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Journal Name:	International Journal of TROPICAL DISEASE & Health
Manuscript Number:	2013_IJTDH_6387
Title of the Manuscript:	NUTRITIONAL STATUS OF TUBERCULOSIS CASES BY HIV STATUS AND OTHER FACTORS ASSOCIATED WITH MALNUTRITION IN THREE HIGH TB/HIV BURDEN PROVINCES, KENYA
Type of the Article	Original Research

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<u>Compulsory</u> REVISION comments	a) Body mass index is one of the indicators related to nutritional status. Malnutrition has many other dimensions, which have not been evaluated. Study can be titled as "Predictors of low Body mass index among patients with smear positive pulmonary tuberculosis in Kenya" b) Please use low BMI as an outcome measure, and define Low BMI as less than 18kg/m². c) Please reclassify demography with respect to three categories – Low / Normal/ High (greater than 25). Compare demographic characteristics and HIV status for low and High BMI categories with normal, and give p-values for each.	a) Title has been revised to 'Predictors of low Body mass index among patients with smear positive pulmonary tuberculosis in Kenya' (page 1) b) Revised as follows page 4. 'A variable for the outcome of interest BMI was generated from weight and height. Persons with a BMI of <18.0 were classified as low BMI, 18.5 – 25.0 as normal BMI, while those with a BMI of >25 were classified as high BMI. Low BMI is the outcome of measure in this study.' c) Based on low BMI as the outcome measure and comments from other reviewers, patients with high BMI have been excluded from the analysis. Therefore we have deleted the column with high BMI in table table 3 and 4. We now have 4 tables 2011, Kenya Table 1: Table 1: Social, demographic,



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	d) Then use logistic regression to identify predictors of Low BMI (under-nutrition). e) Authors have used varied outcomes in their cross-sectional study which makes whole paper confusing. First half of paper is about HIV positives are different as compared to those who are negatives, later half if those undernourished are different, and one of the table also talks about those more nourished being different. Please focus on low BMI as only outcome. f) Conclusion seems to be misplaced. If OR for HIV positivity among “overnourished (BMI >25)” is 0.62 (95%CI 0.41-0.93) which means “lack of HIV positivity is predictive of BMI >25” Multiple outcomes hence make the paper jumbled. Other comments are:	economic and clinical characteristics by HIV status of TB cases who underwent nutrition assessment in three high TB/HIV burden provinces, July 2010 to May 2011, Kenya Table 2: Table 2: Association between social, demographic, economic and clinical characteristics with low Body Mass Index (BMI) in smear positive pulmonary TB cases who underwent nutrition assessment in three high TB/HIV burden provinces, July 2010 to May 2011, Kenya Table 3: Table 3: Risk factors associated low Body Mass Index (BMI) in smear positive pulmonary TB cases who underwent nutrition assessment in three high TB/HIV burden provinces, July 2010 to May 2011, Kenya Table 4: Table 4: Predictors of low Body Mass Index (BMI) in smear positive pulmonary TB cases who underwent nutrition assessment in three high TB/HIV burden provinces, July 2010 to May 2011, Kenya In table 3 and 4 we compare normal BMI and low BMI and p-values are given d) This has been done (Table 4) e) This has been revised; our outcome of measure is now low BMI. Patients with high
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	g) Introduction: Each paragraph in the introduction section should mention one theme. If authors intend to describe magnitude of triple HIV, TB, and malnutrition problem in Kenya in first paragraph, they need not mention indicators of malnutrition (BMI), Last sentence in first paragraph is redundant. Similarly each paragraph in introduction is a collection of facts, with multiple themes. It is suggested to restructure introduction section as Paragraph 1: Magnitude of Problem. Paragraph 2: Interplay between TB HIV and malnutrition, what we do not know. Paragraph 3: Why authors performed this study. Methods h) Study setting: Please specify how many provinces are there in Kenya, of which three were selected. If provinces are selected based on HIV prevalence, were these three provinces had highest prevalence (% of HIV cases) or highest burden (number of HIV cases) or highest burden of HIV positive cases amongst TB patients? These three statements are variedly mentioned in this section. Please give figures for “the criteria” used to make this decision. i) Study population: “Sound mind” is a vague term, and is a pre-requisite for valid informed	BMI have been excluded from the analysis. The ambiguity has been addressed f) Conclusion has been revised to ‘Lack of employment is a predictor of low BMI in TB cases. Nutritional status does not differ by HIV status. TB programs should consider developing guidelines to identify high risk TB cases for nutrition support as an integral adjuvant therapy.’ g) the introduction has been rewritten
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	consent. This phrase needs to be removed. Please provide population of each province, number of TB registered cases in each, and proportion sampled. There must have been a cut-off time period investigators used to draw up a complete list. Please inform if the district TB register is a paper or electronic document, and how random sampling was done. Was it based on registration number for each district, or every nth registered person was chosen or random numbers were used in an electronic list to make this decision. Since all MDR TB cases were included, their selection was not random and will result in oversampling of MDR TB cases, greater than their proportion in population. This is likely to skew the results towards under-nutrition and towards HIV positivity. Please explain. j) Data collection: Who administered the questionnaire. Was it done in local language. How were weight and height measurements obtained. k) Results: Opening sentence of results should	h) This has been addressed in page three in study setting where the number of provinces in the country has been highlighted. In addition, the HIV sero prevalence for each of the provinces has been shown to be higher than the national average. i) The term sound mind has been deleted and the study population section has been revised. The respective populations for the provinces have been added to the text (study setting) including the proportion of sampled smear positive cases. At the district level, there exists a paper based line list of all TB patients notified. Based on the sample size allocated, a random table was used to identify the smear positive cases for inclusion into the study.
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	be about time period of study, and proportion of individuals in outcome categories. Please do not repeat numbers in tables in the text, and only highlight how two groups were different. Please specify direction of difference. If you have used continuous variable (eg age) and provided mean (SD), then giving categorical variables is redundant. At places in results chi square test has been used on ordinal variables, which at places is meaningless. Eg in marital status – Was the difference in two groups was with reference to marriage, or being single ? Prefer two-groups based on what is biologically plausible. Similarly each medical condition has to be individually assessed. Many individuals will have multiple conditions as well. P-value is never 0.000, it is <0.0001. J) Discussion section needs to be re-written	MDR TB was thought to be a risk factor hence patients with MDR were included. We think MDR cases included are representative since it is a survey J) The questionnaire was administered by trained research assistants. The questionnaire had been pre-tested prior to the start of the study and translated to Kiswahili (local national language) for subjects who do not understand English. All sites providing TB services are equipped with a heightometer for routine assessments of heights and weights for the patients. The weights are monitored monthly during treatment period as dosages are depended on weight. k) The study period and response rate has been included in the results section.
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		Numbers in tables and text have been revised accordingly, and direction of difference has been specified. Age groups have been deleted from all tables. This has been revised j) The discussion has been re-written based on all the changes from the 4 reviewers
<u>Minor</u> REVISION comments	k) There are various English grammar issues. Please revise language.	k) We have done our best to revise the language
<u>Optional/General</u> comments		