Reviewer's report

Title: Evaluation of Health Resources Utilization Efficiency in Community Health Centers of Jiangsu Province, China

Version: 0 Date: 25 Aug 2017

Reviewer: Thiago Rocha

Reviewer's report:

Page 3, line 9: The expression "pro-poor" should be changed. There are better definitions of policies dedicated to solving inequalities issues or lack of access of disadvantage populations.

Page 3, line 15: The authors should provide additional initiatives or suppress the expression "among others". This expression doesn't help to understand additional actions dedicated to improving quality and access to care.

Page 3, line 15: The text inside parenthesis ("intended to remove the causes of differences in the quality of health and health care across different populations") can be removed. The concept of health inequity is sufficiently discussed in the literature.

Page 3, line 19: on the other side the explanation about the Healthy China 2020 should be part of the text and not included as a secondary explanation in parenthesis. This phrase must be restructured.

Page 3 line 46: this paragraph is confusing, very wide and needs an English improvement. The paragraph occupies nearly one page and deals with many ideas. It should be rephrased and divided.

Page 3 line 48: This part of the text must be rephrased. There are repeated words: suggest that suggests. "China National Health Equality Survey suggests that suggests that despite overall

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Page 5 line 56: The imbalance pointed out has one or two causes?

Page 6 line 5: the expression "barefoot doctors" must be changed to explain in scientific terms the lack of medical training to its professionals.
Page 6: line 23: how the bed utilization give a good panorama of the health community centers? The health community centers perform admissions? In case of not, these statistics of bed utilization are not well aligned to the matter of the article.

Methods section

The study didn’t define which is its classification in epidemiological terms: observational or experimental? Descriptive or analytic? In case of being analytic cross-sectional, case control, cohort, ecological? There is insufficient information to presume the study classification considering that it involves a performance analysis through efficiency. The authors should address this point.

The variables of the equations should be contextualized to what was considered in the paper as input and outputs. The detailed explanation about DEA was contextualized to describe what the authors performed considering the Chinese data only after of the equation presentation. This presentation can be unified and not duplicated, as in its current form. How were the weights controlled? The orientation of the model to maximize outputs is not easily perceived by someone not familiar with DEA models. The authors should describe the technique considering the need to precisely describe what use was done considering the article data.

I suggest the use of the strobe protocol to better organize the methods section. There is important information missing.

How the selection of the CHC was performed. Which procedures were used to avoid selections bias? The CHC choose was only intentional?

Page 9, line 1: The article (13) reported don’t define a specific conjoint of steps to define which variables should be selected to DEA analysis in the health context. The authors should state clearly how the variables were selected. DEA is a technique susceptible to a bad selection of variables. To define which inputs and outputs should be considered there is necessary identify how the variance of the output might be explained by the inputs selected. In fact, DEA will perform an evaluation of relative efficiency with any kind of inputs and outputs. This is one is a critical point to be addressed while using this technique. Using regression techniques before choosing the inputs and outputs is a methodological procedure to address this issue. The cluster analysis performed might address the overlap between the capability to explain the same portion of the outcomes, but is not the most adequate to exam how the inputs and the outputs are related, in terms of the variance explained. You need to be sure that the inputs selected have the capability to explain a substantial amount of the variance of the outputs selected. Doing this you can be sure that changes in the inputs and the outputs could be performed to improve the
efficiency of the health care offer. The consensus of experts is an insufficient approach to solve this question. You need to better support the selection of the variables to be used as a proxy of health care process. Additionally, the process of care offer is supported by elements of structure, process, and outcomes. Donabedian defines this approach to be used as a guideline to think the quality in the process of care offer. The final selection of inputs did not reflect the full range of elements necessary to perform a satisfactory offer of health services. From a management perspective, change the area of the CHC itself, even when considered together with the other inputs and outputs might not be sufficient to improve the quality of care offered and solve inequities issues.

Results section

It should be provided a descriptive table with raw data related to inputs and outputs.

Discussion

The authors did an extensive discussion in the introduction section about the need to address inequities. The study is organized much in terms of the use of the econometric techniques itself, than approaching the important matter of equity and how to improve efficiency in care. How your contributions can help to solve the iniquity problems in Jiangsu Province?

How can a policy maker use your findings to change the way health policy is designed, funded and evaluated? The list of items defined as recommendations for policy makers at page 17 is not fully supported by your findings. They are generic and not related to the findings from your data.

Level of interest

Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

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Please indicate the quality of language in the manuscript:

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