Author’s response to reviews

Title: Prediction of gastrointestinal disease with over-the-counter diarrheal remedy sales records in the San Francisco Bay Area

Authors:

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Author’s response to reviews: see over
Dear Ms. Pafitis:

Thank you for your email of 16 July 2010 regarding our manuscript (1185628764366661) titled "Prediction of gastrointestinal disease with over-the-counter diarrheal remedy sales records in the San Francisco Bay Area". My co-author and I are grateful for the reviewers’ careful consideration and thoughtful suggestions to improve our manuscript.

On behalf of my co-author, I am pleased to submit the attached revised manuscript addressing the reviewers’ comments. On the following pages, I copied each comment in italics, followed by an explanation of my response.

The manuscript is now 3288 words, and has 36 references, 3 tables, and 2 figures. The abstract is 195 words.

Thank you for the opportunity to revise this manuscript.

Sincerely,

Michelle Kirian, MPH
1. Authors’ contributions: Please indicate that both authors read and approved the final manuscript.

- “JMW and MLK have read and approved the final manuscript.” was added to (P 16, Paragraph 2)

2. Tracking: Please remove all tracking from the manuscript.

- Done

3. Abbreviations: Please format these in to a paragraph.

“The following abbreviations are used: Autoregressive Integrated Moving Average (ARIMA), National Retail Data Monitor (NRDM), and San Francisco Public Utilities Commission (SFPUC).”

4. Tables: the table title should appear above the table and should be only one sentence long. Please place any other text as a legend (or key), which should appear below the table.

- Titles are places above the tables.
- Extra content is placed below the tables.

5. Figures: It is important for the final layout of the manuscript that the figures are cropped as closely as possible to minimise white space around the image. Our online figure guide contains full details for preparing files for submission and can be viewed here: http://www.biomedcentral.com/info/ifora/figures.

- Figures have been cropped and all font changed to 12pt Arial.

6. Typography: Please take this opportunity to check your manuscript for any typographical errors and to make any final corrections or revisions. This is the final proofing stage for your manuscript, and you will not be able to make any changes after acceptance.

- Minor changes have been made to the Titles/legends for figures 1 and 2 and tables 1-3 (highlighted here). They now read:

**Figure 1** Plots of Outbreak-Associated Gastrointestinal Cases, Individual Gastrointestinal Cases, Diarrheal Remedy Sales, and Differenced Diarrheal Remedy Sales. Standardized weekly counts of gastrointestinal outbreak-associated cases, diarrheal illness case reports, Diarrheal Remedy Sales and differenced Diarrheal Remedy Sales in
three San Francisco Bay Area Counties from January 2004 to July 2005. All data aggregated to the first Sunday of week. Diarrheal Remedy Sales are aggregated by week of sale, cases by week of report to the health department and outbreak cases by week of onset of the first associated case. Vertical axes are measured in standard deviations.

**Figure 2** Cross Correlations Between Diarrheal Remedy Sales and Diarrheal Illnesses. Diarrheal Remedy Sales and diarrheal illness case reports cross correlations at time lags from zero to 19 weeks. No significant correlations, bars exceeding the 95% confidence interval (shaded), were found.

**Table 1.** Gastrointestinal Outbreak and Case Characteristics in the San Francisco Bay Area, July 2003 through December 2007.

**Table 2.** Gastrointestinal Outbreaks with 50 or More Cases in the San Francisco Bay Area, January 2006 through December 2007.

**Table 3.** Sensitivity and Specificity of Diarrheal Remedy Sales Model-Generated and Randomly Selected Signals.

- **(Page 10, Paragraph 2)** “diarrhea” was changed to “diarrheal”

- The following from the text, “Figure 1 presents time series plots of the Diarrheal Remedy Sales, differenced Diarrheal Remedy Sales, outbreak-associated cases and reported gastrointestinal cases.” was change to,

  **(P8, Paragraph 1)** “Figure 1 presents time series plots of the outbreak –associated gastrointestinal cases, individual gastrointestinal cases, Diarrheal Remedy Sales and differenced Diarrheal Remedy Sales.”