Reviewer's report

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

Version: 2 Date: 28 November 2012

Reviewer: Catherine Keating

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Major Compulsory Revisions

1. Overall, this is an interesting paper, although perhaps the authors are trying to cover too much in a single paper. The results section is very dense. At a minimum, I recommend that the authors shorten the results section and illuminate key results only. It is not necessary to repeat results which can be interpreted from the tables provided.

2. The methods describe that “The cohort included patients admitted to the Medical Ward or the Obesity Rehabilitation Unit of the Italian Auxologic Institute in Piancavallo (IAI), a centre specialized in the treatment of obesity and its complications”. Can the author clarify what treatment was provided in this ward? ie treatment of obesity related complications only, or, treatment of obesity via methods including bariatric surgery? The therapies provided in the index admission will have a large effect on the profile of the cohort.

3. There is currently no description of how the general population comparator group was identified within the methods section. Nor is there a description of the profile of this group within the tables. Addition of this information is essential for interpreting results (eg what was mean BMI?).

4. The discussion describes that “the severity of obesity, as described by BMI, did not affect the hospitalization costs”. However the cohort includes subjects who are either BMI ≥40 kg/m2 or a BMI ≥30 kg/m2 with obesity complications. Therefore, comparing these groups by BMI does not seem valid because we would expect difference in morbidity.

5. Abstract should ideally describe results for both severely obese and comparator general population (currently only describes cost results for obese). This issue is also observed throughout the paper.

6. The paper reports “the absolute number of hospitalizations due to obesity”. Are there potential confounders in this analysis? Ie differences that exist between the severely obese and general population other than weight (eg socioeconomic status)? This potential limitation requires discussion / acknowledgement.

Minor Essential Revisions

8. Abstract – “all-causes hospitalizations” should read “all-causes
hospitalizations”

9. Background – “twofold” should read “two-fold”
Methods/data – “gurantee” should read “guaranteed”

10. Discussion - “As consequence” should read “Consequently”

Discretionary Revisions

11. The statistical analysis section describes that standardized hospitalization rates (SHR) were not calculated for diabetes or rehabilitation procedures because these conditions are specific to, or very closely associated with obesity. It is recommended that the authors consider including SHR for diabetes as it will be interesting to explore what proportion of hospitalisation for diabetes are attributable to obesity. Furthermore, the argument that rehabilitation procedures are closely related to obesity requires justification / elaboration.

12. It appears that cost data is analysed in raw form years 1996 to 2001. It is recommended that the authors inflate cost data to a common reference year using health sector inflators as is common practice.

Within results section, consider removing decimal points from large values (eg 35,393.2) and ensure consistent formatting (comma or space to separate 1,000s).

13. The comparator population was a general population which includes persons spanning the entire body mass index range. It would be useful to describe the implications on results due to selection of a general population rather than healthy weight comparator.

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: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

Catherine Keating received an unrestricted research grant for research relating to the "cost and utility associated with severe obesity".