Reviewer’s report

Title: The cost of uncomplicated childhood fevers to Kenyan households: implications for reaching international access

Version: 3 Date: 16 October 2006

Reviewer: Gerry Killeen

Reviewer’s report:

General
None

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

The authors are to be commended for their patience with this fussy and perhaps somewhat stubborn reviewer. I very much appreciate the additional and constructive work the authors have put into this piece and certainly agree that this revision is a major step forward. I also accept that this study can provide important insights to a process that affects the lives of millions of the poorest in Africa and this subject matter is of the highest possible priority. The revised manuscript is much clearer and the results far more convincing. Nevertheless, I’m still concerned that data and analysis don’t support, and even contra-indicate, the conclusions drawn for the following reasons:

1. Impressive as the response of the authors is regarding resolution of fevers is, it largely re-emphasizes their previous stance and dilutes the issue at hand with lots of peripheral ones with which I have already agreed. Where it does respond to the issue I raised, the authors’ letter seems self-contradictory in the context of the manuscript. For example, statement 2 of the letter states “we do not assume that all fevers are caused by malaria or that antimalarials resolve all fevers” whereas even in the abstract it states “caretakers also save time with prompt treatment” (Scenario 1). How is the latter statement valid unless treatment at health facilities shortens the overall (rather than just post-treatment) duration of the fever and hence the amount of caregiver time required? Thus the key (and questionable) assumption made is that the amount time required for fevers to resolve after treatment at a health facility is independent of how soon the patient is treated. This clearly depends on early treatment (and not just with antimalarials!) resulting in earlier resolution of fever, regardless of the cause. If indeed “their pattern of fever resolution should continue to follow the same pattern as already in our data”, this implies that the timing of treatment defines the duration of fever. Thus this model DOES assume treatment is equivalent to cure and saves caregiver time in direct proportion to the speed with which it is undertaken. I think a more reasonable scenario to be would be to assume post-treatment costs to be reduced or eliminated in the malaria-attributable fraction (at best half of patients but more likely less than a quarter in Kenya) but a range of assumptions could be explored to at least highlight the importance of this assumption in the current analysis. Incorporation of this easy revision will certainly change the values in table 2 substantially, temper the current conclusions and further emphasize the following:

2. The paper still under-emphasises, indeed almost ignores, its most important and obvious conclusion: Treatment at a health facility under current practice (branch 2) is substantially more expensive to households than home treatment (branch 1) or home inaction (branch 3): The $1.06-1.59 differences between these courses of action in table 1 is a lot of money for a typical Kenyan household and undoubtedly limits utilization of health facilities to some extent. This cost difference is therefore a substantial barrier to achieving scenario 2 or any more ambitious targets. This key result certainly contra-indicates the statement that increasing treatment at health facilities would “have minor cost and opportunity impacts on households” if one accepts the rationale outlined above. For me, this observation strengthens the eventual conclusion that novel financing and delivery mechanisms for ACTs are required to get these key drugs beyond the formal health sector at subsidized prices if the RBM goals are to be fulfilled in undiluted form. I agree that scenarios 1 and 2 would represent progress but don’t agree that these are sufficiently ambitious targets in the modern era. Why not model a scenario in which subsidized ACTs are available outside of the formal health sector and contrast with current policy and plans? Overall, my recommendation is to tighten up the analysis as described above but then be much bolder in the scenarios modelled and conclusions drawn.
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

Discretionary Revisions (which the author can choose to ignore)

None

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory 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 declare that I have no competing interests