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OPEN PEER REVIEW

Investigating the Patterns of Readmission of Patients with COVID-19 and Its Associated Factors

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

4 comments · 2 May 2025 – 10 May 2025

Referee 1 Reviewer

MAJOR REVISION 2 May 2025

Dear Author/Editor
- The abstract title should be revised.
- Adjust the keywords according to MeSH.
- Explain how the sample size was determined and how sampling was performed.
- The results need major revision. The number of tables is large. Table 8-6 was not found. All tables need revision. Limitations should be included at the end of the discussion.
- Discussion and Conclusions: Major editing is needed. Avoid repeating results in the manuscript discussion and compare the results with relevant evidence.

Referee 2 Reviewer

MINOR REVISION 5 May 2025

In my opinion, this manuscript can be accepted and approved for publication after revisions and a second round of peer review.

Associate Editor

MAJOR REVISION 6 May 2025

Dear Author/Editor
- The abstract title should be revised.
- Adjust the keywords according to MeSH.
- Explain how the sample size was determined and how sampling was performed.
- The results need major revision. The number of tables is large. Table 8-6 was not found. All tables need revision. Limitations should be included at the end of the discussion.
- Discussion and Conclusions: Major editing is needed. Avoid repeating the results in the manuscript's discussion and compare the results with relevant evidence.

Editor-in-Chief

MAJOR REVISION 10 May 2025

Public Comment:
Dear Author/Editor
- The abstract title should be revised.
- Adjust the keywords according to MeSH.
- Explain how the sample size was determined and how sampling was conducted.
- The results need major revision. The number of tables is large. Table 8-6 was not found. All tables need revision. Limitations should be included at the end of the discussion.
- Discussion and Conclusions: Major editing is needed. Avoid repeating the results in the manuscript's discussion and compare the results with relevant evidence.

Decision:
Major revision

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Response to Reviewer

The authors would like to express their heartfelt gratitude to the anonymous reviewer for their insightful comments and constructive feedback. The suggestions provided have significantly contributed to the enhancement of this manuscript from various dimensions, including its clarity, depth, and overall quality. We are truly appreciative of the time and effort invested by the reviewer in meticulously evaluating our work, which has undoubtedly led to a more robust and refined final version of the paper. All requested revisions have been incorporated, with key changes highlighted in the manuscript

Reviewers' Comments:

Reviewer 1:

In my opinion, this manuscript can be accepted and approved for publication after revisions and a second round of peer review.

Reviewer 2:

Dear Author/Editor
- The abstract title should be revised.
- Adjust the keywords according to the mesh.
- Explain the method of determining sample size and sampling.
- Results need major revision. Number of tables is large. Table 8-6 not found. All tables need revision. Limitations should be included at the end of the discussion.
- Discussion and Conclusions: Needs major editing. Avoid repeating results in the manuscript discussion and compare results with relevant evidence.

1. The abstract title should be revised.

Predictors of COVID-19 Readmission, Biomarkers and Institutional Insights: A Matched Case-Control Study

2. Adjust the keywords according to the mesh

Response to Reviewer:
1.We have revised the keywords per MeSH standards as follows:

Revised Keywords:
Patient Readmission / COVID-19 / Risk Factors / Aftercare / Hospitalization

3. Explain the method of determining sample size and sampling.

The study used a census of all 121 readmitted patients during the study window and matched them 1:1 with controls via PSM based on clinical/demographic factors, yielding 242 subjects.

1. **Sample Size Determination**

- **Total cohort**: 7,182 COVID-19 admissions (March 2020–March 2023).
- **Readmitted cases**: 121 patients (1.68%) met the 60-day readmission criterion.
- **Control group**: 121 non-readmitted patients matched 1:1 to cases.
- **Final sample**: 242 patients (121 cases + 121 controls).
  No formal power calculation was reported; all eligible cases during the study period were included.

2. **Sampling Method**

- **Design**: Matched case-control using **propensity score matching (PSM)**.
- **Matching criteria** (1:1 ratio with caliper width = 0.2 SD):
  - Age (±5 years)
  - Gender (exact match)
  - Comorbidities (e.g., diabetes, hypertension)
  - Disease severity (SPO_2 ±2%, ICU admission status).
- **Quality control**: Standardized mean differences (SMD < 0.1) confirmed balance.

3. **Inclusion/Exclusion**

- **Included**: Confirmed COVID-19 admissions; readmissions with ≥1 overnight stay within 60 days.
- **Excluded**: Incomplete lab data or admissions outside the study period.

Key Strengths/Limitations

- **Strength**: PSM minimized confounding.
- **Limitation**: Convenience sampling of all eligible cases (no pre-hoc sample size calculation).

4. Results need major revision. Number of tables is large. Table 8-6 not found. All tables need revision. Limitations should be included at the end of the discussion.

Thank you for your careful review. We acknowledge the need to streamline the presentation and clarify table references. Below are our proposed revisions:

1. **Table Consolidation & Supplementary Reference**

- **Main Text Tables**: Will be reduced from **8** to 5 core tables:
    - *Table 1*: Demographic/clinical characteristics (current Table 1 + ICU/ventilation data)
    - *Table 2*: Key laboratory predictors (current Table 5: regression model)
    - *Table 3*: Primary readmission causes (supplementary Table 6)
- **Supplementary Tables**: All additional tables (S1-S8) are explicitly labeled as supplementary:
    - *S1*: Mortality | *S2*: Electrolytes | *S3*: FBS | *S4*: CBC/Inflammatory markers
    - *S5*: Liver function | *S6*: Readmission causes (*moved to main text*) | *S7*: Renal function | *S8*: Comorbidities/ICU history
- **Clarification**: A footnote will be added: *"Extended data (Tables S1-S8) are provided in the Supplementary Materials."*

2. **Missing Tables (6-8) Resolution**

Table 6 (causes of readmission) will be moved to the main text as *Table 3*. Tables 7 (renal) and 8 (comorbidities/ICU) remain in supplements as *S7-S8*. All are now correctly referenced.

3. **Limitations Relocation**

The Limitations subsection has been moved to the **end of the Discussion** (final paragraph) per journal standards.

5. Discussion and Conclusions: Needs major editing. Avoid repeating results in the manuscript discussion and compare results with relevant evidence.

We thank the reviewer for this critical feedback. The Discussion and Conclusions have been thoroughly revised to:

1. **Eliminate results repetition** by reframing findings as comparative analyses (e.g., male gender OR=2.0 contextualized with global ACE2/immune-response disparities [17]).
2. **Strengthen evidence alignment**:
    - Compared low readmission rate (1.68%) vs. 10-45% global rates [5, 8, 16], probing institutional practices.
    - Contrasted null comorbidity association with Ramzi et al.'s meta-analysis (+34% risk with diabetes/CVD) [8].

- Anchored multi-organ predictors (e.g., elevated BUN/bilirubin) to U.K. data on renal/hepatic dysfunction [5].

3. **Expand implications**: Replaced descriptive conclusions with actionable directives (risk-stratified discharge, multi-organ monitoring).

2 Revision 1

3 comments · 16 Sep 2025 – 23 Sep 2025

Maryam Changizi Reviewer

MAJOR REVISION 16 Sep 2025

The following title is suggested:
Investigating patterns of readmission among patients with COVID-19 and associated factors
- Line 67, write the purpose of the study at the end of the introduction.
- Clearly state the type of laboratory findings in the methods section.
What is meant by other clinical outcomes in the methods section?
- The manuscript's discussion is short and requires more evidence.
- Do not repeat the results in the conclusion; mention only the main findings of the study.

Associate Editor

MAJOR REVISION 22 Sep 2025

Dear Professor
The topic of the proposed work is interesting, but some considerations and modifications should be taken into account that could improve the quality of the research in keeping with the aim and prestige of the Journal. The title of the manuscript is not good. The English language must be corrected and improved by a native speaker. Please check your manuscript thoroughly and carefully to refine the language.

1. ABSTRACT: The abstract is confusing and should be rewritten.
2. The novelty of the manuscript should be strengthened.

Major Revision

Editor-in-Chief

MAJOR REVISION 23 Sep 2025

Dear Author/s

There are still some points to consider, as Reviewer 1 has provided comments. Please revise the manuscript carefully.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Response to Reviewers and Associate Editor

Dear Associate Editor and Reviewers,

We sincerely thank you for your valuable comments and suggestions, which have helped us improve the quality and clarity of our manuscript. Please find below our detailed responses to each point:

Reviewer Comments

1.We have revised the title accordingly to:
“Investigating Patterns of Readmission in Patients with COVID-19 and Its Associated Factors.”

2. The purpose of the study has now been clearly stated at the end of the introduction to guide the reader and clarify the study objective.

3. We have updated the Methods section to specify the exact laboratory parameters evaluated, including complete blood count (CBC), CRP, D-dimer, LDH, liver enzymes, and kidney function tests.

4. *Comment:* “What is meant by other clinical outcomes in the method?”

- **Response:** We have clarified this phrase in the Methods section. “Other clinical outcomes” refers to ICU admission, need for mechanical ventilation, and in-hospital mortality.

5. We have substantially expanded the Discussion section. We now include more detailed comparisons with recent studies, interpret our findings in the context of existing literature, and discuss possible explanations for observed readmission patterns.

6. The Conclusion section has been revised to remove repetition and now focuses on the key take-home messages and implications of the findings.

Associate Editor’s Comments

1. As noted above, we have revised the title to better reflect the focus and scope of the study.

2. The manuscript has been thoroughly reviewed and edited by a native English-speaking academic editor to enhance clarity and language quality (Shiraz University of Medical Sciences, RCC unit).

3. The Abstract has been completely rewritten

.

4. We have revised the Introduction and Discussion to more clearly highlight the novelty of our study—specifically, the focus on identifying risk factors for readmission among COVID-19 patients in a regional cohort, which remains underexplored in existing literature.

We have carefully implemented all the recommended revisions and believe the manuscript has significantly improved as a result. We appreciate the opportunity to revise and resubmit and look forward to your feedback.

Kind regards,

Maryam Jafar Sameri

3 Revision 2

2 comments · 13 Dec 2025 – 19 Dec 2025

Associate Editor

ACCEPT 13 Dec 2025

Accept

Editor-in-Chief

ACCEPT 19 Dec 2025

I am writing to inform you of the final decision on your manuscript (159607), which has been accepted for publication in CHBS.