Reviewer’s report

Title: The Integrated Care Pathway for Managing Post Stroke Patients (iCaPPS©) in Public Primary care Healthcentres in Malaysia: Impact on Quality Adjusted Life Years (QALYs) and Cost Effectiveness Analysis

Version: 0 Date: 02 Jul 2019

Reviewer: E. (Erik) Buskens

Reviewer's report:

The authors have attempted to conduct a cost-effectiveness analysis of a post-stroke service in a LMIC setting. This is extremely relevant to support policy decision making and possibly adaptation of public health policies in such settings.

The paper presents an economic evaluation along-side a clinical study (apparently a sort of cluster randomised RCT). It would help the readers to get a feeling as to the intervention that was evaluated if more detail was provided, (possibly in supplementary material) Now this can only be obtained through a previous publication.

Some more detailed remarks that would need to be addressed:

The human capital approach was used to estimate losses in productivity. This was also done for the pensions (old age benefits) of the patients. This seems like double counting as it would seem that pensions do not stop once individuals survive yet become post-stroke patients. The societal benefits may be overestimated as a result.

Another rather major point is data ascertainment. The validity of their analyses hinge on valid estimates regarding costs and effects. Incomplete data is a clear issue here and more detail on 'imputing' should be provided and particularly the sensitivity analyses should assess the potential impact of the imprecise and incomplete estimates obtained.

In page 14 lines 23 and 24 “This study demonstrated that post stroke care using the iCaPPSTM resulted in RM1144.00 savings per QALY gained compared to conventional care. Is this correct? Does the estimate of iCER lie in the SE quadrant of dominance?

Therefore a next point the authors should look at is the presentation of the results. Multivariable sensitivity analyses, a cost-effectiveness plane and acceptability curve obtained through bootstrapping would help to assess robustness of the results.
A Final point is the duration of follow-up. This is now set at 6 months, which in stroke survivors is short term. Longer term impact should at least be discussed.

In the discussion the authors could look into the entire country. It would appear that the participating centres represent regions where care is organised fairly well. Accordingly the differences with other less well served regions is presumably much larger.

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

No

**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.

Yes

**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 am able to assess the statistics

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

Acceptable
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