**Reviewer’s report**

**Title:** Using eHealth to engage and retain priority populations in the HIV treatment and care cascade in the Asia-Pacific region: a systematic review of literature

**Version:** 0  **Date:** 27 May 2017

**Reviewer:** Adam Bourne

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This article is timely and addresses an important topic in the field of HIV prevention and care. With the significant rise in mobile and smartphone use across the world, the potential for use of these technologies to reach those populations most at risk continues to grow. This paper could make a valuable contribution to the literature, however requires some work to strengthen various concepts and potential applications prior to publication.

**Major comments**

1. The paper would benefit from a more clear conceptualisation of what constitutes a 'social media' intervention. Social media is a setting within which interventions can be delivered (e.g. Education initiatives, direct messaging, social marketing, partner referrals, linkage to testing sites, delivery of postal tests etc). It would be like saying that 'bars and clubs' are an intervention type.

2. The selected papers are divided between target audiences of 'men who have sex with men' and 'PLHIV o ART'. Obviously someone could be both. Can you clarify the purpose of the MSM interventions (e.g. Are they about prevention initiatives) and more detail regarding the PLHIV (e.g. Were any of MSM)?

3. There is a great degree of conflation regarding the type of mhealth represented in the 11 papers selected for inclusion. 'Cell/mobile phone based' is a description of a physical technology on which 'smartphone apps' can be used, 'text messages' sent or the web or social media accessed. Wireless is a means of transmitting data that can be applied to many of the interventions types they describe. Text messages can be sent via smartphone apps, and this is increasingly the case. Can this section be clarified and categories revised accordingly.

4. The discussion is a useful summary of the key findings that situates them within the broader literature. What would help to strengthen this some reflection on how these technologies have rapidly evolved and are continuing to do so. There are increasingly sophisticated ways to reach most at risk populations via smartphone technologies given the way that advertising can be targeted and due to exponential growth. This is particularly true of MSM, who are
frequently early adopters of new technologies. Providing the reader with some estimate (however limited) of smartphone coverage in the Asia-Pacific would also help to contextualise the potential benefit of these findings.

Minor comments

5. The authors need to acknowledge the English language only limitation of their search. There are likely to be articles from China, Taiwan or Hong Kong especially that may not be in English but of relevance to this review.

6. Methods section should explicitly state that qualitative studies were excluded

7. nPEP is an usual term. Unless it is the term taken directly from the paper (in which case say so), PEPse (PEP for sexual exposure) may be preferable.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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