Reviewer’s report

Title: Health workforce demography: A framework to improve understanding of the health workforce and support achievement of the sustainable development goals

Version: 0 Date: 05 Nov 2019

Reviewer: Tim Bruckner

Reviewer's report:

This article describes how the principles of a demographic "population pyramid" could be applied to health workforce planning. The Authors provide examples from Nepal and Finland to illustrate the value of these workforce pyramids. I judge the manuscript to be a sound contribution to the field. Below I list minor suggestions for improvement.

1. Decision tree of who/which country contexts may find this pyramid approach to be most useful.

I suspect that HRH planners in low and middle income country contexts would find this paper to be helpful in anticipating workforce needs. However, some contexts may be more appropriate than others. For instance, if a large share of the HRH workforce is in the private sector, and the data available are only in the public sector, the pyramids may tell an incomplete story. In addition, absent a full population pyramid as a backdrop, the age structure of the workforce does not necessarily contextualize whether "drops" by age arise from true labor force exits or simply from age structure of the population. Next, planning models may be most appropriate for countries with (i) a long-term planning horizon (say, 10+ years) and (ii.) stable "rates" of entry and exit as inferred by the pyramid. These, and perhaps other, considerations should be made easily accessible to the reader. Perhaps a decision tree of how/when/in what circumstance these pyramids would be instrumental for planning?

2. Demographic trends can affect productivity?

Please elaborate how (p.5) the pyramid has direct implications for worker productivity. I understand the supply and demand aspects, but are you arguing that productivity of workers is somehow density dependent? Please clarify.
3. What are data requirements?

Perhaps a step-by-step description of the exact data steps necessary (or list of data inputs) to create a pyramid would be helpful for the end-user.

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Please indicate how interesting you found the manuscript:

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

**Quality of written English**
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Acceptable

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