Reviewer's report

Title: EmPhAsIS: Empowering Pharmacists in Asthma management through Interactive SMS. Study protocol for a pragmatic, pharmacy-based, cluster randomized controlled trial.

Version: 2
Date: 25 September 2014
Reviewer: Gordon Murray

Reviewer's report:
There are a number of important statistical issues which must be addressed, primarily relating to the power calculation:

1. Page numbers would be useful! The formula given in the section 'Sample size calculation' is wrong. The term 'beta/2' should actually be 'beta'.

2. It is not clear why this formula has been chosen. It is the formula for comparing means when the primary outcome is binary. The authors should use the correct formula.

3. It is essential that the authors report the power calculation in sufficient detail that it can be reconstructed. For example, although many ICC values are reported, it is impossible to find what value was actually used to determine the sample size.

More minor points which need to be addressed in greater detail:

4. Is it realistic for the study coordinator conducting telephone interviews to remain blinded to pharmacy allocation? Have the authors any pilot data to suggest that this can be maintained, and/or will it be explored in the trial itself?

5. Under data collection, fax sounds rather a dead technology. Do pharmacies even have fax machines?

6. Do that authors have any data to suggest that they can maintain attrition rates as low as 10%. Is differential attrition likely, and if so, how will it be handled in the analysis?

7. The proposed statistical analysis is appropriate, but will be opaque to most clinical/pharmacy readers. Are there plans to explore any more transparent approaches as sensitivity analyses, such as doing a t-test at pharmacy level, comparing mean adherence rates?

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.