Reviewer's report

**Title:** Long term economic evaluation of an integrative psychotherapeutic nursing home programme to reduce multiple psychiatric symptoms of psychogeriatric patients and caregiver burden; a randomized controlled trial.

**Version:** 5  **Date:** 24 September 2012

**Reviewer:** Miranda Mugford

**Reviewer's report:**

1. **Is the question posed by the authors well defined?**

The paper presents an analysis of the economic data collected in a randomised trial of alternative forms of care for people with psychogeriatric symptoms, in terms of incremental cost per QALY gained over the period of the trial (about 6 months?) and in terms of the cost effectiveness of achieving key outcomes of the trial.

The economic question is not really spelled out: it is important that readers understand this, perhaps with the aid of a decision tree. Was the trial designed with a specific economic question in mind?

I am not sure how far the authors searched for previous economic evaluations of interventions in psychiatric care. The statement in the introduction that there has never been a previous trial should be modified: it may well be true, but might be better to say that the authors have not found such a trial in their searches.

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

The details of the trial are summarised and presented in detail elsewhere. I found the summary very hard to follow, especially in the section 2.3 and figure 1.

The method for the economic evaluation is more or less acceptable as an analysis of data alongside a single RCT. Analysis of uncertainty is restricted to confidence intervals in costs and outcomes, and testing effects of missing data on results (I don't think this should be called 'robustness' which is a rather general term, but 'sensitivity to missing data'). There is no modelling of the probability of cost-effectiveness against different decision thresholds.

It is not clear whether the costs of the intervention are captured in the cost data collection instrument.

It is not clear what 'reference unit prices' are (section 2.4 page 6).

3. **Are the data sound?**

Yes, as far as I can judge from what is presented. The reported costs and EQ5D scores seem feasible.
4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

This is not primarily the report of an RCT, and although in many ways it does adhere to the guidelines such as CONSORT, with a flowchart of patients, it also misses many key issues such as method of randomisation and degree of masking of the results from analysts (it is reported that this is not a blinded trial for caregivers and participants and data collectors).

The reporting of a cost effectiveness study could be improved to follow, for example, the York Centre for Reviews and Dissemination NHSEED guidance or the BMJ checklist.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

Mainly acceptable.

6. Are limitations of the work clearly stated?

Yes. It is particularly relevant that the perspective of the CUA study (medical costs and patients' utility valuation) is highlighted, as this is an important controversy in the field of policy and economic evaluation of elderly care.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

The paper is well referenced, but it is not clear how far the authors searched for related work.

See comment above about search for economic studies in this field - even if not done in the 'nursing home sector' I know of several economic evaluations of interventions for psychogeriatric patients which are included in the NHSEED database.

8. Do the title and abstract accurately convey what has been found?

I think it could be reworded to make clearer that this is not the report of the RCT.

9. Is the writing acceptable?

Mainly it is clear, but in several places is difficult to read and could be rephrased. Sometimes sentences are incomplete. I have listed corrections below, but I also recommend a thorough proof read for clear English grammar.

- Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. Revise title

2. Add decision tree(s) for the economic question(s)
3. Clarify if the patient was present at 'multidisciplinary patient meetings' where GAS score was agreed

- Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Rewrite section 2.3 and figure 1 to make clearer the process and uptake of the intervention clearer. A flowchart might help, and it is not, in my view, necessary to repeat all the percentages in the text and the figure. (unless it is required journal style!)

2. Spell out all acronyms. Mostly OK but what are DSM and MMSE?

3. Explain reference unit prices (page 6)

4. Correct references to Tables in section 3.2 should be 3 and 4, not 4 and 5

5. Several examples of unclear phrases or sentences include:
   a. page 3 line 9 'due to their multiplicity in combination'
   b. page 7 section 3.2 line 'the cost effectiveness in ICER'
   c. page 8 last line. 'Completing of the EQ5D ...' this is not a sentence
   d. page 9 line 5 from end: 'This means that the result of the economic evaluation were probably an underestimation of IRR' Do you mean an underestimation of the cost effectiveness of IRR?

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

1. Clarification of the economic question(s) behind the study. Also spell out where and by whom and for what the 30,000 euro threshold is 'generally assumed' to apply (page 8)

2. More reference in intro and discussion to results and quality of previous economic evaluations in the field of psychogeriatric care

3. Be clear about whether intervention costs are included in the TiC-P - describe this instrument more fully in the methods section

4. If you think a blinded trial is impossible, then why recommend that there should be blinded trials. You need to modify this recommendation.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**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