Reviewer's report

Title: Environmental and demographic risk factors for campylobacteriosis: do various geographical scales tell the same story?

Version: 1 Date: 13 March 2012

Reviewer: Norval Strachan

Reviewer's report:

Major Compulsory revision

1. The major aim of the paper is on choice of geographical units and impact on epidemiological inference. This is well done in the paper, but the other important aspects evaluating the importance of risk factors are not highlighted. For example no specific findings associated with individual risk factors are mentioned in the abstract. It seems clear (see p13 of manuscript) that you are testing a number of hypotheses associated with risk factors e.g. higher Campylobacter incidence in areas with high poultry density, lower incidence in warmer weather, lower incidence with lower socioeconomic status etc. I suspect the findings associated with these risk factors are important to readers of the journal and so should be made much more prominent. So I think these findings should be in the abstract and also be part of the main aims of the work.

Minor Essential revisions

1. A number of other studies have found that age is important (e.g. Ethelberg in Denmark found young children from rural households were at increased risk). It appears that you have standardised for age but have not used it as a risk factor in your analysis? Can you please clarify this.

2. Travel abroad has been mentioned as a risk factor in several studies. You have mentioned this but not said whether it is an important risk factor in Quebec or Canada. You may not have this information for your dataset but it would be worth mentioning if it was likely to be an important factor or otherwise – as part of your discussion.

3. There is a growing literature in combining typing data with empirical epidemiological data. It would be worth putting a few lines in the discussion on whether you think that this would be helpful in terms of understanding Campylobacter infections. For example would the typing data help (or not help) in terms of understanding the clusters of cases that you found.

Level of interest: An article of importance in its field

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