Reviewer’s report

Title: Patterns of Antihypertensive and Statin Adherence Prior to Dementia: Findings from the Adult Changes in Thought Study

Version: 2 Date: 21 Dec 2018

Reviewer: Carlos Fernandez

Reviewer's report:

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Comments

1. Page 2: line 44- The reference cited doesn't support the position that most adherence studies use the PDC method. I'm sure the authors must have a SR or similar reference handy that would be more suitable.

   a. This has not been addressed. The authors provide a reference to Medicare Star Ratings, but this document does not support the position that the PDC is one of the most commonly used claims based measures in research.

   b. Lines 46 to 49-poor sentence structure; in addition, should read "..setting of cognitive impairment." , not impairments.

2. The use of GBTM to identify distinct patterns of medication adherence in this study is very interesting and would appear to be a novel (& presumably enhanced) use of this method in adherence research. Admittedly, I am not well versed in the fine points of this method, but would ask the following questions:

   a. Has this method been used in a population with neurodegenerative disorders, namely aMCI, AD, or mixed dementia?

   b. If so, how was the modelling adjusted to account for the trajectory of cognitive decline patterns?

   c. It not, can the authors explain why it is appropriate to use this method in people whose cognition declines over time, and at different, non-linear manner?

   d. It would be useful if the authors would add 1-2 sentences to explain this method and its advantages.

I see that lines 135 to 144 have been added, but my comments a to c above have not been addressed.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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