Reviewer's report

Title: Patterns of geohelminth infection, impact of albendazole treatment and re-infection after
treatment in schoolchildren from rural KwaZulu-Natal/South-Africa

Version: 3 Date: 13 July 2004

Reviewer: John Horton

Reviewer's report:

General
This is a very useful report, and is of interest in the context of ongoing control programmes. The
study predates the WHO mandate on geohelminth control, but follows what is now considered to be
an appropriate course, and uses generally accepted methods. Some of the discussion could be
made more incisive, but there are some useful observations on how problems, such as low cure
rates in Trichuriasis might be overcome. The question of seasonality in hookworm is an ongoing
discussion point, and one which probably differs from place to place.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can
be reached)
None apparent. However there are some items that should be noted and corrected if possible (see
below)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the
author can be trusted to correct)
None noted.

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Discretionary Revisions (which the author can choose to ignore)
1. It would be helpful to know which of the human hookworm species is involved in this area. There
are some differences in the sensitivity of Necator and Ancylostoma to albendazole, although not as
marked as with mebendazole.
2. Although it is stated when treatments and assessments were conducted, it would be helpful if
these were placed together and perhaps using a graphic which showed them together with the
months. This would make assessment of questions like the seasonality of hookworm easier to
understand
3. a rationale for the timing of follow-up for reinfection would be useful (constraint by school terms?).
16 weeks is probably too short for hookworm, especially if it is seasonal.
4. Reading of Kato-Katz: the text reads as if slides were read twice, once for hookworm, and once
for the other helminths. I suspect that this is not the case - consider revision of the wording to make
clear what was done.
5. CR and ERR were presumably done at the 3 week post treatment follow-ups, although it is not
specifically stated.
6. In looking at the re-infection data (page 8) it would be useful to include here the months when the
assessments were made (see point 2), so making linkage with Fig 3 easier.
7. Discussion: it is worth stating that since the baseline data and those from Schutte are little
different despite the passage of 20 years, transmission and epidemiology would appear to have
changed little. It makes the case that without intervention, helminths will remain a problem in rural
communities.
8. Treatment: Trichuris remains a problem for treatment, and the authors are right to highlight it. Not
only does there appear to be effects of intensity resulting in variable CR/ERR, but also there is some
evidence of geographic variation. IT is unfortunate that the prevalences are not high enough to do
further investigations, but it might be worth while looking to see if the higher baseline subjects did less well.

9. Although it is noted that resistance was not a factor, and that albendazole has not been used, is there any evidence that mebendazole has been used, since cross resistance is possible as both are benzimidazoles?

10. Re-infection discussion. This would be easier to understand with the graphic suggested above.

11. Figure 1 could be included in figure 2 as a small window. Figure 2, although very interesting may be a little overdetailed. Since the individual participating homes are shown, one might expect that some reference to this would occur in the text. Similarly, the geology is interesting, especially that most homes are not on the aluvial soils (presumably because they are either subject to flooding or used for crops), no specific use is made of the data. Would a simpler map be possible?

12. Please use words for the months in figure 3. They can be written vertically using 3 letter abbreviations. It makes reading text and comparing with the figures easier.

What next?: Accept after discretionary revisions

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I was employed by GlaxoSmithKline at the time of the conduct of this study, and was responsible for clinical studies of albendazole. However this study was not sponsored by GSK, nor was I aware of its existence. I currently hold shares in the company. However I do not consider that these affect in any way my ability to assess the study or its findings.