Reviewer's report

Title: Living arrangements, chronic diseases, and prescription drug expenditures among Korean elderly: Vulnerability to suboptimal medication use.

Version: 2
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Reviewer: Chiu-Wan Ng

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Discretionary Revisions
1. Selection of living arrangements of interest
The authors have focused on three arrangements namely, living alone, living with spouse and living with adults who are not elderly and excluded from consideration, elderly living with other elderly and elderly who were living with children. It would have been interesting if the latter two groups had also been examined to see if these living conditions could also affect prevalence of chronic illness and medications. As the authors have pointed out traditional extended family living arrangements in Asian countries are changing and living with other elderly persons in the absence of support from own spouse or own family, as well as arrangements in which elderly are left to care for their grandchildren while their children live in separate housing because of work commitments are on the rise in Asia.

Major Compulsory Revisions
1. Identification of chronic diseases
The authors need to list the diseases which they considered as chronic diseases in their analysis. Are these restricted to just diabetes, hypertension, osteoarthritis and low back pain? How reliable are self-reported disease prevalence in the Korean context?

2. Medical costs as proxy for utilisation
In relation to the above, finding of lower medication costs for elderly living alone need not necessary mean sub-optimal medication because case-mix is not known. The models control for numbers of chronic diseases but not case mix. Costs of medication for different ‘chronic diseases’ can differ. Without adjusting for this, authors have not conclusively proven that elderly living alone receive sub-treatment. I wonder if the statement on page 12, “The OOP prescription drug expenditure figured in this study reflected the total prescription drug expenditure, including both NHI burden and user burden, because Medical Aid beneficiaries were excluded” is true since OOP payments should by right refer to only what the ‘user’ or patient pays.

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

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

Declaration of competing interests:

I declare that I have no competing interests.