Reviewer’s report

Title: Viral Transmission Risk Factors in an Egyptian Population with High Hepatitis C Prevalence

Version: 3 Date: 17 June 2015

Reviewer: Julia Uhanova

Reviewer’s report:

The authors successfully addressed most of the issues raised with the previous reviewers. However, the paper is at times repetitive and somewhat unclear. I believe that there are a few revisions the authors can undertake to make this a stronger paper.

Major Compulsory Revisions

ABSTRACT:

Methods: the statistical analysis (line 50-51) mentions only demographic and HCV seropositivity data analysis. There is no mention of the main focus of the paper, which are the viral transmission risk factors.

Conclusions: The conclusion statement is confusing and, the way it stated, contradicts the study findings. Reading it, one may assume that the older adults contribute to both the ongoing endemic and to the shift from a rural to urban area.

THE MANUSCRIPT:

Introduction: The end of this section should just state the aim of the study. Reference to the source of the study population (lines 87-90) belongs to the Methods section and, when repeated again in the next paragraph (lines 95-97) makes the paper verbose and unfocused.

Study Population and Data Collection: In the last statement (lines 123-125) the assessment of the current study population with the "target demographic subgroup of the Egyptian population" is mentioned. Please provide an explanation of what exactly is this target subgroup?

Throughout the paper there are repeated references to "older" and "younger" age groups and populations. Study aim and Conclusion statement also refer to "older" population. Please define what constitutes "older age groups" in your study, as the criteria may differ for different readers. Provide this definition in the Study Population section.

RESULTS:

Demographic Characteristics: this section and the corresponding tables should be rearranged. The section starts with the study results (logistic regression),
followed by the description of the study demographics, and ending with more logistic regression results. Similarly, Table 1 shows the study results, followed by Table 2 with the sample demographics, and Table 3 again with the results. The sample demographics should be described first, followed by the results.

The lengthy description of migration patterns should be shortened as it adds little to the paper and makes it too wordy. The significance of the relationship between migration and HCV status is hard to evaluate without knowing the HCV status of those who did not migrate, the latter was not provided in the text or figures. The logistic regression models (Table 1) include birthplace and residence at the time of interview, but even more important would be to include in the model migration vs. not. The more precise model with no migration as the reference category and different types of migration as the categories of interest with the corresponding ORs and CIs would strengthen the paper and support the focus on migration as one of the possible issues in the shifting epidemic. Similarly, Figure 1 could be supplemented by the HCV status of those who did not migrate.

Representativeness of the Study Population: this section is better fitted within the discussion segment of the paper, as it deals with the generalizability of the study results and not directly related to the study aim. The paragraph opening (line 237-238 of the Discussion) states that "...our sample population was representative of older age groups in Egypt.." and the mentioned above assessment of HCC/EDHS populations should be moved here.

Limitations: Please provide reference to "many other" studies you refer to in your statement about lack of association between HCV status and transmission risk factors.

Conclusion: the conclusion statement is not well supported by the study results. The authors clearly showed that PAT alone can not explain the high HCV prevalence. However, the results of the study did not find medical procedures to be significantly associated with the increased rates of HCV. Similarly, there is no data from this study directly supporting "informal health care settings" as possible risk factors, because there were no specific information in the questionnaire about these. Although plausible and probable, this is not a conclusion of this study, it is more of a future direction of the inquiry. please revise this section.

Please revise this section accordingly.

Minor Essential Revisions
Line 57: Remove the word "older" before "HCV positive".

Line 62: Hepatocellular carcinoma should not be a key word since this paper is about HCV and not HCC.

Line 116: add "for HCC" after "... potential environmental risk factors", because your the next sentence refers to risk factors for HCV.

Line 117: Insert period instead of comma after [10].
Table 3. Highlight unadjusted OR in blood donation category, as this is a statistically significant result: 0.76 (0.59, 0.98).

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests