Reviewer's report

Title: Social disparities in the use of colonoscopy by primary care physicians in Ontario

Version: 9 Date: 3 May 2011

Reviewer: Carl J Lombard

Reviewer's report:

Patient neighbourhood information.

The calculation of the neighbourhood-level variables for a PCP raises some concern. The description of the percentage of patients who reside in the Q! neighbourhood seems fine since this percentage pertains the number of PCP eligible patients. For the other variables the information (i.e., percentage of population age 20 years and older) from the neighbourhood is linked to the PCP patient and then aggregated to define and average characteristic. This is done in a crude fashion.

Example: Two patients linked to two neighbourhoods: patient 1 linked to an area with 80% (800/1000) older than 20 years and patient 2 linked to an area with 50% (1500/3000) over the age of twenty. For your study you use the average of 80% and 50% and get a value of 65%. Taking the size of the areas into account one gets a value of 100*2300/4000=57.5%. Why was the crude aggregation considered adequate?

Outcome model.

In the statistical analysis it is stated that discretionary colonoscopies are modelled but in the results and description linked to Table 4 this is not so. Assumed the later to be the case given the comment on discretionary col. in the limitations.

Statistical model Table 4

In the statistical analysis section it is stated that due to a high degree of collinearity the following variables were excluded: age of PCP, rural location of PCP practice and proportion of visible minorities. In the model we have the ecological level variables % of lives(?) in rural location and % of non-immigrants.

It seems that the last variable is the proportion of visible minorities that was to be excluded and that % if life in rural location has not been described earlier. The description in the text and the final model should be clear to eliminate any confusion of what is in and what is out.

It is stated that interactions was considered with time in the final model but these results are not presented. The time effect which is the main factor for the paper should also be presented as well as the time dependent associations. Will be a bit of a challenge to do this in a nice way.
Table 3
This information should also be converted into graphs

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

declare that I have no competing interests'