Reviewer's report

Title: Determinants of physiotherapy provision in a population of elderly nursing home residents; a cross sectional study.

Version: Date: 18 December 2006

Reviewer: Anne Deutsch

Reviewer's report:

General

The background is useful and sets the stage for the research hypotheses. This is an observational study that captures prevalence data describing physiotherapy treatment provided to patients in Dutch nursing homes. The hypothesis is new and well defined. Random selection of a sample of facilities and random selection of the patients within these facilities means that the data may be generalized.

Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The study hypothesis is described as the provision of treatment depends on the characteristics of residents and on the type of nursing home and supply of care. This statement should be revised to reflect: 1) this is a cross-sectional study and thus a cause-effect relationship cannot be determined. The relationship should be described as an association. The second part of the hypothesis should also be revised to say that association will be examined while controlling for patient characteristics.

Describe how the number of facilities 15/330 and number of patients (n = 600) were determined.

Please expand the data collection description. For example, what items or groups of items from the RAI were used (e.g., demographic, functional status)? Were the physicians and physiotherapists the clinicians assigned to the patient?

The process of recruiting and consenting patients for the study should be reported. Were residents consented? Did any patients decline to participate?

The first outcome, any PT during the past 6 months is described clearly. The second outcome is the number of minutes per week of PT provided to the resident. Is the second outcome an average amount of weekly therapy provided during the past 6 months, or does this include only the number of minutes in the past week?

If the “other” diagnosis includes a diverse group of patients, it may not be the best choice as the reference group for analyses.

Since this is an observational study, the authors should report findings as associations rather than suggest a causal relationship. For example, page 5: the provision of treatment depends on...characteristics of the nursing home, for example, the type of nursing home and the supply of care.

Time since admission was 3.13 years with a SD of 3.56 days; it is not normally distributed. Was this considered in analyses? Were data transformed to be more normally distributed?

Variance in therapy provision across setting is mentioned in the results. Please report the minimum and maximum values in the results section, and perhaps the interquartile range.

Page 11 - According to the text, adding the predictor variables did not explain the variance in therapy provision, and the facility-level factors reduced the variance by 85%. However, Table 4 shows that key resident-level predictors had odds ratios of 32.69 (rehabilitation resident), 1.65 (sex), 1.11 (comorbidity), 0.94 (LOS) and 3.07 (ward) and the facility-level odds ratio was 1.19 (FTE). The odds ratios seem to suggest that the patient-level factors are more important than the facility-level factors. Please clarify.
In the analysis of provision of physiotherapy, it is stated that “the amount of available PT personnel had its influence on the chance of receiving treatment.” In this cross-sectional study, cause-effect relationships cannot be tested. It is possible that some facilities tend to have a higher proportion of patients with rehabilitation needs, and that those facilities have hired a higher than usual number of PTs.

As noted in the discussion, the PG ward and “dementia” diagnosis were highly correlated. Did the authors run multicollinearity diagnostics?

The discussion includes a sentence indicating “the pattern found in our study also reflects the belief that especially residents with good cognitive functioning are more likely to benefit from treatment.” It is unclear what results support this statement.

Page 15 – In the discussion, the authors indicate that there is no reason to expect systematic differences in the 15 nursing homes because of the randomization. Randomization allows the researchers to generalize the data to all Dutch nursing homes, but it does not suggest that the nursing homes were similar.

Page 15 – The limitation of very limited functional status is an important limitation in this study. Only PT use is studied, yet the interview questions ask for both ADL and mobility limitations.

Page 16 – conclusion
The statement that the chance of receiving PT is largely explained by the supply of PTs is not supported by the resulted presented in the tables.

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Discretionary Revisions (which the author can choose to ignore)

none

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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.