Reviewer’s report

Title: Practice Change Toward Better Adherence to Evidence-Based Treatment of Early Dental Decay in the National Dental PBRN

Version: 2  Date: 10 September 2014

Reviewer: Theodorus G (Dirk) Mettes

Reviewer’s report:

First of all, I would like to point out that authors have made some improvements regarding the readability of the manuscript i.e. the method and analysis section. But there remain critical remarks on questions posed by my first review, which has not been addressed at all or partly. It is very time-consuming to look for adjustments in the manuscript without the provided answers to questions posed in the list (1--#7), as well as under ‘additional remarks’.

To point out again on the same questions is not appropriate and I would invite authors urgently to give serious attention to questions raised in the first review that has not been addressed yet.

ADDITIONALLY SOME REMARKS BASED ON THE REVISED MANUSCRIPT:

Abstract: some data presented with p-values, and others with OR, more consistent reporting. The abstract need further improvement regarding the precise description of the research question.

Background: my suggestion to use more recent dental research on implementation of CPGs in oral care instead of only an extensive description retrieved from medical research. By simply describing the dental research in the background section without focusing on the impact of the results and conclusion, which are relevant for CPG implementation research in dental practice (guideline implementation tools, multifaceted interventions in knowledge translation) is useless. If references are used in the text, they should also be described in the reference list.

Methods

Explain further the meaning of ‘large integrated, multi-clinic dental group’? page 9.

9. A group of the same GDPs working in one clinic or working in clinics on different locations? Integrated in what sense?

The reliability of the data collection could be questioned, there is a substantial loss of data i.e. as mentioned on page 15 under results. The quality of data recording by providers as mentioned before has not been addressed properly.
Moreover, as mentioned in the discussion section there has been changes in the electronic dental record over time in the research period (page 21), which could have influence on the results.

Development of data set
Explain the combination of the 5 levels of PBRN involvement (page 14), in higher and lower levels by combining 1 and 2 and 3 and 4, what happened to level 5?.

The counting of the diagnostic coding was incorrect in the first review manuscript and the corrected counting of diagnostic coding is still incorrect on page 14 and 15. Based on the numbers in the text, the remaining findings should be 103,235 instead of 107,581.

The stepwise statistic procedure in the model seems to be correct, but the results of the analysis depend for the greater part on the quality of the collected variables (data) that were put into the model, so there exist serious doubts about the quality of the data used.

Discussion
I disagree with the authors when they stated: ‘this study does not use a theoretical frame work because it was not prospective’. My previous comment was focused on a broader discussion on the current knowledge of behavior change and implementation based on more than one study from decades ago (Friedson 1971).

Level of interest: An article of importance in its field

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

no competing interest at all