PEER REVIEW HISTORY

ARTICLE DETAILS

Title (Provisional)

Outcomes and Costs of Home Hospitalization compared to Traditional Hospitalization in Israel: A cohort Study

Authors

Yehoshua, Ilan; Baruch Gez, Sharon; Cohen, Bar; Hemo, Beatriz; Irony, Angela; Abou Houssien, Khaled; Shental, Omri; Shapiro Ben David, Shirley; Adler, Limor

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VERSION 1 - REVIEW

Reviewer	**1**
Name	**Kunicki, Zachary**
Affiliation	**Brown University**
Date	**02-Apr-2024**
COI	**None to declare.**

Review of bmjopen-2024-085347

Manuscript strengths

1. The authors have written an article that discusses home hospitalization, an alternative to traditional hospital stays, for several conditions.

2. The authors correctly identify limitations of their study and why these limitations matter.

3. The results have implications for clinical practice that merit further investigation of home hospitalization.

Manuscript areas for improvement

1. The authors make the claim that home hospitalization is non-inferior to traditional hospitalization. Their inference for this claim is done by showing a p-value > .05 when comparing home hospitalization versus hospitalization on several metrics. Unfortunately, this is not a valid inference of a p-value > .05. Non-inferiority testing should be done by establishing a difference threshold, and then testing if the effect of home hospitalization is different from traditional hospitalization at the established threshold.1 The authors either need to apply the appropriate methods to conduct a true non-inferiority study, or revise

how they discuss their results to show home hospitalization appears to have benefits over traditional hospitalization in regard to length of stay, follow-up ED visits in 7 or 30 days, and lower costs.

Other comments

1. The manuscript could do with a proof read prior to resubmission due to some minor typographical errors (e.g., line 41, Home should be capitalized).

References

1. Lakens D, Scheel AM, Isager PM. Equivalence Testing for Psychological Research: A Tutorial. Advances in Methods and Practices in Psychological Science. 2018;1(2):259-269. doi:10.1177/2515245918770963

Reviewer	**2**
Name	**Thulesius, Hans**
Affiliation	**Lund University**
Date	**10-May-2024**
COI	**No**

This interesting retrospective cohort study compares two groups of patients. One receiving home hospitalization, the other traditional hospitalization.

Results imply that outcome measures were non-inferior for home hospital treatment.

As for references some seem out of date. This recent paper might be interesting to cite?

Kastengren, M., Frisk, L., Winterfeldt, L., Wahlström, G., & Dalén, M. (2024). Implementation of Sweden's first digi-physical hospital-at-home care model for high-acuity patients. Journal of Telemedicine and Telecare, 1357633X241232176.

Also consider employing propensity score matching or other advanced statistical methods to address selection bias more robustly.

Extending the follow-up period beyond 30 days could provide insights into the long-term sustainability of health outcomes and cost benefits.

Otherwise I have no other ideas of what to criticise productively with this interesting and well written paper.

VERSION 1 - AUTHOR RESPONSE

Reviewer: 1
Dr. Zachary Kunicki, Brown University

Comments to the Author:
Review of bmjopen-2024-085347

Manuscript strengths

1. The authors have written an article that discusses home hospitalization, an alternative to traditional hospital stays, for several conditions.
2. The authors correctly identify limitations of their study and why these limitations matter.
3. The results have implications for clinical practice that merit further investigation of home hospitalization.

Manuscript areas for improvement

1. The authors make the claim that home hospitalization is non-inferior to traditional hospitalization. Their inference for this claim is done by showing a p-value > .05 when comparing home hospitalization versus hospitalization on several metrics. Unfortunately, this is not a valid inference of a p-value > .05. Non-inferiority testing should be done by establishing a difference threshold, and then testing if the effect of home hospitalization is different from traditional hospitalization at the established threshold.1 The authors either need to apply the appropriate methods to conduct a true non-inferiority study, or revise how they discuss their results to show home hospitalization appears to have benefits over traditional hospitalization in regard to length of stay, follow-up ED visits in 7 or 30 days, and lower costs.

ANSWER:
We agree with the reviewer. We revised the manuscript and we do not report now on non-inferiority.

Other comments

1. The manuscript could do with a proof read prior to resubmission due to some minor typographical errors (e.g., line 41, Home should be capitalized).
ANSWER:
We have now reviewed the complete manuscript with Grammarly to correct errors.

References

1. Lakens D, Scheel AM, Isager PM. Equivalence Testing for Psychological Research: A Tutorial. Advances in Methods and Practices in Psychological Science. 2018;1(2):259-269. doi:10.1177/2515245918770963

Reviewer: 2
Prof. Hans Thulesius, Lund University
Comments to the Author:
This interesting retrospective cohort study compares two groups of patients. One receiving home hospitalization, the other traditional hospitalization.
Results imply that outcome measures were non-inferior for home hospital treatment.
As for references some seem out of date. This recent paper might be interesting to cite?
Kastengren, M., Frisk, L., Winterfeldt, L., Wahlström, G., & Dalén, M. (2024). Implementation of Sweden's first digi-physical hospital-at-home care model for high-acuity patients. Journal of Telemedicine and Telecare, 1357633X241232176.
ANSWER:
We added this reference to the discussion.

Also consider employing propensity score matching or other advanced statistical methods to address selection bias more robustly.
ANSWER:
For the case group, we chose all eligible patients (based on the inclusion and exclusion criteria). The control group was matched based on gender, age group, primary diagnosis, time of hospitalization (by quartiles and years), and the hospital they would have been admitted to (based on previous hospitalizations and place of residence). For that reason, we did not employ other statistical methods to overcome the selection bias.

Extending the follow-up period beyond 30 days could provide insights into the long-term sustainability of health outcomes and cost benefits.

ANSWER:
We agree. We added this to the conclusion (for future research).

VERSION 2 - REVIEW

Reviewer	**1**
Name	**Kunicki, Zachary**
Affiliation	**Brown University**
Date	**23-Oct-2024**

COI

The authors have satisfactorily addressed my concerns.

Reviewer	**2**
Name	**Thulesius, Hans**
Affiliation	**Lund University**
Date	**17-Oct-2024**
COI	

Great paper -now improved.

I just have two suggestions for further improvements:

1. add "infections" in the title

2. add info about costs in results in abstract - I guess it is shekels - give this cost or the equivalent in USD or EUR