

Peer Review File

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Reviewer A

Comment: This is a well written and easy to read article. Unfortunately, it does not provide relevant information

Reply: We appreciate the reviewer's comments about the clarity and readability of our manuscript. Despite the reviewer's concerns regarding the review's findings, we believe the manuscript provides important insights on the evolution of COPD risk factors considered in the literature and how policy programs may have affected this evolution. We also think that some of the revisions in response to Reviewer B have clarified the importance of this work.

Reviewer B

This is a paper of systematic review about the impact of hospital readmission reduction program on COPD risk factors.

I recommend some major revision in this paper.

Comment 1: *First, at the Assessment of Modifiability of Risk Factors in results section, (page 8) you described that hospital staff responsiveness was very modifiable factory. But you need to clarify your definition of hospital staff responsiveness.*

Reply 1: Thank you for your comment. We added language in the text to clarify how hospital staff responsiveness was measured by the authors of the paper examined. With respect to hospital staff responsiveness, authors utilized the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), in which patients respond to a series of questions regarding their experience. The two measures used to assess staff responsiveness within HCAHPS relate to the frequency with which hospital staff provided two different types of patient assistance (clicking the hospital call button and assistance going to the bathroom/use of a bedpan) as soon as requested by the patient.

Changes in the text: The following sentence was added on pg. 14, lines 18-21: "With respect to hospital staff responsiveness, authors utilized the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measure of responsiveness based on two questions related to the frequency with which hospital staff assisted patients as soon as the assistance was requested (1)."

Comment 2: *At individual-Level Risk Factors, Charlson Comorbidity Index was described. Although it did not have a significant effect, the references on the Charlson Comorbidity Index are needed.*

Reply 2: Thank you for your suggestion. We included additional information regarding findings related to comorbidities among 2015-2020 articles, namely that they were somewhat mixed. We also further discussed the mixed findings related to the Charlson Comorbidity Index and its association with readmission and added a description of what the Charlson Comorbidity Index is.

Changes in the text: On pg. 15, line 11 was edited to introduce the mixed nature of the findings relative to comorbidities and readmissions. Lines 16-23 and lines 1-2 on pg. 16 were edited to expand on comorbidities and the Charlson Comorbidity Index.

Comment 3: *At interpersonal-Level Risk Factors, the types of medication showed mixed results of readmission rates. For example, statins and formoterol showed a decreased rate of readmission. So you need to explain the meaning of this result in the Discussion.*

Reply 3: Thank you for the feedback. We have expanded on the findings relative to the mixed results associated with medications and breathing treatments and their association with lower or higher risk of COPD readmission. We specifically highlighted differences in the findings and explained a potential reason for why this may be so. We also discussed similar findings and touched on the future implications of these findings.

Changes in the text: On pg. 19 lines 19-23 and pg. 20 lines 1-22 expanded information was provided on medication and breathing treatment options relative to COPD readmission risk.

Comment 4: *At organizational-Level Risk Factors, the meaning of teaching hospital status is ambiguous. So you need to explain the teaching hospital status.*

Reply 4: Thank you for the suggestion. We included a sentence to provide clarification as to what a teaching hospital is and what role they serve according to both the American Hospital Association and the Association of American Medical Colleges.

Changes in the text: On pg. 17 lines 20-23 and pg. 18 line 1, the following was added: "Teaching hospitals are defined in the American Hospital Association Annual Survey as hospitals that report having full time equivalent residents and report having a ratio of intern and residents to beds that is more than 0 (2) as they serve to educate and train interns and residents, conduct research, and provide specialized care, among other functions (3)."

Comment 5: *At community-Level Risk Factors, Herfindahl-Hirschman Index belongs to a term unfamiliar to most people. So you need an explanation and a reference for this.*

Reply 5: Thank you for the suggestion. We have included language in the manuscript to clarify what the Herfindahl-Hirschman Index indicates, its score range, and how to interpret the measure.

Changes in the text: On pg. 18, lines 11-13, the following sentence was added: "The Herfindahl-Hirschman Index (HHI) is useful in determining hospitals' share of the market by examining a hospital's number of staffed beds against all staffed beds within the market, and ranges from 0 to 1 in which a score of 1 is indicative of a completely monopolistic market (4)."

Comment 6: *Lastly, you need to sort out the risk factors that increase re-admission in COPD patients in pre-HRRP and post-HRRP, respectively, in the Discussion.*

Reply 6: Thank you for your suggestion. We have included a summary of risk factors for increased readmission pre and post HRRP and have organized these findings via the Ecological Model. Differences in factors examined in pre and post HRRP studies and in mixed findings were also discussed.

Changes in the text: Risk factors that increase readmission and how they differ or are similar between pre and post HRRP literature were addressed on Pp. 20, lines 14-23, pg. 21, 1-23, pg. 22, lines 1-15.

This study is sufficiently meaningful research on the impact of hospital readmission reduction program on COPD risk factors. I recommend a major revision.

Reply 7: Thank you for your feedback. We have addressed all suggested changes in a revised version of the manuscript. All changes made were done so in tracked changes.

REFERENCES

1. Yang L, Liu C, Huang C, Mukamel DB. Patients' perceptions of interactions with hospital staff are associated with hospital readmissions: a national survey of 4535 hospitals. *BMC Health Services Research*. 2018;18:1-8.
2. Association of American Medical Colleges. *Teaching Hospital Characteristics*. 2021.
3. American Hospital Association. *Teaching Hospitals* N.d. [Available from: <https://www.aha.org/advocacy/teaching-hospitals#:~:text=Academic%20medical%20centers%20and%20teaching,the%20most%20severely%20ill%20and>].
4. Robinson JC. Hospital market concentration, pricing, and profitability in orthopedic surgery and interventional cardiology. *American Journal of Managed Care*. 2011;17(6).