Author's response to reviews

Title: Population awareness of risks related to medicinal product use in Vientiane Capital, Lao PDR: a cross-sectional study for public health improvement in low and middle income countries

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Author's response to reviews: see over
Dear reviewers,

We would like to thank you for having commented our paper.

Would you please find below the detailed answers to your comments and questions. The corrections are highlighted in the text of the revised manuscript.

We hope that this revised version will respond satisfactorily to your questions.

**Reviewer's report**

**Title:** Population awareness of risks related to medicinal product use in Vientiane Capital, Lao PDR: a cross-sectional study for public health improvement in low and middle income countries

**Version:** 4  
**Date:** 24 April 2015

**Reviewer:** Masamine Jimba

**Reviewer's report:**

[Major comments]

L192, 195, 240, 241: The authors included all the variables that were significant at a 20% level in the multivariate logistic regression (Table 4), according to L192. In addition, according to the authors' comment, they excluded variables that were not significant in the multivariate logistic regression to select the independent variables in the final multivariate logistic regression model. I have an impression that two different variable selection strategies were used in this study. If the authors intended to restrict the number of independent variables based on the criteria of the significance level in the univariate regression, the multivariate regression should have had all the variables that met this criteria (without further variable elimination process). If the authors intended to use the backward stepwise approach, they should have not used the criteria of the significance level in the univariate regression. And regardless of the variable selection method that this study finally applied, this stepwise procedure should be clearly mentioned in "Data Analysis" subsection, not only in L240-241.

L240: The final multivariate regression model did not report Adjusted Odds Ratio because there was only one independent variable in the multivariate regression model and thus it was not "adjusted" by any other variables. Then, it should not be called as an aOR.

We understand that this ‘multivariate’ model with only one variable may be disturbing.

Therefore, we have modified the Table 4, as well as the corresponding paragraph in the abstract (L68), in the Data analysis subsection (L195-196, L200), and in the results section (L236, 240, 244, 246) of the revised manuscript. We have presented the results of the multivariate model with all candidates variables potentially associated with our outcome, which have been selected according to the univariate analysis (p< 0.20). In that model, the only variable that remains statistically significant was the district.
L323-327: The authors presented that only "District" variable was included as the independent variable in the final multivariate logistic regression model. If District was controlled for by other (individual or household level) factors, the authors may be able to discuss the availability of health services, among other supply side factors and geographic factors as "District" may mainly represent. However, without controlling for by any other variables, the authors may not be able to investigate what factors that "District" may really represent. In the lines 323-327, the authors discussed "distribution of health facilities" only as a factor that this variable represents. The authors should discuss a variety of factors that were possibly captured by "District."

As suggested by Syhakhang et al., people in urban areas may have better opportunity to receive information on drugs from the regulatory authority (Syhakhang et al. Knowledge and perceptions of drug quality among drug sellers and consumers in Lao PDR. Health Policy Plan. 2004). Without any example for this assumption, we first preferred not to mention this in this article. However, as referee 1 also requested it in the first revision, we have now added a sentence in the discussion (L325-327). Discussions with Laotian partners have not led to any other explanation for this observation. Thus, we have added the following sentence in the discussion: ‘More investigations are needed to assess other potential factors that might explain the differences between the districts.’ (L327-329)

[Minor comments]
L64: Unclear if 85.0% is "85.0% of all the respondents" or "85.0% of those who were unaware of medicine risks."
85.0% refers to the respondents. We have changed the sentence in the revised manuscript. (L64-65)

L137: This sample size calculation did not consider design effect that can arise in two-stage random sampling as this study did. We did not consider design effect in our sample size calculation because we lacked parameters to do so, such as the number of households by villages. 144 citizens were interviewed, i.e more than the minimum of 87 villagers required, which might have reduced the loss of power induced by the two-stage random sampling.

L215-: The word "frequently" may not be appropriate in this context. It sounds like a respondent had a low level of education repeatedly. The authors may want to say that "Respondents being unaware tended to have a low level of education....."
We have now changed the sentences as suggested in the revised manuscript (L214,216,217).

L260: The word "almost" sounds inappropriate in this context. We have now removed the word “almost” in the revised manuscript (L260).
Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
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.