this is true. Selecting schools randomly only works if they select sufficient schools, and our experience suggests that with a heterogeneous distribution such as is found with schistosomiasis, over 150 schools would be required for confidence.

I asked for a map of Malawi showing which of the selected schools were close to or far from water suggests that most selected schools were away from the Lakes. The map they have produced confirms my fears that few of the selected schools were close to water bodies. My original complaint still therefore holds true, and a supplementary survey (to give a realistic number of people infected in Malawi) should be completed in randomly selected schools in the high risk districts. The school selection would include only schools randomly selected but from areas in which known risk factors and previous data suggest a high prevalence is likely. The estimate of infected people in Malawi would then be supplemented by adding in the number of Lakeside schools, and the prevalence in those schools, rather than suggesting that the randomly selected schools represented all schools. We query the validity of the t-test to "prove" a reduction in prevalence. The selection process was random, but random selection is not what is needed for a schistosomiasis survey. This paper should not be published because too many of the 30 selected schools were from low risk areas for schistosomiasis - supplementary data is required from higher risk areas. Perhaps the manuscript might be submitted to an expert statistician to validate their claims that 30 schools from 3900 is sufficient to base their conclusions.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Reject because scientifically unsound
Level of interest: Too insignificant to warrant publication in any journal

Quality of written English: Acceptable

Statistical review: Yes

Declaration of competing interests:

None