Author's response to reviews

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

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Author's response to reviews: see over
June 6, 2011

Dear Dr. Shipley,

Enclosed is a re-revised version of the manuscript MS: 1463295710473300 entitled “Social disparities in the use of colonoscopy by primary care physicians in Ontario” to be considered for publication in BioMed Central. We have addressed the comments on statistical methods by the third reviewer and tracked the changes in the re-revised manuscript. A point-by-point response to the comments raised by Dr. Lombard is given below:

Reviewer 3

Comment 1: Patient neighborhood information.
The calculation of the neighborhood-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 (ie 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 area with 80% (800/1000) older then 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?

Response:
We performed the analyses again using a weighted average for the neighborhood level variables taking into consideration the size of the area. This does not change our results in any way. However, the modified Table 1 and Figure 3 are added to the manuscript.

See page 8, paragraph 1, Table 1 and Figure 3.

Comment 2: Outcome model.
In the statistical analysis it is stated that discretionary colonoscopies are modeled but in the results and description linked to Table 4 this is not so. Assummed the later to be the case given the comment on discretionary col. in the limitations.
Response: We modeled the number of colonoscopies and corrected the mistake in the text.

See page 8, Statistical Analysis, paragraph 1.

Comment 3:
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.

Response: We added the description on proportion patients living in a rural area of residence.
See: Page 8, paragraph 1.

Comment 3:
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.

Response: The only interaction found statistically significant was the interaction between PCP sex and year. This was graphical shown in Figure 1. However, this interaction does not seem to be clinically meaningful and hence we did not include in the final model.
See: Page 11, paragraph 1.

Comment 4:
Table 3 This information should also be converted into graphs

Response: We have converted information in Table 3 into graphs and added a new figure.
See: Figure 2.
Thanking you for considering this manuscript. Please don't hesitate to contact me if you have any further questions or problems regarding this manuscript.

Sincerely,

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