Reviewer's report

**Title:** Out-of-pocket expenditure by the senior citizens with chronic disease: the effect of total number of chronic diseases, specific chronic disease, and comorbid clusters

**Version:** 2  
**Date:** 11 August 2014

**Reviewer:** Qun Wang

**Reviewer's report:**

1 Major Compulsory Revisions

**Background:**

a. Generally, literature review part is weak in this paper and thus the knowledge gap is not well defined. For example, in line 61 you mentioned ‘the expenditures have not been examined in the context of comorbid chronic conditions’. In fact, I have a feeling that in developed countries there are a lot of these studies since cost on chronic conditions is the major contribution to the total health expenditure. After a very quick look, I found a paper talking about expenditure in the context of comorbid chronic conditions:


b. In line 51 – line 55 reviewed the literature on the role of the number of chronic conditions in OOPE and this part does not flow well with the first paragraph. In fact, many factors influence OOPE for chronic conditions. Please specify the reason of looking at the number of chronic conditions.

c. The health financing system or even the health delivery system for chronic diseases in Australia needs to be explained in either background or methods part. Readers feel a bit strange when they read something related to the health financing system in Australia in the discussion part.

**Methods:**

a. You used two approaches to modelling. But the first model you described in line 152-155 is already two-part model, the second approach you described in line 155-159 because two-part model is the model where the possibility of incurring any healthcare expenditure is modelled separately from the magnitude of healthcare expenditure, given that some expenditure is incurred in the first place. Please read more literature about two-part model. So your analysis in Table S1 and S2 is the same as the analysis in Table S3.

b. In line 88 please give the definition of home care since it can also cause medical expenses.
Results

a. The response rate in line 188 was 45.7%. It is very low. In line 192-199 you mentioned the difference between your sample and the general population in Australia. Considering the low response rate, I believe that the difference comes from the low response rate. It needs to be explained in the discussion part on why the rate was so low and how the low response rate influences the analytical result.

b. Your tables S1, S2, and S3 are your main results. Please do not include them in supplementary files if the journal allows the space.

c. It is hard to understand the statement of “The patients, with few exceptions, expressed their satisfactions irrespective of the type of treatment providers (Table 4)” in Table 4.

Discussion

a. The discussion is very weak and does not flow well. There is no comparison of the similarity and difference in the findings of your study and of previous studies. For example, line 307-308 seem to come from nowhere and do not relate to the previous and following sentences; line 331-334 talked about the results in another study without any comparison of the results in your study and in previous studies and these few sentences need a proper reference; line 286-293 read like results, but not discussion; line 338-342 are better organized into other paragraph.

b. Limitation part is better organized into ‘first, second, third’. Line 363 – 365 seem to come from nowhere. Do you want to explain why you did not include dental patients? If yes, please specify. As mentioned in the result part, the low response rate is one of your study limitations. Please discuss it.

c. The number of chronic diseases is one of your major study objectives, which needs you to well discuss.

d. How you did for comorbid groups also need to be discussed. Please specify the advantages and disadvantages of each comorbid group and what you recommend for future studies if they want to use the same grouping methods like you.

2 Minor Essential Revisions

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
None declared.