Reviewer’s report

Title: Economic evaluation of an extended nutritional intervention in older Australian hospitalized patients: a randomized controlled trial

Version: 0 Date: 14 Nov 2017

Reviewer: Nele Van Damme

Reviewer’s report:

Thank you for studying the cost-effectiveness of a nutritional intervention. This is really important in times of scarcity. Although, I found no clear information on your primary and secondary outcomes concerning cost-effectiveness in the result section and none in the discussion section.

Abstract

'Cost-benefit analysis was measured in terms OF quality-adjusted life years …'

Introduction

Can you add the aim of your study clear and specific (e.g. according to PICO).

Methods: Study design and location

The title doesn't cover the content. Besides design and location, also datacollection, ethical considerations, setting, and participants are described. This paragraphs reads difficult because of a lack of coherence, structure, and logical sequence of the content.

Methods: Nutritional assessment

In accordance with 'health-related quality of life': can you add information on the validity of the PG-SGA in this paragraph?

Methods: Health-related quality of life

Is it possible to summarise the results of the validation of this instrument?

Methods: Intervention

Try to avoid long sentences. These are difficult to read. E.g. 'A combination of strategies …'

Methods: Cost analysis

Try to avoid long sentences. E.g. 'Pharmaceutical costs …'
Data on ethical consideration should be better combined in one separate paragraph. Your paragraph 'Design and location' also contains data on ethical considerations.

Methods: Analysis

How did you decide on your sample size?

Can you describe more specifically what you mean with 'Basic descriptive statistics were used…'

First sentence is not grammatically correct:. Better: 'Continuous variables were expressed as mean (SD) or median [interquartile (IQR)] ranges.

Try to avoid long sentences.

Methods: Economical evaluation

Can you integrate the correct concepts concerning heath economic evaluations: e.g. cost-utility.

Results

In general: This paragraph should be less difficult to read if more conform/more comparable to the method section (e.g. sequence, titles, paragraphs and content).

Results: Base case analysis results

Please, can you add or describe clearly the results on your primary (cost per unit improvement in the PG-SGA) and secondary outcome (costs per qaly gained).

Avoid interpretations in your results section: 'This entails that the intervention dominated the control group as it was both cheaper and more effective that the former implying that the intervention would be considered cost-effective.

Discussion

Can you formulate an answer on your specific study aim and describe the results on your primary and secondary outcome at the beginning of this section?

Can you add a reference concerning the validity of the PG-SGA.

I would suggest an additional topic for the discussion: In the introduction you described a 'trend towards an improvement in nutritional status' determined in the RCT. In your health economics study, you identified that the units improvement in the PG-SGA were significant higher in the intervention group. It would be interesting if you discuss these findings in relation to each other. How can you explain this 'difference'?
Your discussion topics concern costs, but no reference was made to cost-effectiveness which was the main outcome of your study.

Table 1

This table also contains outcomes of the study, not only 'baseline characteristics'. Please, can you make this more clear?

Table 2

'Intervention costs' were not completed for the base case analysis.

Are the 'intervention costs' of 22 AU $ correct? You described in the method section already 37.16 AU $ per hour for an accredited dietician, and there are also other costs (e.g. nutritional supplements). Can you explain this?

This table is not consequently organised (e.g. use of italics, use of blanc rows).

References to footnotes not correct? Only 'a' and 'b'?

Footnotes not correct: 2 times 'b'

Table 3

Footnotes: no 'c'?

Figure 3a

For me, it's not clear how to compare this figure with the results in the text. In the text you describe 'willingness to pay values as low as $50 per unit'. On the X-as, I cannot identify the probability of intervention being cost effective at a willingness to pay values as low as $50, because the scale at the X-as ranges till 500,000. Can you make this more clear?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

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

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.
I agree to the open peer review policy of the journal