Author's response to reviews

Title: Integrated post-discharge transitional care in a hospitalist system to improve discharge outcome

Authors:

Chin-Chung Shu Dr (stree139@yahoo.com.tw)
Nin-Chieh Hsu Dr (oeoeomorrison@yahoo.com.tw)
Yu-Feng Lin Dr (dr.yufenglin@gmail.com)
Jann-Yuan Wang Prof (jywang@ntu.edu.tw)
Jou-Wei Lin Prof (jouweilin@yahoo.com)
Wen-Je Ko Prof (kowj@ntu.edu.tw)

Version: 4 Date: 9 June 2011

Author's response to reviews: see over
June 9, 2011

Dear Dr. Lin Lee:

Thank you very much for reviewing our original manuscript entitled, “Integrated post-discharge transitional care in a hospitalist system to improve discharge outcome” (MS No. 1678569673526672) that we submitted for possible publication. We appreciate the comments of the editors and reviewers, and we have revised the manuscript accordingly.

Below please find our point-by-point responses to the reviewers’ comments. Attached also is our revised manuscript.

We truly appreciate the time and effort you have given our paper. We look forward to hearing from you soon.

Sincerely yours,

Wen-Je Ko, M.D., Ph.D.
Department of Surgery
National Taiwan University Hospital
7, Chung-Shan South Road, Taipei 100, Taiwan
E-mail: Kowj@ntu.edu.tw
Tel: 886-2-23562557
Fax: 886-2-23582867
Reviewer 2

**Title:** Integrated post-discharge transition care in a hospitalist system to improve discharge outcome

**Reviewer:** Jeff Greenwald

Major Comments:

**Comment 1:** The first major one is your study design. As noted in prior comments, this type of study had methodological limitations that you cannot escape by now calling it a QI project. That is not legitimate. If it were a QI project, you'd need to use a standard QI reporting methodology (e.g. SQUIRE).

**Answer:** Thank you. We apologize for our methodological limitation. We removed the term QI project and changed back the mode to a trial. We also added the limitation in the discussion section.

**Comment 2:** Also, you noted in your response to my comments that you added additional exclusions to your criteria based on my comments. You cannot do that post hoc.

**Answer:** Thank you for your comments. We revised the exclusion criteria according to what actually happened. We are grateful for your reminder of making the exclusion description more detailed and truthful. Let us explain the exclusion criteria. First, patient who were electively admitted were excluded. In our Methods section, we mentioned that our study subjects were admitted from emergency department. Second, patients were also excluded if they died during hospitalization, were transferred to a sub-specialty ward or other institutions, or refused consent. We counted the number in Figure 1. Lastly, patients without underlying chronic illness and Barthel score >60 were also excluded for presumably not requiring monitoring. For clarity, we removed the criteria “previous enrolled” and “short life expectancy” that were not defined in our project execution though it matched our patient group post hoc.

**Comment 3:** I think this study has merits and probably should be condensed to either a poster/abstract or perhaps, with some more rigorous review, a brief report.

**Answer:** Thank you for your appreciation. Based on the Editor’s suggestion, we kept current format of research article.
Comment 3- You also need to have the English re-reviewed as there are awkward sections still. I have embedded many other less critical comments in the text.
Answer: Thank you. We revised the manuscript according to your comments. Before this submission, the revised manuscript was reviewed and proofread by a native English editor.

---

Minor comments based on the additional file from the reviewer
#. Title: Transition → Transitional
Answer: We corrected the word.

#. Title: This part of the tile after the colon doesn’t add much - too vague
Answer: We removed this part and added the aim of the intervention in the title.

#. Abstract: First sentence: re-admission → not hyphenated
Answer: Thank you. We corrected the word throughout the text.

#. Abstract: “Under quality improvement initiative,” is awkward.
Answer: We removed this vague term.

#. Abstract: observation group → control group
Answer: We changed the term accordingly.

#. Abstract: result; sixth line, p = 0.031: Doesn’t make sense. What comparison are you showing with this p value? All you’ve quoted is intervention data.
Answer: Thank you for your comments. We revised the sentence to clarify the meaning. We compared patients with worsening indicator or new/worsening symptoms to those without.

#. Introduction, sixth line: Given this is a study from Taiwan, you should clarify where you mean - I assume you mean in the US.
Answer: We indicated the area of the reference.

#. Introduction, sixth line: “Reasons for this include …” This is oversimplified.
Answer: We revised the sentence as “Reasons for high readmission rate include…”
#. Introduction, the end of 1st paragraph: This is a pretty scant reference list for this topic that has had many studies.  
**Answer:** We added two references: one systematic review and one Cochrane database analysis.

#. Introduction, first two sentences of 2nd paragraph: 1. Awkward; 2. You mean at "our center" right? 3. If you are referring to Eric Coleman's work, you should capitalize Care Transitions Intervention here and below.  
**Answer:** Thank you for your comments. We revised the sentences and changed “a particular referral center” to “our referral center in Taiwan”. In addition, we capitalized the Coleman's work as “Care Transitions Intervention”.

#. Introduction, first sentence of 3rd paragraph: “the integrated model using telephone service…” Not clear what you mean. There is extensive literature on telephone follow-up (including a Cochrane review) about this topic.  
**Answer:** Thank you for your comments. We revised the sentence and cited the Cochrane review ([Cochrane Database Syst Rev. 2006; (4):CD004510.](https://www.cochranelibrary.com)) to indicate that the literature is extensive but the effectiveness of telephone follow-up remains uncertain, particularly for a hospitalist system.

#. Methods, first sentence: I know you decided to change the label on this to a QI initiative but it wasn't designed that way nor was that your intent. You cannot also change inclusion/exclusion criteria post hoc, so my original comments stand. You may need to address many of these issues in your "limitations" section of your paper.  
**Answer:** Thank you for your comments. Our study is truly a prospective study. We did not change the description of our study design at all. As regards the term QI project, we apologize for this. The aim of the study is to demonstrate the performance of an integrated PDTC for hospitalist system using a clinical trial. We removed the term of QI project in the manuscript. We also addressed the drawbacks as the study limitations in the discussion section. We also revised the inclusion and exclusion criteria accordingly.

#. Methods, last sentence of the 4th paragraph:  
Illiterate: How did the staff screen for this? Also, the better term is limited language proficiency.  
cognitive deficits: How was this identified?
Answer: Thank you. We interviewed the patients before discharge to screen if they are literate and to check their recognition ability. We defined positive cognition deficit if a patient had not intact orientation, attention or recall ability (Mayo Clin Proc. 1996; 71(9):829-37). We revised the term “illiterate” to limited language proficiency.

#. Methods, after 8th paragraph:
In case you think I'm being too critical, I think your intervention was terrific: very patient centered and well considered. I just want to make sure your reporting of it is rigorous, accurate, and legitimate.

Answer: Thank you very much. We appreciate your kind comments and reminder regarding the manuscript. We hope the results of this manuscript will be helpful for readers of BMC Medicine worldwide.

#. Methods, last second paragraph:
How do you define an "expected" death?

Answer: Expected death is defined for those discharged in critical status with short life expectancy. In Taiwan, some patients ask to die at home in the end of their disease course. Therefore, by this traditional culture, they are classified together with in-hospital death in the Figure 1. In contrast, those who were reported as dead in our follow-up were defined as unexpected death.

#. Methods, last second paragraph:
In the US, we rarely plan a visit to the ER (not 100% true but mostly). Why specify "unplanned" ED visits and how do you define them?

Answer: Thank you for your suggestion. We defined all ED visits as unplanned. We wanted to use “unplanned” to emphasize this negative event. We apologize for the confusion and removed the word.

#. Results, third paragraph:
“Extraordinary care”: Not a term we would use in the US.

Answer: Thank you. We deleted this term and used “Artificial tubes…” instead.

#. Results, third paragraph:
“… 11.8% of the study patients.” In both groups?

Answer: Yes, 11.8% meant average rate of wound in all patients in both groups. We apologize for the confusion and revised the sentence to make it
clearer.

#. Results, third last sentence of the 4\textsuperscript{th} paragraph:
“…than those without (\(p=0.031\), Fisher’s exact test)”, you should state the N not just the \(p\) value.

**Answer:** Thank you, we added the number (\%) into the sentence as “…(6[33\%] vs. 26[13\%], \(p=0.031\))”.

#. Results, 2\textsuperscript{nd} last sentence of the 4\textsuperscript{th} paragraph:
Clarify. It's important to highlight things like this as many telephone based interventions identify a host of problems that need fixing...some of which avert a readmission but most don’t - only improving the patient’s experience or general recovery without being serious enough to lead to a hospitalization.

**Answer:** Thank you. We described it clearer as “Four cases had wrong tube or wound care in telephone contacts that contained immediate education. In the following telephone contact, all of them corrected the care technique. During the contacts, only two reported poor drug compliance, which improved under our advice.” However, the two incidents were not significantly associated with readmission.

#. Results, 1\textsuperscript{st} sentence of the 5\textsuperscript{th} paragraph:
“…contacted us 105 times …” means contacting who?

**Answer:** Thank you. We stated that the patient/family contacted our team through a designated hotline.

#. Results, third last sentence of the 5\textsuperscript{th} paragraph:
“…symptoms (\(p=0.019\), Fisher’s exact test).” \(\rightarrow\) Again, include the N

**Answer:** Thank you, we added the number (\%) into the sentence as “…(7[33\%] vs. 25 [13\%], \(p=0.019\))”.

#. Results, 1\textsuperscript{st} sentence of the 6\textsuperscript{th} paragraph:
I'm confused. I thought the post-discharge clinic was part of the intervention. Why would the control have ANY visits to this clinic?

**Answer:** Unlike telephone contacts and hotline counseling, which only served the intervention group, the hospitalist-run clinic served both groups. We described it in the Methods sections (the 5\textsuperscript{th} paragraph). If patients had no PCP and follow-up is needed as judged by the hospital doctor, the patient maybe followed-up in the hospitalist-run clinic. On the other hand, the referral
to a hospitalist-run clinic by telephone contacts and hotline counseling is unique for the intervention group after discharge (the 8th paragraph of the methods section). In contrast, the control group would have unplanned visits to hospitalist-run clinic by their own decisions.

#. Results, second last paragraph:
“…had borderline higher…”: suggested using “a trend toward” instead of “borderline”.
**Answer:** Thank you. We corrected it accordingly.

#. Results, last paragraph:
What about having a pcp visit?
**Answer:** Thank you. We added the insignificance into the paragraph.

#. Discussion, 2nd sentence of 1st paragraph:
I don't understand this sentence.
**Answer:** We revised the sentence to make it clearer. “An integrated PDTC program, performed for a hospitalist ward in a Taiwan referral center, significantly reduces readmission and mortality rates within 30 days after discharge.”

#. Discussion, last sentence of 1st paragraph:
But this is part of the PDTC. You might argue that this is independently associated with better outcomes
**Answer:** Sorry for misleading you. Part of the integrated PDTC is unplanned referral to a hospitalist-run clinic by telephone service. Visits to a hospitalist-run clinic, including both scheduled and unplanned appointments after discharge, were independently associated with better outcomes. We appoint the clinics mainly for patients without PCP.

#. Discussion, after 1st paragraph:
This opening paragraph does not adequately state the findings of your study.
**Answer:** Thank you. We revised the paragraph and tried to state our study findings.

#. Discussion, 2nd sentence of 2nd paragraph:
“…easy to implement…”
Comments: Not so. It requires infrastructure and personnel to be done properly
in a sustainable manner.

**Answer:** Thank you for your suggestion. We revised the term “easy” to “not difficult” and revised the sentence accordingly.

#. Discussion, 2\(^{nd}\) and 3\(^{rd}\) paragraph:
Why are you referencing anything here? This is about your program.
Why reference here? This is your discussion. You only have to reference other authors if you are talking about their work/comments/opinions.

**Answer:** Thank you for your comments. We apologize for the references and deleted them.

#. Discussion, 3\(^{rd}\) sentence of 3\(^{rd}\) paragraph:
“Extraordinary hospitalist…”
Comments: I don't know how you are using this term. Not sure what you mean.

**Answer:** Thank you. We deleted the word “extraordinary” and started the sentence as “Hospitalist…”.

#. Discussion, 2\(^{nd}\) last sentence of 3\(^{rd}\) paragraph:
This is quite confusion. Your intervention (and title) refers to referral to this hospitalist clinic and yet it's used less frequently in the intervention group, which includes referral to this clinic. Explain.

**Answer:** Thank you for your comments. Based on the Methods, both groups can visit a hospitalist-run clinic as needed. Under the integrated PDTC, patients and physician may have more confidence (Braun E, *Eur J Intern Med*. 2009; 20(2):221-5.) and scheduled hospitalist-run clinic requirement may be decreased. As regards unplanned visits to the hospitalist-run clinic, PDTC can effectively reduce this. Although the control group lacks a hotline or telephone contact service, the frequency of hospitalist-run clinic visits in this study increases in those without PDTC and decreases in the intervention group. On the other hand, the higher percentage of presence and clinic follow-up of primary care physician in the intervention group compared to the control group may be another cause for the reduced use of a hospitalist-run clinic. We added the description in the 3\(^{rd}\) paragraph of the Discussion section.

#. Discussion, after 3\(^{rd}\) paragraph:
You might consider some discussion on the literature about the importance of
continuity of care across the care transition

**Answer:** Thank you. Continuity of care after discharge is very important based on many literatures (Coleman, Arch Intern Med. 2006 Sep 25;166(17):1822-8; van Walraven, J Gen Intern Med. 2004 Jun;19(6):624-31; and Kripalani, J Hosp Med. 2007). In our study, we demonstrated that PDTC in one kind of care transition. We discussed it in the second half of the 4th paragraph of the discussion section.

#. Discussion, 2nd sentence of 4th paragraph:
See prior note. You designed this as a trial not a QI effort. You can't really decide later to go back and change that.

**Answer:** Thank you. We deleted the term based on your comments. We also deleted the term regarding “quality improvement initiative”.

#. Discussion, 4th sentence of 4th paragraph:
“…caregiver’s expression.”

**Comments:** I don't know what this means.

**Answer:** It means that the statement of the patient/caregiver may be incorrect when using the telephone even though we had educated them before discharge. We apologize for the confusion again. We revised the sentence as “…caregiver’s incorrect statement”

#. Discussion, 5th sentence of 4th paragraph:
That isn’t a limitation as determining which component of the intervention was the driver of the impact was not the purpose of the study.

**Answer:** We removed this point from the limitations part of the Discussion section.

#. Discussion, 6th sentence of 4th paragraph:
“…considerable…”

**Comments:** So what are your thoughts on this. That is, what did you do to reduce this bias?

**Answer:** Thank you for your suggestion. In eligible patients (551, see Figure 1), 143 (26%) were not required and did not match our enrolled disease status. Another 95 (17%) refused enrolment. Although the excluded population is not small, we tried to enroll patients more homogeneously from the general medical population admitted from the ED. For further practice, more care should be exercised regarding excluding populations or groups.
#. Table1:
Comments: Do patients measure this (and blood sugar and heart rate and temp) themselves or is there a visiting nurse or health worker of some sort?
**Answer:** Yes, we educated patients or their caregivers to do the indicator monitoring, including blood pressure, blood sugar, body temperature and heart rate. We added this description into the footnote of Table 1.

#. Table2:
No (%)
Comments: You should indicate that the number in parentheses are % of total.
**Answer:** Thank you for your suggestion. We added the % in the parentheses and described it in the footnote of Table 2.

#. Table2:
Percentage of PCP
Comments: How much might this trend towards more primary care presence in the intervention group explain some of your findings since this group had more primary care follow-up.
**Answer:** A trend of higher percentage of PCP in the intervention group may influence the clinic analysis. Follow-up in the PCP clinic is also more in the intervention group than in the control group (72% vs. 83%, \( p=0.038 \)). This factor may be a cause for reducing the use of the hospitalist-run clinic in the intervention group. We added the point in the Discussion section (4th paragraph). Thanks.

#. Table3:
Visit of integrate clinic by hospital physician
Comments: Not sure what this means.
**Answer:** We revised the term as “Visits to the hospitalist-run clinic”.
**Editorial comments:**

**Comment 1:** Editorially, we disagree with the recommendation that this should be condensed to either a poster/abstract or a brief report. We would be happy to consider your manuscript to stay as a research article, however, we would request that you revise you manuscript to adhere to SQUIRE guidelines:  
**Answer:** Thank you for your comments. We kept the manuscript as a research article and removed the term of QI project accordingly. Furthermore, we adhered to the SQUIRE guidelines as much as possible in the revised manuscript although the study remains a clinical trial.

**Comment 2:** Furthermore, as regards the new exclusions, I suggest you remove this section, and note in your limitations that more care should have been exercised regarding your exclusion criteria. We will then check the revisions in-house.  
**Answer:** Thank you. We revised the exclusion criteria accordingly and explained it. First, patient who were electively admitted were excluded. We mentioned that our study subjects were admitted from the emergency department in the Method section. Second, patients were also excluded if they died during hospitalization, were transferred to a sub-specialty ward or other institutions, or refused consent. We counted the number in Figure 1. Lastly, patients without underlying chronic illness and Barthel score >60 were also excluded for presumably not requiring monitoring. We also removed the criteria “previous enrolled” and “short life expectancy” that were not defined in our project execution although it matched our patient group post hoc. We addressed these points in the limitation part of the Discussion.