Reviewer’s report

Title: Impact of nursing home admission on health care use and disease status of dependent older people one year before and one year after skilled nursing home admission based on 2012-2013 SNIIRAM data

Version: 0 Date: 09 Apr 2017

Reviewer: Ji-Young An

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Study population:

It was not easy to understand from the text how the authors defined/merged/identified the study population of this study. It could be summarized concisely somewhere in the text. So far, my understanding, hopefully to be enough to review this study, is:

"This study focuses on people over the age of 65 years, 25,534 out of 371,791, those who received at least one health care reimbursement in both 2012 and 2013, had been admitted to the EHPAD nursing home during the first quarter of 2013. To compare health care use between the year before (2012) and the year after (2013) nursing home admission, this study had to be limited to include people who were still alive one year after admission to an EHPAD nursing home (n=14,887, 58%; mean age: 86 years; women: 76%). Women 85 years and older represented more than half (51%) of the study population."

EHPAD nursing homes are for elderly people 60 years and older. It also would be good to address simply why the authors did not include people aged between 60 and 64 (or 65?) for this study.

Data:

It is necessary to include the procedure how to manage/merge data ensuring confidentiality. Data for this study were retrieved from by CNAM-TS based on SNIIRAM data. However, in the beginning of this paper, it is not described clearly to convey the fact whether the data available in the databases for this study are enough to be evaluated in terms of the types of health care use or not. Also, as the authors mentioned in the discussion section, the databases are necessary to be further refined with relevant resources for the analysis.

Results and Discussion:

Based on my understanding of the results reported:
One year after nursing home admission, the most prevalent diseases identified as cardiovascular/neurovascular (45% vs. 51%) and neurodegenerative diseases (40% vs. 53%). Any statistical difference identified between sex, age, the types of health care use, etc.? These are all age-related diseases. Especially, it was reported that health care use changed considerably during the year following nursing home admission.

The prevalence of dementia (35% vs. 47%) increased and was more prevalent in people aged 75-84 years, and among women aged 65-74 years. A marker of dementia was identified for more than one in two of all residents between the ages of 75 and 84 years (57% of women and 52% of men). I wonder what happened to the group of women aged 85 years and older because they represented more than half (51%) of the study population.

Hip fracture was the leading cause of hospitalization for injuries (4% vs. 7%), and this trend is congruent with the literature. It would be helpful to present any statistical difference between age, the types of diseases or health care use, etc. What about its impact to the length of stay, hospitalization, medical expenditure, etc.? It also would be nice to be discussed in the discussion section.

It was reported that the need for emergency hospitalization increased with age, but hospitalizations without an overnight stay were less frequent in people 85 years and older. Would you explain the reason more in detail? In addition, some part of this paper, it also was reported just like that, "emergency hospitalizations decreased." It is quite confusing. Would you correct/edit this information?

Dental care is particularly important to people who reside in nursing homes. This study reported that dental consultations remained stable. Any further findings from this result, such as indicators related to general oral health, nutrition, etc.?

As the authors mentioned in the discussion section, particularly family support had a significant impact on institutionalization; however, this study does not consider this issue when they designed this study. Further discussion is necessary.

Conclusion:

This study utilized large database and national health insurance data. However, the conclusion is not original and does not add any new finding to the area. It is recommended that the authors further develop a couple of additional paragraphs.

**Are the methods appropriate and well described?**

If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**

If not, please specify which controls are required in your comments to the authors.
No

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

No

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.

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