Author's response to reviews

Title: Economic costs of obesity in Thailand: Cost-of-illness study

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Author's response to reviews: see over
On behalf of co-authors, I’d like to thank for all your consideration and suggestion. Point-by-Point responses are as follows;

Reviewer 1:

1. The study provided a comprehensive state-of-the art in topics pertinent to its main message.

   Thank you.

2. Within the country scope of knowledge, the study identified clear gap of knowledge which fitted well with the objective. Yet, some international readers might not see this as interesting enough in terms of filling the existing gap in the field of policy and plan for obesity prevention.

   We agree that this article focus on country-specific situation. However, given obesity is not disease but health risk, we believe that many people including those with health background underestimate impact of obesity. Thus, the study findings will raise awareness among those readers especially living in developing countries. This study shows public health and economic burden of obesity in a developing country is as high as that found in developed countries.

3. The paper describes methods quite well. There might be a need to elaborate more on the ground of making the assumptions on the scope of representation of inpatient data

   Inpatient data were derived from COHI database, which covers all inpatients under by CSMBS and UC scheme. In our study, we assumed that inpatients covered in this database accounted for 80% of the total inpatients in the country. Based on reference 48, CSMBS accounted for 8% while UC accounted for 75% of the population so COHI database covered about 83% of the population. By using the assumption of 80%, our results might slightly overestimate the burden of obesity. To response to this issue, we explain the ground of assumption as well as this limitation in the 6th paragraph of the discussion section.

4. The authors made succinct description of the results.

   Thank you very much.

5. They were careful enough in making discussions by addressing important weaknesses of the data limiting the cost estimation. Comparing findings of the study with those of others, the authors showed relatively new findings specific to the country setting and its neighbours in Asia e.g., the findings on the impact of obesity equate or exceed that of smoking and drinking. This sheds new light on priority setting of burden of diseases.

   Thank you very much.

6. In summary, I think this report is appropriate for many BMC readers.

   Thank you very much.
Reviewer 2:

1. The linkage between obesity and those morbidity need time to develop. Some may be fast, some may be rather slow. The authors did not take into account this lapse time as this was not mentioned and the value of estimated lapse time for each particular disease is missing. Calculation was probably based on morbidity in the concurrent year (2009). This would lead to over-estimation of the costs since there would be zero year for disease free among the diseases. Please provide information on the estimated lapse time and recalculate the cost.

We totally agree with the reviewer that this is an important issue. However, our study is a prevalence-based study which aims to identify cost of obesity that occurred in the given year (2009) rather than the incidence-based which aims to identify lifetime cost of obesity. For incidence-based study, the annual probabilities of developing comorbidity will definitely need to be taken into account. On the other hand, the method commonly used in the prevalence-based approach is to calculate Obesity-Attributable Fraction or OAF (the proportion of cases that are attributable to obesity). Due to the limited number of valid epidemiological data on exact lapse time of each comorbidity (we cannot find the exact lapse time but the studies identified that longer time spent in obese the increased risk of CVD-related death or cancer-related death), the fact that the lapse time for developing each comorbidity is different, and the fact that when people becoming obese (at earlier age or else), there is no previous prevalence-based cost of obesity studies (ref 21-28) or any prevalence-based cost of illness studies incorporate lapse time in their analysis before including our study. Nevertheless, we agree that this is the limitation of this type of study and worthwhile to be mentioned for future research. In addition, in using the prevalence of obesity in 2009 to calculate OAF, we agree that it may lead to the overestimation of the result as there may be a zero year disease free among obesity people. However, by using the prevalence of obesity in 2009 we can clearly see the magnitude of the problems that will occur from the current prevalence of obesity that societal need to be prepared for in the future. We, therefore, discussed the limitation of not taking into account the lapse time as well as the use of prevalence of obesity in 2009 in the discussion (paragraph 5). We do hope that this is acceptable.

Thank for all your consideration and suggestion. Should you have any further questions or suggestions please feel free to contact me.