Reviewer’s report

**Title:** Potentially inappropriate Medication Use in Nursing Homes. An observational study using the NORGEP-NH Criteria

**Version:** 1  **Date:** 19 Jul 2017

**Reviewer:** Emily Reeve

**Reviewer’s report:**

The authors have addressed many of my original concerns and I believe that the manuscript is improved. I have a few minor suggestions for final consideration.

Abstract - 'PIMs' abbreviation used without first defining it

psychotropic drugs are introduced in the results section - perhaps add mention of them in the aim (when mentioning the NORGEP criteria) or methods

I would suggest including 95% CIs for all ORs (in abstract and throughout the manuscript) to show the precision (as well as the p value)

Introduction: 'adverse reactions (ADRs)' - this should be adverse drug reactions (ADRs)

'The NORGEP-NH criteria have not yet been validated per se' - suggest being more specific with this - have not been externally validated against adverse outcomes or as a beneficial tool for practice (is this is what you mean?)

Aims - please mention psychotropic drug use here

Methods - just to clarify, were all residents who were hospitalized excluded from this study?

'For all cases, clinical data were recorded at enrollment (day 1 in the treatment course) and at predefined days during the course of the acute illness, including delirium assessed with Confusion Assessment Method (CAM)' - death and delirium are mentioned in the stats section - can you provide more information as to how long patients were followed/checked for delirium and death? Falls is also mentioned later in the manuscript but not at all in the methods. How long were participants follow-up for?

Discussion - Any thoughts on why those with the best ADLs had the highest risk of receiving 3+psychotropic drugs? It is mentioned that it is not thought to be due to deprescribing as there wasn't a relationship with number of drugs?
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.

Unable to assess

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 recommend additional statistical review

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

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal