Reviewer’s report

Title: Emergency Department Visits and Hospitalizations by Cognitively Impaired Tube-Fed Nursing Home Residents: A National Study

Version: 1 Date: 30 December 2013

Reviewer: Nanako Tamiya

Reviewer’s report:

- Major Compulsory Revisions

Page 7~8 The validation of the ACS conditions is a key and most important element for this study. For the readers outside USA, a more detailed explanation regarding “using MEDPAR file and AHRQ Prevention Quality Indicator (PQI) codes or using Outpatient SAF file and AHRQ PQI codes using MEDPAR file and AHRQ Prevention Quality Indicator (PQI) codes” will be needed, especially including the information on their validity (Who and how coded them, etc).

Page 8, Please inform what version of the MDS is being used. Based on this, could you please elaborate on the rationale behind the selection of these five (5) activities of daily living among the ones contained in the MDS?

Page 8, Could you please give more details on why you collapsed the total ADL score into these categories? I think there might be better ways to represent the ADL scores contained in section G of MDS than the one you have used, as it does not seem sound. If there are other experiences using this method please cite them. Otherwise, it would be better to explore other options.

Page 15, you mention that “This study adds to a growing body of evidence documenting the potential risks and complications associated with FTs in NH residents with CI.” However, it seems this conclusion is out of the scope of the results of this particular study as there is no comparison with non-FT users and the direction of the severity of CI seems counterintuitive. A similar statement is given as “Despite such evidence, our results suggest that FT use is very common, with 46% of all NH residents with FTs being classified as having at least Severe or very severe CI (MMSE < 7). (Page 12)”

- Minor Essential Revisions

Page 2, “ED visits and potentially preventable ambulatory care sensitive (ACS) hospitalizations and ED visits” should better rephrased as “ED visits and potentially preventable ambulatory care sensitive (ACS) hospitalizations and ACS ED visits” to show clearly that the last ED is ACS ED as you did in the other section.

(you should be consistent regarding the order and way you describe these outcomes through the paper. In some section, the order of the hospitalization and ED is different (p5)
Page 3, Information on the number of “comatose” in the conclusions is redundant.

[Introduction] You explained this study’s future contribution would be that “Such information may give families and providers a clearer picture of the likely burdens associated with FT use based on cognitive status and allow them to make a more informed care decision.” Please indicate what clinical conditions could be the contributions of this study clearly, such as placement of new FT tube among NH residents with CI or decision to refer to EDs.

Additionally, in the Discussion, you explained the influence of CI severity regarding the clinical decision by nursing staff or family. This idea is very interesting, but the rationale of the interpretation using previous studies regarding clinical decisions for old people with CI would be necessary. Furthermore, it is suggested to make a case for this study’s meaning by using previous studies about clinical decision-making aimed at older people with CI in the introduction.

Page 6, It should be mentioned more clearly the rationale behind the 90-day blackout window after initial NH assessment (i.e. clinical connotations, definition of long stay residents, availability of MDS assessments, etc.).

Page 6, Please add more details on the considerations for the power calculation that led you to establish a 5% sample.

Page 7, MEDPAR or page 8 SAF: Even it is being listed in the list of abbreviations, the first time should be spelled out in full like any other abbreviation. Otherwise, at least the way of writing the abbreviations should be consistent.

Page 8, please add a reference for “FT placement differs by race/ethnicity.” Moreover, in table 1, Why are not Caucasians represented? In Methods, the classification of ethnicities with small numbers is already mentioned. Please show the prevalence of all ethnicities including Caucasians or Black as an important confounder.)

Page 13 Please refrain from mentioning the MMSE scores in the discussion section as it may lead to confusion on the actual tool being used in this particular study. Otherwise, mention again that they may be an equivalent measure (ref 24).

[Methods-Data Analysis & Table 1] The Footnote of Table 1 included “All characteristics were significantly different across all 4 levels of CL (p<.0001).” Please show the statistical tests for these p-values in Methods or footnotes of Table 1.

[Results] The title of the table and text: Table 3 should be “Rates of Hospitalizations and ACS Hospitalizations”. However, the author wrote in RESULTS, page 11 “Table 3 shows the rates of ACS ED visits and ACS hospitalizations.”

- Discretionary Revisions

[Methods –Primary Outcomes] You defined the person-year regarding
denominator of a rate as “If K5b (feeding tube present) was ‘yes’ on any qualifying MDS assessment then the resident was considered to be at risk for the above outcomes through death or the end of calendar year 2006.” In the legends of Table 2 and 3, we found “n=3479” as “person years of observation” (in footnotes). As final sample, 3479 persons were observed time at risk of events. Therefore, there is a question whether all of 3479 persons could have whole a year as their time at risk of events. If you do not show the “incident rate” in correct statistical meaning, suggested would suggest to change this expression for these outcome indicators to “proportion” or “prevalence”.

[Methods –Primary Outcomes] Regarding previous comment, it is better to show the definition of the time at risk of events clearly. How did you treat 2 or more ED visits and hospitalizations in 2006? Please clarify whether there is censorship of observations when the first event occurs.

[Discussion] the first half of the paragraph includes representative results in the US with this random sampling. However, these results do not address your primary objectives for this study. It would be better to answer your hypothesis first. In addition, it would be better to show these numbers; 20,000 or 30,000, as estimators with standard errors.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.