Reviewer's report

Title: Cost-utility analysis of bariatric surgery compared with conventional medical management in Germany: a decision analytic modeling

Version: 0 Date: 17 Apr 2017

Reviewer: Ralph Peterli

Reviewer's report:

General comment

The authors describe a cost-utility analysis of bariatric surgery compared to best medicine in Germany. These results may be important for negotiations between health care insurances and patient organizations, German bariatric society as well as health care providers to reduce arbitrariness in the decisions which patient gets access to bariatric surgery and which one doesn't.

Specific comments:

* as a non native English speaker I have the impression that English needs to be improved

* syntax error in the conclusion of the abstract (page 2, line 50: ……lifetime , (and) it may cause....)

* page 7, line 9: all data available from the SOS trial are intention to treat analysis. The stable weight of the conservative arm or even a weight loss at 20 years is due to a number of patients operated in that group. If per protocol analysis data were available weight development in the conservative arm of the SOS trial would be worse and thus, results of the present study be even more in favor of surgery. Maybe this can be included in the discussion

* resource utilization and cost data: (p7, l 35ff): follow-up visits after bariatric surgery by a medical specialist (surgeon or physician) in the German health care system are much less frequent compared to other countries, follow-up is much longer necessary and the health care system in general for outpatient treatment is very special and makes comparisons to other European countries difficult
* cohort description (p8, l24): definitions of patient groups according to BMI levels uncommon: Why did you choose these the limits 33, 37, 52, 52?, isn't BMI below 33 moderate and up to 37 severe etc??

* sensitivity analysis (p9, l6ff): difficult to understand

* model validation (p9, l35): the number of fatal and non fatal cardiovascular events are overestimated if compared to trials in the pre-statin-era (SOS, ASCOT etc). This may have to be more elucidated in the discussion

* Table 3: avoid abbreviations in the headings, easier to read if full text available

* Discussion: Three different types of bariatric operations were included (Bypass, Sleeve and banding) that differ very much in effectiveness and long-term costs (f.ex. reoperations following gastric banding). The present analysis does show separate results, add at least a comment in the discussion

* P.14, l27: health insurance companies do not follow widely accepted international and German guidelines, there is great amount of arbitrariness

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**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Unable to assess

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

**Quality of written English**

Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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