Reviewer's report

Title: The United States and Canada as a coupled epidemiological system: an example from hepatitis A

Version: 2 Date: 15 June 2007

Reviewer: Philip Rosenthal

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. Your model does not take into account US citizens who travel to endemic hepatitis A areas (such as Mexico, Central America or Caribbean) and then travel to Canada shortly thereafter. How can you factor this into your model?

2. What is the policy regarding hepatitis A vaccination in Canada? Who is receiving immunization? What ages? How does this alter the model? This must be included and addressed in your manuscript.

3. While food-borne outbreaks are sporadic, they certainly can affect many individuals as evidenced by the recent hepatitis A outbreak in the US the result of green onions from Mexico at a US Mexican restaurant chain where over 600 individuals and several deaths occurred as a result. How does your model account for including travelers from Canada who might eat at such food establishments in the US during outbreaks?

4. Are foods such as fruits and vegetables imported to Canada from Mexico, the Caribbean or Central America? How is this factored into your model since hepatitis A may be transmitted in this way? Have imports been increasing, decreasing, or remaining the same over the timeframe you have investigated?

5. Other authors have published mathematical models of hepatitis A transmission and the effects of universal childhood immunization in the US (Van Effelterre et al. Clinical Infectious Diseases 2006;43: 158-64). How does your model contrast and compare to previously published models?

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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)

1. typo page 3 line 5- "inteval" should be "interval"

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Discretionary Revisions (which the author can choose to ignore)

none

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests