Reviewer's report

Title: Effectiveness of School Dental Screening on Dental Visits and Untreated Caries among Primary Schoolchildren: Study Protocol for a Cluster Randomised Controlled Trial

Version: 0 Date: 01 Mar 2018

Reviewer: Rebecca Gossage-Worrall

Reviewer's report:
The trial you propose is interesting and will increase the evidence base for referral methods for dental screening in SA schools for untreated caries. It presents some challenges given the limited resources available.

I have made some specific points which I hope will improve the manuscript.
* Funder - 'self-funded' is ambiguous. If the authors are funding the research this should be explicit (e.g. through substantive employment). See SPIRIT for guidance if required. The authors declare that they have no competing interests but are involved in the design of the research which may considered a conflict that requires stating.
* The sponsor or the contact details are not specified in the manuscript and are listed as not applicable in the submitted checklist. This should be justified as it contradicts the NCT registration which lists KCL as the Sponsor.
* There is no details about any Trial Management Group or independent oversight committee. This may not be required but it is a SPIRIT checklist requirement so justifying why there isn't a TMG, TSC and DMEC is advised.
* There is no consideration of risk/harm. The manuscript acknowledges (from the review) that there is no conclusive evidence regarding the harms or benefits of school-based screening. Are there any safety issues? Are false positives or incorrect referrals possible? If so, how will these be handled?
* Data management - the manuscript doesn't specify who will collect the data and be responsible for it in each cluster/site as appropriate. Only the abstract mentions that dentists will collect the outcome measures so it would help to be clear who is doing what.
- It is unclear whether 'separate fieldwork teams' will have access to data (previously the manuscript states that only the authors will have access).
- It is unclear if the 'recorder' will be blind as it reads like they both send referral letters (page 10) and record the primary outcome. I found it difficult to unpick this section. It may aid the reader to describe the roles of those in the fieldwork team/s e.g. the field team (in each cluster?) consists of a recorder who will do x and an examiner who will do y. Individuals will switch roles to minimise visual fatigue.
* Accounting for 11% attrition would require a sample size > 1000.
* Page 7 ("Trial Outcome") - wording implies there are two primary outcomes.
* Page 15 (para 1) - consider revising, it is unclear in parts.
* Page 15 (para 2) - please add a reference for 'robust design'. Also, I am not sure how collecting and analysing sociodemographic data reduces bias - it allows you to compare the groups and consider how balanced the groups are. Later in this paragraph the authors go on to mention limitations of the proposed trial which is important; however, the wording could be improved.
* Given the potential impact of gender segregation on the study design and implementation the team may want to consider (if you have not done so already) whether it is feasible to engage a male co-PI to help ensure the ratio is representative of the target population.
* Figure 1 does not include when assent/consent will be obtained.

Typos
Page 9 (line 2) - taking part *in* (rather than 'of') a trial.
Page 9 - "For schools that agree*d* to participate"

Level of interest
Please indicate how interesting you found the manuscript:
An article whose findings are important to those with closely related research interests

Quality of written English
Please indicate the quality of language in the manuscript:
Needs some language corrections before being published
**Quality of figures**
All images and figures within the manuscript should be genuine i.e. without evidence of manipulation. No specific feature within an image may be enhanced, obscured, moved, removed, or introduced. If you have concerns about the veracity of the figures you should choose the first option below.

**Statistical review**
Is it essential that this manuscript is seen by an expert statistician? If so, please give your reasons in your report.

**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