Reviewer’s report

Title: Comparison of ICD code-based diagnosis of obesity with measured obesity in children and the implications for health care cost estimates

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Reviewer: Ulf Lindblad

Reviewer’s report:

This paper on the comparison between obesity defined by measured BMI, and obesity as registered in administrative databases, is well written and flows fine. A further focus is on differences in health care costs between obesity by measurement and by administrative health care register, respectively. The findings confirms hospital based data that obesity is under-reported by ICD-diagnoses in administrative databases, and that that costs estimated by obesity found in these registers are underestimated. Further, diagnosed obesity is associated with higher health care costs than undiagnosed obesity. The paper adds that these finding still holds when information from primary care with almost full coverage are utilized.

MAJOR COMPULSORY REVISIONS
1. Information from administrative databases were almost complete, however, the participation rate in CLASS, for measured obesity, was only 51%. Although at an expected level, the potential bias from selection bias should be discussed in some detail. This is important for the implementations of the findings.

2. The findings have substantial implication for the capture of ICD codes for administrative databases and this should be discussed.

3. “Body weight” and “body height” should rather be used instead of just weight and height.

MINOR ESSENTIAL REVISIONS
1. Discussion, first line: “obesity for identifies” should rather be “obesity identifies”.

DISCRETIONARY REVISIONS
None

/Ulf Lindblad
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Level of interest: An article of importance in its field
Quality of written English: Acceptable

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 related to this manuscript.