Author's response to reviews

Title: Lessons learned from a textbook outbreak: EHEC-O157:H7 infections associated with the consumption of raw meat products, June 2012, Limburg, Belgium.

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Author's response to reviews: see over
Response to reviewer,

Thank you for the helpful criticism. The text has been rewritten to improve the quality of the written English. Please find below how the items brought up by the reviewers were addressed.

1. No data are given on the results of the hypothesis generation phase of the study. While it is stated that certain butchers were frequently mentioned during exploratory interviews, it would be useful to know how many exploratory interviews were completed and how many interviewees reported buying food from the stores and which foods were purchased. A listing of the hypotheses under test and frequency of exposure from exploratory interviews is required so that the reader knows why particular exposures were included and excluded from the case-control study questionnaire.

To answer this question, some changes were made at different chapters. First I expand on the exploratory interviews and what kind of information these provided, then I expand on how they influenced the case-control study.

All cases were contacted for an exploratory interview. When the case-control study was designed not all cases were known (there was information from 13 laboratory-confirmed cases at the time of the design as detailed in the methods section).

“The public health authority also contacted all cases telephonically for an interview. Information on personal characteristics (age, gender), family size, symptoms in family members, possible sources, diet history, food preferences and in which shops they recently bought food products was collected.”

An overview of the results from these exploratory interviews is now included in the “Results”-section. All 17 families were contacted for an exploratory interview. Information on infant cases was provided by a parent. Nine cases named “filet américain” as a possible source. Four cases named “minced beef” as a possible source. The other cases had no specific suspicions (N=7) or named a different product (N=4, raw vegetables, sausages, codfish, steak).

To explain how this influenced the case-control study, we included the following part in the “Methods”-section.

A standard survey is available for case-control studies in foodborne outbreaks. As the exploratory interviews, conducted by the start of the case-control study, pointed towards meat products, we shortened this survey by excluding specific questions about diary, vegetable and fruit consumption. The final survey included 13 meat products, three dairy products (including ice-cream) and six other food products (vegetables and sprouts). The survey also included questions on outdoor dining at a restaurant or snack bar and whether or not they went shopping at a supermarket in a list of five supermarkets. Finally the survey gathered information on symptoms and the onset date of these symptoms.

2. Add information to Table 1 to show the data for exposures where significant associations were not found.

The survey contained 25 items (22 food items, 1 shopping item, 2 outdoor dining items). Because it seems a little excessive to present all the odds ratios and confidence intervals in one table, I named the food items for which no significant association was found in a separate row:
<table>
<thead>
<tr>
<th>Factor</th>
<th>Odds Ratio</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Univariate analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suspected Supermarkets</td>
<td>11.67</td>
<td>1.41</td>
<td>96.49</td>
</tr>
<tr>
<td>Ice Cream</td>
<td>8.57</td>
<td>1.03</td>
<td>70.89</td>
</tr>
<tr>
<td>Steak Tartare</td>
<td>48.12</td>
<td>5.62</td>
<td>416.01</td>
</tr>
<tr>
<td><strong>Multivariate analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suspected Supermarkets</td>
<td>9.09</td>
<td>0.91</td>
<td>90.65</td>
</tr>
<tr>
<td>Steak Tartare</td>
<td>41.02</td>
<td>4.51</td>
<td>372.78</td>
</tr>
</tbody>
</table>

_The following food items were included in the case-control study, but no significant association with cases or controls were found:_

_Beef:_ steak, tartare, minced beef, hamburger, tenderloin, roast beef, sausage

_Pork:_ Salami, sausage, minced pork

_Pork & Beef:_ sausage, half beef – half pork minced

_Vegetables:_ sprouts, salad, ready-made salad, crudités, ready-made fruit salad, homegrown vegetables

_Diary:_ raw milk, soft cheese