Reviewer’s report

Title: Key Attributes of Patient Centered Medical Homes Associated with Patient Activation of Diabetes Patients

Version: 0 Date: 16 Oct 2017

Reviewer: Carlos Wong

Reviewer's report:

Thanks for inviting me to review the statistical and methodological aspects of the submission. This study was a cross-sectional survey about the identification of key attributes of Patient Centered Medical Homes (PCMH) associated with greater patient activation.

Results in abstract: three PCMH domains (organizational access, integration of care, and comprehensive knowledge) found to be significant attributes. Odds ratio and corresponding CI should be reported but only odds ratio of 'comprehensive knowledge' was reported because of having the highest odds ratio among three significant attributes. Furthermore, the abbreviation 'PAM' is defined in earlier part.

Method in text:

Inclusion criteria were 1) patients who were adults, 2) diabetes diagnosed by ICD-9 coding, 3) had at least 2 visits within the past 2 years, and 4) who did not opt out. Regarding the third criteria, the observation period is unclear - the adult patients with diabetes visited the center over certain period should be specified.

Authors gave a power analysis requiring 1301 participants to detect a 5-point difference in domain ratings across the four clinics with 80% power. The estimated sample size was 1301 but the number of observed data without missing was 1253. It reduced the statistical power which may no longer reach 80%. Another concern on the power analysis was the reference of 5-point difference - is that the minimally important difference of PAM score? (Or composite score?) The evidence on the use of 5-point difference, out of theoretical range of 100, is better justified.

What is the distribution of composite scores? Authors defined the domain score of >=4.5 as high perception of domain, while it will be helpful to give the possible option of each survey question, interpret the score and provide reference to a cut-off of 4.5.

In statistical analysis, please give the module used in STATA for ordered logistic random-effect regression analysis, and the method to deal with missing co-variates / socio-demographic variables (missing value for PCMH composite outcome is defined).
Analysis surrounding patients with type 2 diabetes usually accounted for duration of diabetes, treatment modality, and presence of diabetes-related complication in adjusted model. This study neglected those covariates, albeit those may not have impact on PAM. This issue should be addressed in limitation.

Table 2: please provide SD for characteristics in continuous form

Table 3: from the footnote, all regression models were fitted with 1253 participants. Is that correct?

Table 4: remove '(low scores) in the row 'PCMH domains' as 'low scores' is not the reference category of PCMH domains. 'Ptient' is typo

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.

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