Reviewer's report

Title: Nutritional status among older residents with dementia in open versus special care units in municipal nursing homes: an observational study

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Reviewer: Alessandro Nobili

Reviewer's report:

This article examines the nutritional status of residents with dementia in open units (OU) and in special care units (SCU) of Oslo’s 21 municipal nursing homes.

Title and objectives of the study are consistent with methods and results. There are some points in methods and results that should be improved for better understanding how the study has been conducted and the results obtained.

Major Compulsory Revisions

1. In methods, the authors state that “the aim of the study was to randomize maximum 10 residents ...”: but they did not provide further methodological information on how the randomization has been conducted and how many patients for each unit have been randomized. Selection criteria and procedure of randomization should be extensively and clearly explained. However, due to the observational nature of the study, I think that the authors refer to "randomly selected from the residents". In any case, please clarify this point.

2. A table reporting the general (socio-demographics and clinical) characteristics of the studied sample divided in the two randomized groups should be added.

3. In Table 2 data on the specific results of each specific item of the nutritional assessment should be added, according to the two randomized groups.

Minor essential Revisions

1. How and when the cognitive impairment was evaluated? What test was used? These information should be added.

2. In results the authors indicate that among the invited 29 nursing homes, 21 (72%) participated. Then they indicate that 28 SCUs and 49 OUs were included: but they do not indicate what was the overall number (the denominator) for each one: these information are useful for assessing the representativeness of the selected sample. The same information should be added for the sample of patients randomized in the two settings. These data could be added in Figure 1.

3. In results (page 7, line 6), the sentence “At 12/21 (57%) of the nursing homes all relevant units participated”. What does “relevant” refers? Please specify.

4. In discussion (page 11, second paragraph) “few residents”: the authors should specify the number and the percentage of patients who declined to participate and, if available, the reasons.
5. In the same paragraph, the authors report the value of 81% as the rate of participants, but it is not clear what is the numerator and denominator on which it was calculated. Please specify.

6. Among limitations, the relatively small number of randomized patients should be added.

Discretion Revisions
1. Are data on the prevalence of use of enteral and/or parenteral nutrition available? If so, they could be added in the discussion.
2. No information on the organization and available personnel working in SCUs and UOs has been provided. If available, these information could help to better characterize the two analyzed settings.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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.