Title: Effects of and Satisfaction with Short Message Service Reminders for Patient Medication Adherence: A Random Controlled Study

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Version: 4 Date: 13 September 2013

Author's response to reviews: see over
Dear Editor:

We are resubmitting a revised paper entitled “Effects of and Satisfaction with Short Message Service Reminders for Patient Medication Adherence: A Random Controlled Study” according to the editor’s suggestion. We have followed the reviewers’ comments to adjust or correct our manuscript. The following pages are our replies to reviewers’ comments. We have marked with blue color for our any changes or adjustment in the revised manuscript.

Our manuscript has not previously been published in print or in electronic format and has not under consideration elsewhere. Besides, none of the authors has any conflict of interest in connection with this paper. We hope that you will consider our article for publication and look forward to hearing from you. Please let us know if any revisions are needed.

Sincerely yours,

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Reviewer's report

Title: Evaluation of the short-term short message service reminders on patient's medication adherence results of a random controlled study to assess the effects of and satisfaction with incoming messages

Version: 3 Date: 25 July 2013

Reviewer: Thyra E de Jongh

Reviewer's report:

Many thanks for your responses to my comments. You have addressed many important issues. However, some of your responses do not fully cover my questions or concerns. Specifically:

1.) You indicate that there was in fact randomisation. However, you fail to explain the method used for randomisation. For instance, did you use a random numbers table or did patients get assigned simply by alternation (which is not generally considered a good randomisation method)? Was assignment done blinded? As it reads now, pharmacists could essentially choose who to 'randomly recommend' to what group. You still need to explain this better.

Ans: Thank you for your comments. We used the systematic sampling method to assign qualified patients to each group instead of using random number table. The odd-number patients or even-number patients at pharmacy department’s registration were assigned to each group. The blinded assignment was conducted. We have added the text in page 7.

3.) Whilst you have added some 'definition' to the text, these definitions do not really explain much at all. An actual definition of a delayed dose could, for instance, be: "any medication that was not taken within 4 hours of the prescribed time". This is important as it helps to distinguish a delayed dose from a missed dose (e.g. if a dose is delayed by more than, for example, 12 hours it could also be considered missed). Please sharpen your definitions.

Ans: Thank you for your suggestion. If patients did not take medication and passed more than half-period of time between two doses, we defined it as “missed dose”. For example, if patients needed to take medicine twice a day (i.e., once every 12 hours), and they took medicine more than 6 hours late, we would call “missed dose”. If patients did not take medicine on time, and they took medicine within 6 hours, we would call “delayed dose”. We have added the text in page 10.

8.) In your edits, you have now chosen to display up to 2 decimals. This suggests a
level of accuracy that is not possible from your data. I would recommend providing no more than 1 decimal point.

Ans: Thank you for your suggestion. We have adjusted to 1 decimal point.

10.) This explanation should not only be given in the response to the reviewer but also added to the text itself. Given that this was highlighted as being unclear by 2 out of 3 reviewers, this is obviously an issue that needs to be explained better to the readers.

Ans: Thank you for your valued comments. We have added all explanations to the text.

The writing style of the paper as a whole is still somewhat lacking. In the new sections that you have added, you have copy-pasted comments from the reviewers but have not always properly adjusted the sentence structure or tense accordingly. I strongly recommend copy editing by a native English speaker, preferably someone who also understands the science behind the project.

Ans: Thank you for your comments. The manuscript has been rewritten by a native English speaker with scientific expertise.

Level of interest: An article of limited interest
Quality of written English: Needs some language corrections before being published
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
Reviewer's report

Title: Evaluation of the short-term short message service reminders on patient's medication adherence results of a random controlled study to assess the effects of and satisfaction with incoming messages

Version: 3 Date: 3 August 2013
Reviewer: Brian Suffoletto

Reviewer's report:
Major compulsory revisions:
All relate to translation of material and presentation.
Title: remove "the" prior to "short"
Ans: Thank you for your suggestion. We have adjusted the title.

Abstract: Methods: Needs to be re-written. ie. "Patients aged 20 years and older prescribed more than 7 days of a prescription were randomized to SMS intervention or control. Intervention participants received daily message reminding dosage and control group received no messages. Phone follow-up was performed to assess outcomes at 8 days."
Ans: Thank you for your comments. We have adjusted abstract in method section.

Abstract: Results: needs serious re-writing. Makes no sense in English.
Ans: Thank you for your comments. The results have been rewritten by a native English speaker with scientific expertise.

Abstract: Conclusion: Stop calling it a PMP and call it daily SMS. PMP is confusing.
Ans: Thank you for your suggestion. We have adjusted it.

Introduction:
1. Remove reference to PMP, as it is confusing and not descriptive. Call it daily text message medication reminders.
Ans: Thank you for your suggestion. We have removed the reference to PMP in all manuscript.

2. Pharmacists randomly "assigned", not "recommended" intervention and control participants.
Ans: Thank you for your suggestion. We have replaced "recommended" with "assigned"(P.7).
Results:
1. Please revise statements throughout manuscript to say the intervention "reduced" NOT "improved" the incidence of delayed or missing doses.

Ans: Thank you for your suggestion. We have adjusted it in all manuscript.

**Level of interest:** An article of importance in its field  
**Quality of written English:** Not suitable for publication unless extensively edited  
**Statistical review:** Yes, and I have assessed the statistics in my report.  
**Declaration of competing interests:**  
I declare that I have no competing interests
Reviewer's report

Title: Evaluation of the short-term short message service reminders on patient's medication adherence results of a random controlled study to assess the effects of and satisfaction with incoming messages

Version: 3 Date: 6 August 2013

Reviewer: Marcia Vervloet

Reviewer's report:
The authors addressed all issues. Some comments are left, however.

1. I would advise to include in subparagraph Study Design of the Method section that patients could not choose the times the reminder was sent (authors' answer to point 5 of my previous minor essential revisions), as well as include an example of the reminder text in subparagraph Intervention (authors' answer to point 6 of my previous minor essential revisions). In addition, the authors gave a clarifying answer to point 3 of my previous major compulsory revisions (on number of SMS reminders sent for multiple medications), however, this was not included in the paper. The same for their answer on point 4 of my previous major compulsory revisions (on whether the control group had access to the PMP system).

I would recommend the authors to include this information in the paper.

Ans: Thank you for your comments. We have adjusted the Study Design of the Method section in page 7, and added an example in Intervention section in page 9, and also added the related information in page 8-9.

2. The authors did include more literature in the background section, however, some of these references might still not be the most appropriate ones. For example, the review of Fjeldsoe et al (ref. 9) does not specifically involve SMS reminders for medication intake. The authors might want to look at the recent review of Vervloet et al. The effectiveness of interventions using electronic reminders to improve adherence to chronic medication: a systematic review of the literature. J Am Med Inform Assoc. 2012 Sep-Oct;19(5):696-704. And there are more studies on medication reminders through SMS (e.g. in HIV treatment, diabetes, etc) for improving adherence. I would again recommend the authors to look into the literature more thoroughly. This applies to the discussion section as well!

Ans: Thank you for your comments. We have included more literature in the background (P.6) and conclusion section (P.23)
3. The limitations should not be a part of the conclusion at the end, but a part of the discussion section.

Ans: Thank you for your comments. We have adjusted the limitation in the discussion section (P.22)

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

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

**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