Author's response to reviews

Title: A systematic review of post-migration acquisition of HIV among migrants from countries with generalized HIV epidemics living in Europe: implications for effectively managing HIV prevention programs and policy

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Author's response to reviews: see over
Dear Victorino Silvestre,

Thank you for the opportunity to revise our paper and for the helpful comments from the reviewers. We have responded to each comment in turn, please see below.

Referee 1

_The study submitted by the authors is based on a potentially interesting idea_ (trying to identify HIV acquisition or risk post-migration) _among people born in a country outside the EU, but unfortunately did not appear to be implemented up to the standard required for systematic reviews and there appears to be some major holes in the search process_

We thank the referee for their extremely helpful comments which we have tried to address. We appreciate that our original manuscript may have lacked the some of the detail necessary to ensure that readers understood that we did indeed implement our systematic review up to the standards required according to both PRISMA and the National Institute for Health and Care Excellence, non-departmental public body of the Department of Health in the United Kingdom. We have included further details about this in the paper and have submitted a PRISMA checklist and flow diagram to the journal.

1. **Why do Tables 3 and 4 go before Tables 1 and 2 in the text? This should be modified.**

   We have changed the manuscript so that Tables 1 and 2 go before Tables 3 and 4.

2. **Tables also were not provided, though this would not change my assessment of the paper given the description of tables.**

   We do hope the referee is able to see our updated and modified tables. We feel that the manuscript is enhanced by viewing the tables in conjunction with the narrative summaries.

1. **In the Abstract, please provide some objectives in the Background section. Have these objectives match well with later in the introduction.**

   We have provided objectives in line 8 of the abstract and updated the introduction to reflect this.

2. **Throughout, please be sensitive about language related to people living with HIV. a. I.e., line 2 – change to “A large proportion of people living with HIV in many European countries were born in another country “i.e., migrants” to the European country) b. I.e., line 3 – change to “A large proportion of the people who contracted HIV through heterosexual transmission were born in countries with generalized HIV epidemics.” This website should be helpful:**


3. **Please also be sensitive about language related to migrants throughout, i.e., line 2 is potentially stigmatizing. It is more sensitive to the people to which your refer to really clarify what you mean and to avoid grouping the entire population together and ascribing characteristics to the population, which may only apply to which may only apply to certain people in the population.**

   We are very grateful for this feedback as we were unaware that the language would be considered stigmatising. We have strong links with community based organisations and have conducted a lot of community participatory research with migrant organisations around
Europe who regularly adopt the language we use in this manuscript. Nonetheless, on re-reading the paper we can fully appreciate that our motivations are not clear, particularly since we have adopted the language used in the papers we have reviewed. We agree that much of this language can exacerbate stigmatising and anti-immigrant sentiments if viewed out of context. In addition we acknowledge that some readers will not recognise that in most cases these words have been used to remain brief and within limited the word count.

We have made substantial revisions throughout the manuscript based on the extremely helpful blog post the referee provided. In an effort to remain true to the review process however we have be unable to fully adopt some of the recommendations the blogger makes. In particular the narrative summaries and the tables do use some of the medical terms that are more disease-focussed than person-focussed.

4. The Introduction needs some work – it is very short. At the very least it would be helpful to know why this lit review is being conducted – is there a missing gap in the literature?

We agree that the introduction was very short. The revised and expanded introduction includes details about why this work was undertaken and the importance of publishing this review.

5. In the objectives (lines 16-21), it is not clear what this paper is doing, methodologically – systematic review, etc. Please rephrase this summary of the paper as objectives so that this is clear to readers. In general, the objectives of this review are quite unclear, and I am having some trouble following the aims after re-reading several times.

We have revised these lines and hope that it is now clear. (Please see lines 3-10 on page 6)

6. Methods – why limit to just EU countries? Please make this clear

We have included the following on page 7 lines 1 & 2.

Only studies conducted in countries with programmatic or surveillance links within the European Centre for Disease Prevention and Control (ECDC) were included in this review. [Footnote: These are EU/EFTA countries: Austria; Belgium; Bulgaria; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Iceland; Republic of Ireland; Italy; Latvia; Liechtenstein; Lithuania; Luxembourg; Malta; The Netherlands; Norway; Poland; Portugal; Romania; Slovakia; Switzerland; Slovenia; Spain; Sweden; UK]

7. Methods – line 14: I am not convinced that your search list captured everything you wanted it to. Why did you use “assortative sexual mixing” as a term? This is usually used in mathematical modelling studies to describe partnering patterns, but do not have much to do with migration or HIV risk. The terms need to be re-examined and expanded on, or at least justified, and all the terms used need to be provided to readers so that anyone could re-do the search on their own (authors suggest that they did not include all of the terms in the text of the manuscript).

It is unfortunate that the referee was unable to see our tables during the initial review as this may have assuaged some of the concerns about the search process. The terms “assortative” and “dissortative” sexual mixing are regularly used in surveillance, cross sectional and prevalence studies that examine sexual mixing as reflected in the selected
papers. Our full search is comprehensive and runs to 34 lines and due to its length we do not agree it should be included in the paper. It is available online (as are the full methods) which we have now made clearer in our revised manuscript.

Methods

Later, in the results, you have headings for ‘sexual behaviour’, which talks about different sub-types of the virus, which is confusing. Why is this sexual behavior? Later, you very briefly talk about sexual mixing/partnership patterns. A key problem here is that you did not adequately include search terms for sexual behavior, or describe them. You also have a heading for “Condom use and partner numbers”, but it is not clear if you used these search terms. To make any clear conclusions about condom use and sexual behavior you would need to do a much broader search.

We fully agree that these headings were confusing and we have now revised the manuscript so this section is about evidence of sexual mixing, which is how many authors of the reviewed papers present these data. We agree that it was confusing to include discussions about condom use and sexual behaviour and lifestyles and we have removed these papers from our review.

8. Did the authors use PRISMA guidelines for their systematic review? Suggest that authors redo the review with these guidelines in mind. I would suggest Marshall and Werb 2010 “Health outcomes associated with methamphetamine use among young people: a systematic review” as a guide, including detailed supplementary files, which are necessary to allow readers to give a good assessment of the methods and results.

We believe our systematic review was conducted using a rigorous and systematic search, screen and quality appraisal process. Our review does match the PRISMA guidelines and with have included the checklist for the journal. The PRISMA statement and guidelines are flexible as stated in Moher et al (2009)

“The general concepts and topics covered by PRISMA are relevant to any systematic review, not just those summarising the benefits and harms of a healthcare intervention. However, some modifications of the checklist items or flow diagram will be necessary in particular circumstances.”

In addition authors state:

“The aim of the PRISMA statement is to help authors improve the reporting of systematic reviews and meta-analyses…. However, the PRISMA checklist is not a quality assessment instrument to gauge the quality of a systematic review.”

9. The search needs to be updated, as it was done in May 2012. This is now over two years later and the authors are certainly missing key papers.

We agree that the search needed updating, particularly since the original paper has been with journals since October 2013. We updated the search in January 2015. The results are included in the revised manuscript.

10. In general, because of the limited data and the difficulties with the search process, I would recommend authors consider re-submitting this paper (elsewhere or to BMCPH) as a very brief
article, or presenting only parts of it, but going into more detail about one section (i.e., just focusing on HIV prevalence acquired post-migration, or just on HIV risk among migrants post-migration).

We believe the updated manuscript with the additional data is too long for a brief article, particularly since we were also asked to update the search till 2015. Additionally we would not want to exclude the data from the member states survey which is very important in highlighting the policy and programmatic changes needed in the EU/EFTA area.

Referee 2

1. There seem to be some perhaps overly strong statements made around migrants and high risk sexual behaviour in the discussion section ‘implications for prevention programming’. From earlier statements, and a look at some of the papers included in the review, it seemed like the evidence is quite mixed. For some groups (Black MSM) you find evidence reporting higher levels of risky sexual behaviour, but this is contrasted with other studies which find that condom use within African living in Europe is higher than the general population, and that the majority of migrant female sex workers in Spain used condoms consistently with clients. These studies seem to challenge these negative stereotypes of migrants as ‘risk takers’.

We have updated the manuscript in light of feedback from another referee and these papers are now no longer included in the review.

2. The authors need to consider implications their review may have for migration policies. Of course, this applies to the individual studies reviewed, but the general findings, which seem to suggest that post-migration infection may in fact be higher than first thought, could be used as an argument to further limit and police immigration, or to further stigmatise pre-existing migrant populations.

We thank the referee for this comment and agree that there are implications from the review. We have written this paper in the context of migration and HIV prevention policies that are based on data that suggest that far more “infections are imported” than is the case. As a consequence there have been policy-makers that suggest migrants should be screened for HIV before gaining entry to Europe or that HIV prevention efforts should only be targeted at people born in Europe. We have now addressed these issues in our manuscript. The introduction now reads:

Funding for primary prevention among migrant communities may be reduced or redirected if surveillance data suggest that individuals do not have HIV prevention needs after they have left their home country or that significant numbers of migrants are coming to Europe as “HIV health tourists”

3. From looking at the studies included, it is clear that the definition of a ‘migrant’ or ‘migrant population’ varies across the papers, something which is acknowledged by the authors, with ethnic groups and migrants used interchangeably (see tables 3 and 4). The authors could make it clearer what their starting definition of a migrant was for the systematic review and who this related to the inclusion criteria, and whether this changed during the review process.

We have addressed this point in the introduction where we elucidate upon our objectives:

This paper presents a review of the evidence of post-migration HIV acquisition among migrant communities in Europe. We examine quantitative studies and
surveillance reports based on data of populations from countries with a generalised epidemic which include outcomes that estimate the probable country of infection, incident infections, or evidence of sexual mixing.

We have also addressed the minor issues.

1. **In the section ‘implications for policy’, what do you mean by combination prevention for both migrants and non-migrant communities?**

   This sentence is now amended:

   To reduce acquisition countries would need to include policies around structural, behavioural and biomedical prevention interventions that are targeted to all communities, including migrants from countries with generalised epidemics.

2. **P4, line 9-10 – this sentence does not scan well**

   This sentence is now amended:

   This assumption is often based on reports from clinicians who make deductive inferences according to a patient’s country of birth, time of arrival in the new country of residence, CD4 cell counts and the natural history of HIV infection. Clinicians may also use algorithms that are biased towards determining that patients born in countries with a generalised epidemic contracted HIV prior to migrating to Europe [4].

**P11 – tables 1 and 2 are inserted after tables 3 and 4 (on page 9)**

This has been corrected.

**P14, line 6 – should the sentence start with ‘ideal’?**

This has been corrected to “Effective”

**5. Across the whole article, references appear after the fullstop, whereas they should be before it**

This has been corrected.

We include the amended flowchart and PRISMA checklists for the Editors review.

Yours sincerely

Ibidun Fakoya