Reviewer's report

Title: Willingness of using a rapid diagnostic test for malaria in a rural area of central Cote d'Ivoire

Version: 2 Date: 24 July 2012

Reviewer: Lindsay Mangham

Reviewer's report:

The revisions that have been made so far have strengthened the paper, though I think there are some areas which some further edits would be required to improve the clarity of the study findings. I hope the comments below are helpful in presenting the results.

Major Discretionary Changes

Line 36: I don’t think there is good evidence on the use of malaria RDTs in reducing malaria mortality in most parts of the world. Certainly they offer potential, but it is my understanding that this has not yet been achieved.

Lines 46-56: I find some of the results a little difficult to follow – for example you say less than half (44.4%) complied with RDTs – but you also report 34 of 100 considered RDTs favourable (by which I think you mean they reported they were willing to undergo an RDT for malaria).

Lines 151-160: I find the description of the study population a little confusing – am I right in thinking that the information in Tables 1-4 refers to a survey of 100 patients that were offered an RDT at Bozi health centre and then in-depth interviews were conducted with different types of provider to get their perspective on some key themes.

Lines 172: I am not a statistician, but wondered whether the use of a mixed effects model makes sense when there are only two groups at level 2 (Bozi and Yoho)?

Lines 186-190: Greater care may be needed in describing differences by demographic group. For example you refer to the percentage of men aged 14-24 as 53.3% - but in Table 1 53.3% seems to refer to both sexes. Also I note from Table 1 that differences by sex, age, number of children and religion were not statistically significant, but this wasn’t clear from the description.

Lines 190-194: According to Table 1 Muslims were not more willing to have a malaria test than Animists.

Lines 196-208: Having a better description for the categories would help the reader interpret the findings and whether some of the conclusions you draw make sense. At present, some of the categories used in Table 2 are unclear – for example I’m not sure what is meant by “Vital Blood” “blood is life”, or “Justification”. Also I’m not certain how to interpret “reason for blood
examination”, its different categories and how this relates to use of HIV tests at the facility when I refer to the data in Table 2.

Lines 207-208: Please check the interpretation – I’d understood the results to show that 84.8% of patients that agreed to the malaria RDT perceived a need for patients to be tested for malaria – but that’s not what you write.

Lines 209-223: In presenting the qualitative findings from the in-depth interviewers with providers alongside the patients’ perceptions need to be careful not to muddle who said what. Rather than report on patients, then traditional healers then patients again it might be easier to follow to report on patients’ perceptions and then compare or contrast to views of providers.

Lines 226-229: Please check the explanation – are you saying that both 19.0% and 72.7% of patients that were found the test useful? I find the current explanation quite confusing.

Lines 232-234: Please check explanation – in reading Table 3 if was apparent to me that HIV test referred to knowledge of HIV status.

Lines 251-254: I found the interpretation difficult to follow – do you mean people were more willing to accept if they were not fearful or were unsure if they were suffering from malaria?

Lines 259-264: Again I think improving the description of the categories might help the interpretation – I find what you write about a willingness to undertake an RDT and acceptance and opinions about HIV test difficult to follow.

Discussion: As a general comment, I think the structure and logic of the points made in the discussion could be improved. In places the discussion becomes speculative, in which explanations are given which do not necessarily follow from the results presented. For example, the discussion refers to perceptions of quality of care and perceptions about community health workers, neither of which were referred to in the results. Similarly, the discussion emphasizes differences by religious group or urban/rural areas, though I’m sure whether the evidence presented elsewhere was as conclusive. In other places, it is uncertain which findings refer to this study and which refer to the broader literature.

Line 271: resistance of what?

Lines 285-287: no information about the perceptions about the quality of care available is presented in the results

Lines: 285-290: are there differences in the demographic characteristics of populations in Bozi and Yoho that may also contribute to willingness to use RDTs – e.g. education which would found to be a significantly differ between those that were and were not willing.

Lines 294: You refer to two key determinants – but I’m not sure whether you refer to this study or other studies. Please review.

Lines 347-352: As I understand it 100 RDTs were made available and 100
patients were surveyed. So did you survey all patients that were offered RDTs or only a sample of them (i.e. were only 100 patients offered RDTs and did 66 RDTs go unused?). How did you go about finding the patients that were offered an RDT? Any potential for selection bias at stage patients were offered an RDT and in the sample that were followed up?

Minor Discretionary Changes

Line 3: In the title I suggest replacing “Willingness of using a ...” with “Willingness to use a ...”

Line 85: It would be more accurate to say RDTs provide reliable results within 15-20 minutes, than a couple of minutes.

Line 163: may be more accurate to refer to data analysis since it includes qualitative data analysis, which by its nature will not be statistical.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests