Reviewer's report

Title: Geo-mapping of time trends in childhood caries risk - a method for assessment of preventive care

Version: 4 Date: 16 November 2011

Reviewer: Thiago Ardenghi

Reviewer's report:

1) General comments
This paper is a study which aimed to demonstrate the use of geo-maps concept for analysing time-trends data on caries risk among preschool resident in the region of Halland, Sweden. The study population comprise 9,973 and 10,927 children from whom data on dmf-s index were obtained in 2006 and 2010, respectively; smoothed caries risk geo-maps were produced and geographic changes in caries risk during the time period were assessed. As the main results, the authors demonstrated the usefulness of such approach in monitoring changes in caries risk over time.

In my opinion this is a logically organized manuscript. The paper is well-written; the methods are sound and the topic is of interest for the scientific community and for the target population. I have few suggestions / questions for the authors that should be providing into the text for better understanding as follow:

2) Discretionary Revisions
2.1. Introduction:
2.1.1 In my opinion it could be strengthened considering the implications of geo-maps for allocation of public health resources: what does this concept would add for oral health promotion approach along time-trends?

2.2. Methods/Results
2.2.1. Please, provide the rationale for classifying the positional changes as "evident".
2.2.2. How did parallel changes in the parish-level socioeconomic characteristics were assessed? Did the authors perform any statistical analysis? Although there is no proper information, it seems that the proportion of immigrants among all residents increased (from 1.9-30.7 in 2006, to 4.0-33.9 in 2010). Could it have any impact on the results?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a
statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'