Reviewer’s report

Title: Cost-effectiveness analysis of a school-based dental caries prevention program using fluoridated milk in Bangkok, Thailand

Version: 0 Date: 29 Aug 2017

Reviewer: Peter Milgrom

Reviewer's report:

This is a report of a cost effectiveness analysis from a societal perspective of milk fluoridation program in Thailand. Overall, the approach is sound but some missing detail and poor editing detracts from an otherwise useful contribution.

The background section would be improved if the authors reviewed the available data on the expected magnitude of caries reductive effect. It would also be helpful to include a brief description of the dental care system in Thailand. For example, are sealants used? Also, in terms of purpose what magnitude of effect is considered important? There is a vague reference to this in the discussion (page 14, line 25). Given the empirical data, it might be reasonable to ask whether having this program is a good use of scarce resources even if the effect is positive? Is the characterization of the benefits/savings in the conclusion as "considerable" actually justified? The authors might note that value of topical fluorides in low caries rate populations has been questioned.

Also, why 6 years. If the same children were examined every year, the authors could improve the paper by looking at the incremental savings. Given that the dental caries in this population is likely concentrated in the first permanent molars and that caries develops in these molars largely when they are erupting, why continue the program past the first couple of grades. The authors could also look specifically at the benefit for the second molars, if there is any.

In the abstract and throughout the manuscript there is lack of clarity of the sample size. This is also true in the tabular material. The abstract should include the cost results in terms of cavities averted.

The description of the source of the outcome measure and the sampling that is alluded to (page 9 line 27) is not comprehensible. Also, presentation of the results at the surface level likely inflates the results. No information is provided about how missing teeth were translated into surfaces. The results should be presented at the tooth level. The authors should clarify why they needed sampling? How many children is this based on?

The authors cite a government report saying that the groups were equivalent at the initiation of the study period. One assumes this is related to the two schools from which the caries data were derived. The paper would be improved if the data regarding the equivalency were included in the
Reference to an unpublished government report, likely in Thai language, that the reader would have trouble obtaining is not acceptable. The authors should provide greater detail about how these variables were measured and also explain whether they are available at the child level. One would like to know if the caries increment calculation is adjusted for baseline caries score? One would also like to know about the use of fluoridated toothpaste or other concomitant treatment.

The authors should clarify the proportion of parents who consent to the program and whether children who did not receive the milk were included in the exams of the sampled school.

Throughout the methods, the authors refer to the Royal Chitralada project. The paper would be clearer if this was explained. Is this the entire milk fluoridation project nationwide? Perhaps the paper would be clearer if it contained a table with each element of data identified with its source, including whether it was an extrapolation or what.

Throughout, the nomenclature THB.### is often unclear because of the lack of spacing. Page 13, line 58 is completely unclear. Grammar should also be check on page 15, line 58.

Table 1 is not needed and the contents included in the text. Other tables need to be labeled so that they can be interpreted without reference to the text.

On page 18, "Ethis" should be fixed. The line spacing in reference 17 is incorrect.

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

No

**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

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