Reviewer's report

Title: Enhanced surveillance of invasive listeriosis in the Lombardy region, Italy, in the years 2006-2010 reveals major clones and an increase in serotype 1/2a

Version: 3 Date: 15 February 2013

Reviewer: Benjamin Silk

Reviewer's report:

Major Compulsory Revisions

1. While I appreciated the thoughtful description of the enhanced surveillance system, both as an addition to the manuscript text and as a reply to reviewers, the manuscript and the abstract still include conclusions that are not supported by data. On what basis can the authors conclude, in the abstract for example, that rapid cluster detection led to inactivation of transmission routes when no outbreaks were detected in Lombardy, Italy during the study period? Instead, I am still hopeful that a synthesis providing the key points of the molecular epidemiology of listeriosis in Italy can be provided as a more appropriate conclusion.

2. Is the increase in serotype 1/2a from 7 cases in 2006 to 23 in 2010 statistically significant? It seems important to do this statistical test, given that this increase is emphasized so much that it is part of the title of the paper.

3. The sixth paragraph of the discussion appears to be very long. (Due to formatting, however, I can’t tell if there are actually two paragraphs). Because of the length of the paragraph (or paragraphs if there are two), it is difficult to follow the discussion. It would be very helpful to split this content into shorter paragraphs with topic sentences to indicate the main idea of each paragraph.

Minor Essential Revisions

1. The methods subheading “Bacterial isolates” could be changed to “Isolate Characterization”, and then the existing subheading “Isolate Characterization” could be deleted from its current position.

2. In the discussion, second paragraph, first sentence, is the intended meaning this: no common-source outbreaks were detected in the five-year period of the study by the local and regional health authorities? As written, it sounds like the authors expect someone else to report outbreaks to the health authorities and I’m not sure that is realistic (i.e., the authorities should be detecting outbreaks). In the following sentence, I would say that listeriosis outbreak detection is not challenging compared with outbreak investigation.

3. Even in black and white, the color schemes for the legends of the figures are still difficult to discern. Perhaps using various pattern markings (horizontal,
vertical or diagonal lines, dots, etc) will help. Also, I did not see where the legend for figure 1 defines percentages versus number of isolates.

Minor Issues not for Publication/Discretionary Revisions

1. For simplicity, I suggest revising the title to remove “in the years 2006-2010”

2. A number of small grammatical corrections would be helpful –

   a. Background, 1st paragraph, last sentence, make plural: “…fetal and neonatal infections are severe…”
   
   b. Background, 1st paragraph, first sentence, add dash: “a total of 526 outbreak-related cases [11].”
   
   c. Background, 4th paragraph, first sentence, reword: “… are necessary for timely outbreak detection and tracing of contamination sources.”
   
   d. Background, 5th paragraph, third sentence, reword: “…associated with…”
   
   e. Background, 5th paragraph, fourth sentence, reword: “…recently proposed as the predominant clone causing human sporadic and outbreak-related cases…”
   
   f. Methods, first paragraph, second sentence, reword: “…serotyping and molecular subtyping to detect clusters and support epidemiological investigations.”
   
   g. Results, second to last paragraph, first sentence, reword: “…was detected among patients…”
   
   h. Results, last paragraph, second to last sentence: MLVST or MLST?
   
   i. Discussion, first paragraph, first sentence, specify what percent increase: “…increased X%.”
   
   j. Discussion, third paragraph, first sentence, plural: “…were comparable…”
   
   k. Discussion, sixth paragraph, reword: “foodborne listeriosis, which could have been associated with the consumption of a traditional…”
   
   l. Discussion, sixth (long) paragraph, remove comma: “…has not to be disregarded because…”
   
   m. Discussion, sixth (long) paragraph, sentences near end, remove “indeed”: These clones have been associated…”
   
   n. Discussion, sixth (long) paragraph, sentences near end, remove “indeed”: It has been hypothesized…”
   
   o. Conclusions, first sentence, spelling: stand-alone (not standing-alone)
   
   p. Conclusions, second sentence, revise: “Rapid cluster detection can alert authorities to putative outbreaks…”

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being
published

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

**Declaration of competing interests:**

I declare that I have no competing interests.