Reviewer’s report

Title: A descriptive study of reportable gastrointestinal illnesses in Ontario, Canada, from 2007 to 2009

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Reviewer: Karin Nygard

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A descriptive study of reportable gastrointestinal illnesses in Ontario, Canada, from 2007 to 2009.

The manuscript presents the epidemiology of 15 gastrointestinal illnesses in Ontario, Canada and includes valuable information from the surveillance of these illnesses from 2007-2009. Overall, the paper is well written but ambitious in scope. The authors present a wide range of results for a number of illnesses, which has resulted in a diffuse focus. Presenting so many different results has lead to the paper reading more like a report than an article. I would suggest shortening the manuscript to emphasize the main interesting findings. The authors should consider selecting some key results and clearly describing and discussing the implications of these.

Major compulsory changes

Please see the overall comments regarding the focus of the manuscript.

Minor essential revisions

Methods:

1. The acronym iPHIS should be explained

2. The results presented in the manuscript rely heavily on the source and setting attribution conducted by local health authorities as described on page 5. It is well known that cases often attribute their illness to what they suspect; i.e chicken or eggs for salmonella, eating hamburger or kebab from fast food restaurants, etc. The authors need to include some data on the evidence base for attributing source and setting, as especially for infections with long incubation periods (such as listeriosis), the attribution of exposures may be very difficult and for sporadic cases most often must rely on epidemiological studies; i.e case-control studies or laboratory confirmation. Therefore, a more detailed description of the process should be included in the paper, even though the authors refer to other papers where the method is fully described. This should include information on the type/length of questionnaire used to collect information, typical follow-up time and evidence base for attribution.

3. a better description of how cases are determined to be travel-related, including a definition of “travel-related” should be included. Were departure/return dates as
well as the incubation period taken into consideration?

4. How and where is information on outbreak cases collected and maintained? Was data collected on outbreaks from an outbreak surveillance system?

Results:

5. On page 9, the authors state under ‘Exposures of Endemic Sporadic Cases’ that endemic sporadic cases accounted for 44.6% of all reported cases, but this number actually refers to only those endemic sporadic cases that had been followed up and had not been excluded based on exposure information, as shown in Figure 1.

6. In Table 4, there is a typo in ‘paratyphoid fever’.

Discussion:

7. The discussion is too long and unfocused. A lot of figures and numbers are presented with only limited discussion of the implications. A better structure would increase the interest and readability.

8. The limitations of the data are not well described in the discussion. In particular, please comment on the evidence for the “known” exposures for endemic cases (see also comment on methods). To what degree do the authors trust the results of the source/setting attribution and what are the limitations when using this information to determine source/setting? Was there lab confirmation of sources for any cases?

Discretionary revisions

1. It may be more appropriate to refer to non-outbreak, non-travel related cases as ‘domestic’ or ‘non-travel-related’ sporadic cases rather than ‘endemic’ sporadic cases.

2. Although the title and objectives of the study refer to gastrointestinal illness, several of the pathogens discussed in the manuscript do not necessarily cause gastrointestinal symptoms (for example, botulism and listeriosis).

3. Why were cases defined as ‘travel-related’ as a result of travel outside of Ontario rather than outside of Canada? Were cases with travel history outside of Ontario but within Canada expected to have similar exposures to those who had travelled internationally?

4. The authors should consider cutting down the number of tables and figures,

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a
statistician.