Reviewer's report

Title: Syndromic Surveillance: STL for Modeling, Visualizing, and Monitoring Disease Counts

Version: 1 Date: 17 February 2009

Reviewer: Rochelle Watkins

Reviewer's report:

This manuscript describes a new approach for monitoring chief complaint data, and provides a well-written description of original work that would be of interest to others working in the surveillance field. The question addressed by the research is worthwhile, and the approach is evaluated well. A comprehensive description of this method may enable others to adopt and evaluate similar strategies.

Minor essential revisions

1. My main comment relates to the lack of practical implementation detail provided (that analyses were performed using R) given the detailed process of model fitting. If the authors wish the work to be considered by the managers of public health systems (last sentence of Conclusion), more implementation detail would be useful – including specifying the R packages or original (annotated) R code used for model fitting and monitoring processes, which can be provided as an additional file.

Some additional minor revisions are also suggested:

2. The authors include elements of discussion throughout the results section which works well. Are there any recommendations for setting up fitting processes to help ensure the components model different variation in the data (para 2 page 6) if this might be a specific issue with the method? Some additional discussion which integrates this work with related surveillance literature would be useful, and acknowledgement of the study limitations could be expanded.


4. Suggest include the results from Table 2 in an additional column in Table 1 as STL(90) or similar, which will allow the presentation format to be the same as the other methods for easier comparison and timeliness data to be included.

5. I assume the daily refitting process is quite fast?

6. Text corrections:– missing table numbers, ‘of of’, possibly revise the term ‘presentation’ on page 4 para 2, potential subheading inserted after Figure 2, page 9 formula repeated from page 6.

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