Reviewer's report

Title: Tracking the spatial diffusion of influenza and norovirus using telehealth data: a spatio-temporal analysis of syndromic data.

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Reviewer: John Brownstein

Reviewer's report:

This manuscript presents essentially a descriptive analysis of the use of telehealth data for the purpose of monitoring the spatial spread of both influenza and norovirus. While this should not be considered a definitive evaluation, the presentation of the data and its application are highly novel and warrant publication. To date, there have been very few analyses showing the potential of syndromic data for monitoring fine scale geographic patterns. This is a very exciting line of research.

While I am highly enthusiastic about this study, I do have a few concerns that the authors should consider addressing.

Minor Essential Revisions

1-The recommendation for the use Satscan should be removed. Since the authors did not compare other spatial statistic methods, they have not evaluated the true utility of Satscan. Overall, I would avoid considering this study an evaluation. It is more of a description of the use of a method to describe patterns of spread in real-time. This in itself is very useful and has real public health value. A study that evaluates methods would be a welcome follow-up.

2-Because of the obvious difficulty in validating whether these data were truly reflective patterns of specific viral spread, the authors should be cautious about how they interpret these results. (though the authors are clear about this limitation in the discussion, other areas of the paper including the abstract may be misleading). Perhaps referring referring to this limitation in the Introduction would reduce confusion.

3-Further, have the authors considered the impact of RSV on their data? Including national estimates of the RSV impact would be very helpful at least. If the epidemics do not overlap, this would eliminate RSV as a confounder in the data (though the use of only patients over 5 years of age is a good start).

Which journal?: Appropriate or potentially appropriate for BMC Medicine: an article of importance in its field

What next?: Accept for publication in BMC Medicine after minor essential revisions
Quality of written English: Acceptable

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