Reviewer’s report

Title: A cluster randomised control trial investigating the effectiveness of personalised letters sent subsequent to school dental screening in increasing dental registration rates in unregistered 12-13 year old children in South-East Scotland

Version: 1 Date: 26 September 2008

Reviewer: Peter Robinson

Reviewer's report:

Cunningham et al
A cluster randomised control trial investigating the effectiveness of personalised letters sent subsequent to school dental screening increasing dental registration rates in unregistered 12-13 year old children in South East Scotland

This is an interesting study and definitely needs to be reported. However, it contains a number of areas that could be clarified before it can be published.

1. The title is too long. I suggest “A randomised control trial of the effectiveness of personalised letters sent after school dental screening in increasing registration of unregistered children”.

2. The background to the abstract is overwritten. The first two sentences could be deleted and the second part of the background could be reduced substantially.

3. More detail is needed about the control group in the abstract.

4. The results of the abstract do not report the primary outcome of the study.

5. I think the aim could be expressed a little bit more clearly. Certainly the aim could be self-standing and not referring to other parts of the background. In addition I found it confusing to hear the Lothian and Fife system was “traditional” when the previous paragraph had said how there were aspects of it that were unusual.

6. At the bottom of page 5 refers to three groups of 12-13 year old children. What are those three groups?

7. My principle concern with the rest of this paper relates to the sub-analysis of children who had never been registered or were lapsed. Why was this done? There’s no hint that it would be done in the background or the aims. In fact this sub-analysis pretty much dominates the results (paragraphs 3 and 4) and by the bottom of page 10 I got the feeling that the authors were trawling the data for a positive finding because their primary outcome had shown no difference. Likewise in the discussion quite a lot is made of the difference in outcome between these two groups of children even though it is unrelated to the aim. There is another interpretation of this significant finding by the way. There are
three working hypotheses and three groups (the total population, those who had never been registered, and those who were lapsed). Using an alpha of 0.05 this gives a 45% chance of type 1 error. It may be that this difference between groups is just by chance.

8. The authors also over-interpret a non-significant finding at the bottom of page 11 referring to the slightly lower re-registration rate amongst the traditional group.

9. Actually the authors have some really interesting data because the system for following the children was unique and as the authors point out could never be used again. The authors ought to play this up as any misclassifications in earlier studies by other authors would mask any differences between the groups.

10. The profile does not seem to indicate any loss to follow up. Is this correct? It would be interesting to know about loss to follow up and indeed whether any other aspects of the CONSORT statement were omitted.

11. The conclusions should really relate to the primary outcome of the study rather than the strange sub-analysis.

12. I found table 1 slightly confusing. In the traditional group the description says the letter was tailored to the confirm registration status of the child prompting registration when necessary. What this really means is that they only sent a letter to the children who were not registered.

13. In tables 2 and 3 I did not like the phrase “changes in registration levels”. What these tables describe is the proportion in each group who had registered at the end of the study. Table 2 could be simplified as if we know the number in each group and then the proportion who registered we don’t have to be given the absolute number who registered. The extra space gained could be used to describe the characteristics of the group (very briefly!) rather than just referring to the group number.

14. Given what I have said about the sub-analyses, table 3 might be a distraction.

In conclusion this is an interesting and potentially important paper but it needs to be clarified and to focus more on the primary outcome than an exploratory analysis.

Major compulsory revisions: 4, 7, 8, 9, 10, 11,

Minor essential revisions: 1, 2, 3, 5, 6, 12, 13,

Discretionary revisions: 14

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests