Reviewer’s report

Title: Obesity, Cardiovascular Risk Factors, and Mortality among Older Thais: A Four-Year Follow-Up Study

Version: 2 Date: 27 April 2010

Reviewer: Alessandra C goulart

Reviewer’s report:

- Major Compulsory Revisions

The manuscript written by Vapattanawong et al, “Obesity, Cardiovascular Risk Factors, and Mortality among Older Thais: A Four-Year Follow-Up Study” is very interesting, but it is not original in Asian population as the author mentioned in his discussion (Gu D.et al 2006). Further, there are some issues and limitations regarding to the outcome, methods and results that need to be clarified and revised.

1. Abstract: The author should review the sentence, “a reverse J-like shape of association between BMI and all-cause mortality was observed”, which is not in agreement with the results presented in the table 3, and the following statement in the discussion section: “This Study was unable to confirm the reverse –J or U shape relationship between BMI and mortality as found in many studies”. The results summary should be clarified. Its not totally clear from which models the hazard ratios were obtained as well as it seems that the author omitted the information about men ranging 30-34.9 kg/m2. As consequence the conclusion is not totally right since the author did not find a significant increased mortality among all BMI strata for both genders.

1. Introduction: The author should add more discussion regarding the relationship between mortality and obesity among older people.

2. Methods: The author never mentioned about past smokers as well as the prevalence of some comorbidities that are more frequent among older people, as cancer, chronic illness which are associated with lower BMI, even in a pre-clinical stage. Also, the author did not consider the waist circumference as a measure of obesity or tested different cut-offs previously described in Asian populations. Further, the author did not consider the additional multivariate adjustment by cigarette smoking, alcohol consumption, physical activity, education, beyond age, marital status, geographical area and education level as well as he did not perform separate analyses after excluding participants who were current or former smokers, heavy alcohol drinkers, or who had prevalent chronic illness at the baseline examination, or who died during the first 3 years of follow-up. In the statistical analyses the author mentioned about some results from the regressions models. This part should be moved to the results section. Finally, he forgot to mention about the statistical program.
3. Results: again, in this part the author mentioned about a reserve –J shaped pattern of mortality by BMI, which was found in both men and women (table 2). This issue needs to be rewritten since the author did not find significant results in higher BMI ranges regardless to gender. This affirmation is more controversial when the author also mentioned that “as a consequence of controlling for other variables, a reverse-J shape association between BMI and hazard was not retained.

- Minor Essential Revisions

- In the table 1, it's not make sense analyze the association between BMI as continuous variable with categorical variable.
- In the table 3, The author misled the model 4 for model 2 in the bottom line.

- Discretionary Revisions

The author should consider analyzing the relationship of all-cause mortality with BMI ranges suggested for Asian people as well as with WC.

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

'I declare that I have no competing interests'