Reviewer’s report

Title: Sedative load of medications prescribed for older people with dementia in care homes

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Reviewer: Andrew McLachlan

Reviewer’s report:

General comments

This is an interesting manuscript that investigates the pattern of sedative use in older people, especially those that are most vulnerable with dementia. The authors have employed data from a longitudinal study in residents of age care facilities and applied the “sedative load model”. This is an important question as it related to potentially significant medication-related harms for older people. The strength of this study is the use of patient medication administration which ensures they have capture relevant and complete medication data. Perhaps a weakness is the diagnosis of dementia which was essentially based on a clinical or “recorded” diagnosis within patient notes. There was limited information about severity of dementia.

Taken together this work provides important insights into the patterns of medication use of older people with dementia in residential aged care facilities.

Discretionary Revisions

1. The authors refer to the work of Hilmer et al on total drug burden, which combines both sedative and anticholinergic medicines as well as considers drug dose regimen, that has been shown to correlate to functional and cognitive status older people. How should this study be considered in light of the studies investigating the drug burden index (DBI) using a sedative load model that simply counts medicines and does not consider dose.

2. The authors’ state “…. no studies which examine the use of the sedative load model to examine prescribing of sedative medications in residents of residential homes have been conducted to date”. While no study has used this exact model – a range of other models including DBI such as…


3. This study only examined data for people living with a diagnosis of dementia – did the authors consider a comparison between the sedative load in older people with and without a diagnosis of dementia?

4. Indicate the time period over which data were collected in the Methods section.
5. This is an observational study – match the conclusions to the aims of the study

6. Table 1 – there is no need to report age to 2 decimal places

7. (Tables 1-3) I am unsure of the rationale for presenting data for each of the homes separately at each time point – is this the best way to present the data? Is there merit in combining these data and perhaps using a figure?

**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