Author's response to reviews

Title: Predictors of antibiotics co-prescription with antimalarials for patients presenting with fever in rural Tanzania

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Author's response to reviews: see over
Response to reviewer’s comments

Comment w1: Implying what – maybe that prescribers were prescribing symptomatically or without adequate diagnostic facilities were trying to cover all possibilities – whatever the possibility, we need a simple statement here about what might realistically obtain in the study area.

Response: Yes, was not clear. I have revised and here is the new version……Regardless the fact that Malaria is declining but due to lack of laboratories and mRDT in most health facilities in the rural areas, clinicians are still treating malaria presumptively. This leads them to prescribe more drugs to treat all possibilities……see conclusion on page 2

Comment w2: Do we mean training, supervision, or other – for same word count can add more specificity in recommendations.

Response: I accept, and that has been revised and deleted.

Comment w4: The authors may be interested that the 2010 National Malaria Program…..

Response: Yes, the reference was interesting and has been added to the document…..Malaria treatment in Tanzania is mainly based on clinical judgment in the majority of health facilities, especially lower level facilities. Most of the health facilities lack laboratory diagnostic capacity for malaria and hence most of reported malaria cases are clinically diagnosed….see last paragraph on page 3

Comment w6: Likewise the PRESIDENT’S MALARIA INITIATIVE. Tanzania Malaria Operational Plan FY 2013…..

Response: Yes, the reference was of interest and has been added in the document…..Historically, more than 5,000 of the lowest-level facilities (dispensaries and some health centers) had no laboratory diagnostic capacity, leaving health care workers at more than 90% of facilities to diagnose malaria on the basis of clinical signs and symptoms alone…see third line page 4
Comment w8: It would help to report on two issues – the diagnostic capacities of these 16 facilities during the period of study – and lab/microscopy available and/or RDTs as well as the stock/supply/availability of ACTS and antibiotics at that time.

Response: The diagnostic capability of the facilities has been explained. But information on stock out was not added as it was not collected by the study. The study did not want to interfere with the health system functioning. The new version reads... Out of these 14 health facilities in Kilombero & Ulanga districts only two health centers have capacity of diagnosing malaria by using microscopy..... In Rufiji only 2 health centers and one dispensary can diagnose malaria by using microscopy. 13 health facilities do not have microscopy...see study area section on page 5.

Comment w10: Does follow-up mean they were visited at home at a later date or tracked at a next clinic visit – follow-up implies something that takes place at a later date – one suspects here that the patients and their records/charts may have actually been reviewed at the time of their actual visit – or was this simply a record review of all screened records/case files without interaction with actual patients – in short it is not clear what actually happened.

Response: Yes patients were visited at their households. More information on follow up has been added to the document ...... Patients were asked to come to the health facility on day 3 and day 7 for clinical evaluation and assessing their prognosis including if they have experienced any of the side effects....look at the third line on page 6.

Comment w12: Actual data collection instruments and procedures are not well described

Response: Actual data collection has been clearly explained ...... data collection was done using a standardized questionnaire developed in English and translated into Kiswahili. Information on demographic, complaining symptoms, laboratory investigations, past medical history, present medical history, medication used, history of drug reactions and all events were collected....look at the second line of data collection on page 6.

Comment w13: It is still not clear why patients had to be followed home if all the required information was in their case notes at the clinic – if the clinician wrote the medicines in the case note alone with the relevant demographic information, what additional information as collected at home?

Response: The study was a cohort event monitoring and hence patients were follow up.
Comment w15: Were patients or clinicians interviewed? The abstract implies that this was primarily a review of records. At any rate if we are studying prescribers' behavior then interviews should have been with those prescribers. Please make it clear what was done.

Response: Patients were interviewed at recruitment and during follow up as this was a safety study on Artemether lumefatrine, in this paper the interest is on prescription pattern. However changes have been made and now reads, A trained clinician interviewed patients as they come for treatment and once they were prescribed with antimalarial a clinician filled in a clinical questionnaire see last line on page 6.

Comment w17: This is the first mention of ‘forms’ – what were these – and again what was the purpose of home follow-up if the purpose of the study was to look at prescriber behavior?

Response: The questionnaires used and not forms....changes have been made in new version and now reads, All questionnaires used to collect information at recruitment and at follow up were taken for manual editing, validation and data entry which was done using the Epidata 3.1 see first line on data management and analysis on page 7.

Comment w19: Please clarify – do we mean that 11,648 people attended these clinics and everybody regardless of condition was given AL or is 11,648 only the number of people who got AL – if the latter, please tell us the total number of patients attending during the period so we can get an idea of the proportion of total attendees who got AL.

Response: 11,648 were the total of those prescribed with AL. The study was interested with patients prescribed with AL as it was a safety study on AL. The total number of patients was not collected.

Comment w20: Very good, please stress this information earlier – and if possible how many RDT and how many microscopy – this also gets back to question of what diagnostics capabilities were available at the 16 different facilities.

Response: The number of those tested using BS and those by mRDT has clearly been stated......A total of 5076 patients were tested for malaria, of them 3,953 were BS tested and 1,410 were malaria rapid diagnostic test (mRDT) tested with some had both. About 80% of those tested with Microscope were found positive with 67% of those tested with mRDT were found positive while others were treated based on their presenting clinical symptoms see fourth line on demographic and clinical information on page 7.
Comment w22: Curious, did the authors observe IMCI algorithms pasted on clinic walls or in guidelines on the clinicians’ tables?

Response: Yes, clinicians had the IMCI guideline on their tables.

Comment w23: One can also say parasitological confirmation to ensure RDTs are covered.

Response: Yes, noted and has been changed as suggested ….. use of parasitological confirmation…..see line 9 on page 9

Comment w24: Here again is why one needs to have mentioned the availability of mRDTs and microscopy in the 16 clinics and then refer to this in the discussion as a possible explanatory factor

Response: Truly, the availability of mRDT and microscopy has been explained in methodology

Comment w25: Is the study area a high transmission area – relate the discussion to the results where possible.

Response: The study area was high transmission area, now malaria is declining in the area.

Comment w26: Have they had training in RDT use, do they trust RDT results, a limitation is that the clinicians were not interviewed, but …

Response: All clinicians had training on mRDT but not all the time had mRDT.

Comment: Be clear what should be the proper inference from the findings – are we saying that clinicians might be more worried about and less certain of their judgements and lab results in younger patients and therefore want to be safe and prescribe everything??? BTW was antibiotic prescription associated with symptoms like cough as seen in the figure.

Response: The sentence has been modified to read…..This might be due to pediatrics being in high risk to suffer from recurrent infections of other systems such as the respiratory tract and gastrointestinal system as seen from figure 1 that cough was a major symptom after fever and headache…see 21st line on page 10
Comment: And therefore … don’t just repeat results, what is the main lesson learned?
Response: conclusion has been revised and now reads…Fever is still the main complain regardless malaria decline. Presumptive treatment is still practised. When a child is having fever and tested malaria negative clinicians tends to give more drugs including atimalarial to cure for all possibilities...see conclusion on page 11