Reviewer's report

Title: Improving medication adherence in stroke patients through Short Text Messages (SMS4Stroke)-study protocol for a randomized, controlled trial

Version: 1 Date: 11 June 2015

Reviewer: Randi Foraker

Reviewer's report:

This manuscript is a description of a study protocol to test a short text message system to increase medication adherence among stroke survivors. Minor essential revisions are listed below.

The reviewer asks that the authors consistently use either the present or the past tense throughout the manuscript.

ABSTRACT
- Please define SMS at first use

BACKGROUND
- Are there preliminary data specific to the use of mobile phones in this particular population? It is usually the case that older patients use these devices less regularly.

METHODS
- Do the authors anticipate loss to follow-up? That is, are most patients expected to complete their post-stroke care at the intervention clinic?
- How will the authors know that their medication reminders explain the variability in outcomes with the addition of SMS for medication education and lifestyle advice to the intervention arm? Did the authors consider using the latter for the control condition?
- Are caregivers required to provide informed consent if they will be responding on behalf of the patient/participant?
- Is the patient satisfaction "tool" a survey? What will be the "predecessor innovations" that the SMS will be compared to?

ANALYSIS
- Primary and secondary outcomes are likely to vary by the number of medications patients are taking. Did the authors consider a sub-analysis among patients managing a long list of medications versus only a few?
- It would be interesting to report patient "adherence" to responding to the text messages - particularly over time. "Alert fatigue" is documented among providers receiving clinical decision support alerts via the electronic health record. I think that patients who take a lot of medications may be less likely to respond to SMS
over time.
- What is a clinically significant change in the MMAS score?

ETHICAL CONSIDERATIONS
- It is a safety issue to depend on patients to alert the SMS programmers about medication changes. The healthcare provider should be the one to confirm any medication changes so that the patients are reminded to take the correct dose at the correct time.
- Similarly, will the detailed interviews with the patients re: medications be confirmed by the provider / clinic notes?
- How will adverse events be documented/addressed? Is there a DSMB?

IMPLICATIONS
- Is this intervention scalable to other healthcare settings / conditions?
- What are some future directions for this work?

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**Level of interest:** An article of importance in its field

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

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

Within the past five years I received a medical education grant from Pfizer, Inc. with the aim of reducing the risk of stroke in women.