Reviewer's report

Title: Demographic determinants of gastrointestinal illness in Canada: a population study

Version: 1 Date: 12 March 2007

Reviewer: Jane Heyworth

Reviewer's report:

General
The research objectives is well defined but not new. The demographic determinants of gi are well established and not surprisingly the authors have found the young and females to be at greater risk. For females the risk is greater among lower income groups.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
The authors do not discuss the sensitivity and specificity of their definition. As GI is defined here as vomiting or any loose stool, it is sensitive but not specific. The authors appear to assume that an infectious agent is predominant cause but food allergies, over consumption, alcohol etc can lead to one-off vomiting or loose stools. This is an important limitation of the interpretation of their results.

Odds ratios, rather than betas, need to be reported in table 2, taking into the significant interactions, as they were in table 1. Otherwise the reader has to calculate these.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
The methods are appropriate but the authors need to include a statement as to how the individual in a household was randomly selected. I do not think the standard logistic regression models need to reported in the methods.
The authors do not comment on the lack of finding of an increased risk of gi in the elderly, although this has been reported elsewhere.

Years is often omitted when the authors are reporting age.

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Discretionary Revisions (which the author can choose to ignore)
The paper is well written but it is bit formulaic.

What next?: Accept after minor essential revisions

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'