Reviewer’s report

Title: Forecasting imbalances of human resources for health in the Thailand health service system: application of a health demand method

Version: 0 Date: 10 Sep 2018

Reviewer: Alvaro Alonso-Garbayo

Reviewer's report:

This manuscript presents the results of a study projecting HRH needs and potential supply for the Thai health system in 2026. While the topic is interesting and relevant to the present HRH agenda, the manuscript presents a case study about the Thai system without linking it with a broader HRH planning perspective. The thorough presentation of results together with the limited mention to other alternative methods and the limited discussion in regard to existing knowledge about the topic makes this manuscript read more like a technical report than a scientific document.

Major compulsory revisions

The introduction should include a presentation of the existing literature about HRH planning and HRH needs projection methods to frame the choice of the selected method (e.g. see Nigenda et al 2015). The methods section would benefit of information about the sources of secondary data and the issues found with these figures. It is not clear why authors suggest that demand method was the most appropriate (e.g. support with references to existing literature is strongly recommended). The sequence of steps taken to calculate needs and supply should not include results (e.g. services provided by each professional, time allocation per profession to different activities, proportion of service utilization by health facility type, etc.). This should be presented in the results section. There is need to define some essential terms such as service utilization, health worker productivity, demand or need as they are used in this study. There is no mention to ethical approval for this study. The presentation of results should avoid repeating the results that are already in tables and restrict the narrative to complement the information presented in tabulated form. The discussion section should include a broader debate about how other methods would have applied or not to the present case study. Need to include discussion about the limitations of the demand method regarding promoting status quo (unambitious) and not supporting/promoting new approaches. While the authors include as limitation the fact that the methods don't capture present challenges like population aging or increased prevalence of NCDs it is expected that the manuscript report on how other authors have dealt with these issues or at least to suggest further research if nothing is available in the existing literature. While mentions to existing literature is made in the discussion section, most of it is purely descriptive without discussing about how contextual issues (e.g. epidemiological profile, economic/financial landscapes, etc.) may have affected the degree of appropriateness of this method to the different
contexts and compared to Thailand. Given that this manuscript doesn't present the difference between HRH needs and HRH demand it would be interesting to include a brief discussion about the labour market approach to planning suggesting how fiscal space may dictate the demand which may not cover the needs (e.g. Sousa et al 2014). The conclusion needs reinforcing its link with the findings of this study.

Minor essential revision

While the calculation of HRH needs with a "team" perspective, seems appropriate, it is not clear how this was done (e.g. 20% of OPD consultations at public facilities were performed by doctors and 100% by nurses?). While the document refers to Table 5 to present results of the sensitivity analysis for different time requirement scenarios (e.g. +10%, equal and -10%) it appears that there is only one scenario presented (to be checked by statistician). In the calculation of supply projections, it is not clear why pre-graduation drop-out is considered for nurses (e.g. considering the number of graduates would already account for these students dropping before graduation).

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

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