Article details: 2022-0149
Title: Association between physician continuity of care and patient outcomes in clinical teaching units: a cohort analysis
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Reviewer 1: Sammy Zakaria
General comments (author response in bold)

11. In reading this manuscript, I could not reconcile the disparate results found, and the conclusions of this manuscript are too strong. In particular, it is reported that 30-day readmission and mortalities are modestly higher with 3 attending changes, but all other outcomes are non-significant. For 2 attending changes, there is no difference, and there was no trend for significance for any outcomes. I would suggest these results are exploratory and concerning, but not definitive.
Thank you for this suggestion. We agree that the results of this study are exploratory and not definitive. We have modified the wording of our conclusion to reflect the exploratory nature of our findings.

12. I wonder if just looking at attending shift changes is enough to affect outcomes in a teaching hospital environment. Residents, who probably spend more time with each patient, greatly affect care too. Since the residents only switch once a month (as mentioned in the methods section), it would be interesting to analyze the effect of one or two teams on outcomes. As mentioned above, the resident shift change may be more important than attending shift changes. I would suggest analyzing for this effect as well.
We thank the reviewer for this suggestion. Accordingly, we have incorporated now into our model three additional elements which account for resident/learner continuity of care: presence of a senior resident on the team, handover between CTU teams every 28-days, and transfers of care between CTU teams. Our revised results now incorporate these additional elements into the model.

13. Abstract: Background: Since I am less familiar with the Canadian health care system, I did not understand what CTUs were until looking at the introduction (where is was explained well). If this manuscript is geared toward an international audience, I would suggest explaining in a few words that CTUs are what they call Canadian teaching services that consist of an attending physician and residents and students or a teaching team. The way it is written now, I thought CTUs is a unit of measurement for patient care. Alternatively, you can just delete the first sentence (and modify the second sentence to indicate that you are discussing outcomes for teaching teams
Thank you for this comment. We have now modified the first sentence to explain CTU more clearly (page 2)

14. Abstract: Interpretation: I would suggest tempering this sentence. It is reasonable to report that increased handoffs lead to increased 30-day readmission and mortality rates, but you consider adding mentioning that the effect was marginal or modest, and that other results showed no difference in outcomes.
Thank you for this comment. We have now modified the interpretation section to give a more balance report of findings, and to highlight that the results are associations which needed further in-depth study.

15. Introduction (Page 5, Line 8-17). I would suggest deleting the sentences on outcomes in the primary care setting or for transitions. I found myself getting distracted from your topic

Thank you for this comment. We have now re-worded the first paragraph under Introduction to remove the emphasis in primary care setting/transitions, and focus more on continuity of care in the inpatient hospital setting (Introduction page 4).

16. Introduction (Page 5 Line 17-18). In what setting? I would specify what you are referring to for medical trainees and nurses, if relevant

Thank you for this clarification question. We have now re-worded the first paragraph under the Introduction section to focus more on the inpatient setting (Introduction page 4).

17. Introduction (Page 5, Line 22). I would suggest deleting general, since hospitalists are a sub-branch of internal medicine.

Thank you for this suggestion. We have now deleted 'general' (Introduction page 4)

18. Introduction (Page 6, Line 7-8). I would suggest substituting "limited" for "set," since I didn't understand how a set number would prevent burnout.

Thank you for this suggestion. We have substituted the word 'limited' for 'set' (Introduction page 5).

19. Interpretation (Page 9, Line 54-55). Here, you mention that there were "modest" increases in outcomes. I would do the same in the abstract.

Thank you for this suggestion. We have now included that in the abstract (Page 3).

20. Interpretation (Page 10, Line 44-45). You report the results of the Farid paper, and that sicker patient did work with changes in attendings. Is that the case for your group?

Thank you for this important comment. Besides the Charlson comorbidity index and the case-mix group which helped us with identifying homogeneous patients based on comorbidity and admitting diagnosis, we did not have any additional data features that would have accurately help us identify sicker patients. We have now acknowledged that as a limitation under our Interpretation section (page 13).

21. Interpretation (Page 10, Line 51-56). I don't disagree with your hypothesis, and I can see that the effect would only be seen at 30 days instead of 7 days. Perhaps the discharge process is different, since there are no differences in ICU stay and in-house outcomes.

Thank you for this comment. With the inclusion of additional elements in our model, we now see a decreased association with ICU stay and increased 30-day re-admission outcomes. We now hypothesize on the potential reasons why we may see these findings (Interpretation pages 10-11).

22. Table 1 (Page 13, Line 26-31): I find this row interesting. Are there differences in outcomes depending on whether the patient was on a team with or without a senior resident?

Thank you for this comment. We now have included the presence of a senior resident in the model as another potential confounder.

Reviewer 2: Cecilia Preci

General comments (author response in bold)

Thank you for the opportunity of reviewing this interesting manuscript dealing with an important clinical question, and that help to understan how important the continuity of care is. This study has been satisfactorily revised. I feel the authors addressed the reviewers' concerns as best as they could considering the multiple data inconsistencies reported in their survey. This information may be helpful to less mature programs.
I feel your revised manuscript has satisfactorily addressed the reviewers' concerns. The multiple data inconsistencies were your major problem and this cannot be corrected or rectified further. I have no further concerns that require another revision. The information is interesting but I feel already known to most mature programs. Nevertheless, your study may be beneficial to less mature programs. If another revision is requested please add another sentence or two to your analysis in order to explain better what was the answers you have attempted to answer. This remains an important and timely topic, both for clinical organization and for the training of future doctors . The authors should continue to emphasize that this was a performance improvement project.

Reviewer 3
General comments (author response in bold)

23. The authors use the passive on page 1 line 32 in the sentence starting with "Manuscript." I would recommend using "We" as the subject of that sentence as they do a few sentences earlier.
We apologize for this. We have now corrected this.