Reviewer’s report

Title: Physical activity and the prevention, reduction, and treatment of alcohol and/or substance use across the lifespan (The PHASE review): protocol for a systematic review.

Version: 0 Date: 07 May 2017

Reviewer: Chantelle Garrity

Reviewer's report:

This paper appropriately fits the scope of Systematic Reviews as the authors describe a systematic review of physical activity interventions targeting the prevention, reduction and treatment of alcohol and substance use incorporating both quantitative and qualitative studies. In review the protocol, this appears to be an extremely large undertaking; akin to a best evidence synthesis of the literature. Overall, the authors provide sound rationale for this study, which will be an important contribution to the field.

Areas in need of clarification:

Line 187 - Impact of stakeholder Engagement: Involving stakeholders in this systematic review process is of importance. However, it would be useful to readers if the mechanism by which this will happen is further explained in more detail in this section. Having read the entire protocol, the authors should consider moving pertinent sections of the discussion section that further describe the specifics of such engagement - back to this section when 'stakeholder engagement' is first introduced. The level of detailed provided in the current discussion section on specific organization and names of those involved as stakeholders may be better suited in an appendix, with a summary description of the process and types of agencies/key stakeholder positions mentioned in the article.

Line 354 - Search strategy: has consideration been given to having the main search strategies peer reviewed (PRESSED)?

Line 382 - Data management: given the potential screening and extraction volume, has the study team given consideration to the use of an online collaborative systematic review software system (beyond EndNote and bespoke extraction forms)? This would be a potential time saver in terms of project management in real time, and creating efficiency in screening (one could do liberal
accelerated screening at titles and abstracts - 1 to include but 2 to exclude) in terms of collating conflicts automatically. It would facilitate data extractions, data mining and report generation; filtering studies by type and whether AUD and/or SUD related. DistillerSR and Eppi Reviewer are two main products that come to mind but there are others available.

Line 400-401: RK will be consulted in relation to economic evaluations - does this mean that economic papers will be reviewed by two persons or just one?

Line 574 - DISCUSSION - Stakeholder Involvement and Public and Patient Involvement (PPI) - the suggestion to the authors is to move much of the specifics provided below (Lines 575-596; and Lines 601-615) to the previous section "Impact of Stakeholder Engagement" - see above comment. This will then address 'how' the engagement will take place, and with which types of organizations.

One suggestion is for the authors to take Lines 596-598 and make this the first sentence under this discussion section, and from there describe how service provider and user perspectives have influenced the application (providing a high-level overview of what has already been described in the protocol). This should be referenced as a general strength of the protocol. In the discussion section authors should also point out other strengths, and challenges of this review, and emphasize intended impact/implications of this work to round out this section.

**Level of interest**
Please indicate how interesting you found the manuscript:

An article of importance in its field that should be highlighted to relevant networks

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

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal