Reviewer’s report

Title: Potential for alcohol and drug interactions in older adults: Evidence from the Irish Longitudinal Study on Ageing

Version: 4 Date: 24 February 2014

Reviewer: Fei-Yuan Hsiao

Reviewer’s report:

In this study, the authors attempted to estimate the prevalence of concomitant alcohol use with specific conditions known to deteriorate with alcohol assumption and the identification of sociodemographic and health factors associated with concomitant use of alcohol interactive (AI) medications and alcohol. I believe this paper has the potential to provide more evidence surrounding this issue but the statistical analyses were not appropriate to support their hypotheses.

Major Compulsory Revisions:
1. According to the Measures of alcohol consumption in the Method section, the study subjects were divided into three groups based on their alcohol consumption: non-drinkers, light/moderate drinkers, or heavier drinkers. However, the authors lumped them altogether in Table 1. The authors should divided all study subjects based on their definitions and provide more details regarding potential differences in sociodemographic and health factors across these groups.
2. Furthermore, no data regarding study subjects with problem drinking had been provided.
3. Table 2 should be modified accordingly based on their alcohol consumption as well, not just a yes/no categorization.
4. The discussions should be based on the results presented in the Results section. Some data were firstly seen in the Discussion section.
4. Currently, there are very few discussions or explanations regarding the potential association between alcohol consumption and AI medications in different therapeutic classes.

Minor Essential Revisions:
There were some grammar errors.

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

Quality of written English: Needs some language corrections before being
published

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

**Declaration of competing interests:**

I declare that I have no competing interests