Reviewer's report

Title: Hospitalization rates and cost in severe or complicated obesity: An Italian cohort study.

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Reviewer: Marjory Moodie

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MS ID : 2122120313800571
Title : Hospitalization rates and cost in severe or complicated obesity: An Italian cohort study.
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Overall, this is an interesting article which will contribute to the literature around the hospitalisation costs and their determinants associated with severe obesity. Whilst the study has some limitations, these are acknowledged by the authors. There are a number of minor issues with the paper which should be addressed.

Overall
1. The writing tends to jump around between the use of the third and first person.

Abstract
2. Background: abstract makes no mention of country of study. Line 3 – change to ‘… in an Italian cohort’
3. Line 4 – in the case of patients with complications, can their BMI be in the 30-40 range?
4. Methods: no mention is made of size of cohort
5. How long were patients followed for?
7. Results: First sentence – remove word ‘were’.
8. Results: First sentence – is this relative to the general population?
9. Results , line 3 – not clear whether these are absolute costs or incremental differences over and above the comparator.
10. Conclusion, sentence 2 - reword to read – ‘Co-morbidity control among obese people …’

Background
11. Paragraph 2, 1st sentence – change risk to singular. Should specify the types
of cancer and reference this sentence.

12. Paragraph 6 – define NHS the first time that the acronym is used

13. Paragraph 6 – Perhaps should comment on the importance of the NHS system for the reader. Do NHS hospitals account for all hospitalisations in Italy? Is there a private hospital system in Italy which is important in terms of health care delivery?

14. Paragraph 7 – the wording of the study aim is clumsy, and requires reworking. It makes no mention of the comparator. The research question needs to be more clearly defined.

Methods

15. Paragraph 2, sentence 3 – should be ‘guaranteed’

16. Under data, is absolutely no mention of comparator population.

17. Be careful re use of acronyms. For example, NHS been used several times previously, then in Methods, paragraph 6, it is spelt out in full. LDL, HDL – should be spelt out first time used.

18. Paragraph 6 – were hospitalisation costs based on DRG daily tariffs or whole-of-episode tariffs? Are the authors confident that tariffs in this instance represent the true costs of hospital care?

19. Last paragraph – is referencing of software complete?

Results

20. The results section needs to be more tightly written with less duplication of results which are in the tables.

21. Paragraph 2 – mean follow-up time was 7.3 years. Were the general population hospitalisation rates and costs calculated as averages over the same time period?

22. Paragraph 3 – Sentence reads ‘In women, the highest SHR was in an older age group (50-59 age group) and was less pronounced.’ Less pronounced than what?

23. Define IQR first time used.

24. Last paragraph – WC was positively associated with an 8% increase for every 10cm. This statement requires clarification. Do the authors mean ‘for every 10cm’ above the median?

Discussion

25. How would the comparison of rates and costs to the general population been different if the comparison had been of high BMI patients to a general hospital?

26. Late in the discussion (page 12) – refers to WC being a significant predictor of costs – here says a 7% increase for every increase of 10cm, whereas previously in methods was 8%.

27. Second last paragraph – lack of representativeness of sample to the overall obese population – this needs to be expanded, and given this point, what is the
value of the results of the study?

Conclusion

28. Not sure that the conclusion re cost-effectiveness of secondary prevention naturally follows from the results. The authors were comparing very dissimilar target populations.

References

29. A recent paper which the authors should consider including:


Tables

30. All acronyms used in tables should be defined in table notes.

31. Table 2 – LH column – BMI30-39.9 – probably should say ….. (plus complications)

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.