Reviewer's report

**Title:** Is there an impact of public smoking bans on self-reported smoking status and exposure to secondhand smoke? Do smoking bans decrease exposure?

**Version:** 1  **Date:** 22 November 2010

**Reviewer:** francesco barone-adesi

**Reviewer's report:**

The authors use data from the Ontario province (Canada) to evaluate the impact of the introduction of different types of public smoking bans on the prevalence of active smoking and the prevalence of exposure to passive smoking. The paper is of some interest, but there are several limitations and some pieces of information should be added:

The following are the major compulsory revisions:

The main weakness of the study is that it is based on the results of only two surveys. That makes it impossible to estimate the underlying time trends of change of smoking habit and exposure to passive smoking that were already in act before the introduction of the full bans. Decreasing trends in the exposure to passive smoking and the prevalence of smokers are reported in most of the industrialized countries, even before the implementation of smoking regulations. For these reasons the estimated impact of smoking regulations reported by the authors are likely to be overestimated. The authors should state this explicitly. If information (even incomplete) is available from the other years (for example 2001), it should be used to produce educated guesses on the magnitude of the underlying decreasing trend.

Between 2003 and 2005 (the two years for which survey data were analyzed) only 3 municipalities (Sudbury, Durham, Thunder Bay) had major changes of the enforced smoking regulations. For other municipalities, it is difficult to disentangle late effects of the introduction of more restricting rules from the presence of underlying temporal trends of exposure to passive smoking.

The authors should put the results of their study in the context of the existing literature. A number of large studies have been conducted to investigate the impact of the introduction of smoking regulations on the prevalence of active smokers and passive smokers in different populations (see, for example, Galan 2007, Gallus 2006, Haw 2007, Patja 2008). What does the present study add to the existing literature on the effects of smoking regulations? A comparison between the results of the present study and those reported in different countries could increase the interest of the paper.

Cross sectional studies measure prevalences (which are proportions), not rates as the authors reported. The term rate should be changed in prevalence in the paper. More importantly, methods to estimate 95% confidence intervals for
prevalence difference should be used, instead of methods for rate difference.

The five questions of the survey used for the present study should be reported in the text (by the way, this reviewer was not able to find the questions using the websites reported in the references. Please double check their correctness). Is the reported prevalence referring to the exposure to passive smoking happened in the last day, in the last week, or in the last month? Without this information it is very difficult for the reader to compare these results with those from other studies.

Information on the dimension of the sample used in the survey should be provided.

The graphical quality of figure 2 is low. It is not possible to judge the contents of the graph properly.

The graphical quality of figure 4 is low and it is difficult to judge it.

Nevertheless, it seems there are some inconsistencies in the reported figures. For example, in the second row 2003 and 2005 “rates” are reported to be 57.8 and 50.1 respectively. However rate difference is reported to be -1.30. Similar problems are present in other rows. Please double check it.

The following are minor essential revisions:

Results section, last paragraph: statistical significance of changes in the exposure to SHS in Thunder bay and Halton should be assessed

Discussion section, second to last sentence: 20001 should be changed in 2001

Figure 2, legend: an operative definition of “public place” (labeled as 1 in the figure) should be provided. Do they include restaurants (labeled as 2)?

References of papers quoted in this review


Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests