Reviewer's report

Title: The impact of the health care workforce on under-five mortality in rural China

Version: 0 Date: 29 Oct 2018

Reviewer: Christopher Morley

Reviewer's report:

This analysis examines healthcare workforce effects at the county level across China, and does so elegantly. I believe the fixed-effects model employed appears to use appropriate controls for autocorrelation and heteroscedasticity, the data source appears reasonable, and the outcomes generally align with what has been demonstrated elsewhere in the literature. While other studies (including our own, not cited; see Morley CP, Wang D, Mader EM, Plante KP, Kingston LN, Rabiei A. Analysis of the association between millennium development goals 4 & 5 and the physician workforce across international economic strata. BMC Int Health Hum Rights. 2017 Jul 18;17(1):18. doi: 10.1186/s12914-017-0126-2.) have examined effects at the national level or within global regions, I believe this study incrementally adds to the literature by examining the effects of healthcare workforce within the relatively controlled context of a single (very large) nation.

I have only a few minor modifications to request:

1. The authors have probably controlled for covariates appropriately, especially by employing county level GDP measurements and other economic proxies for general development. However, with access to data about the counties, I am wondering if there aren't other covariates that could have been examined. I am most concerned about built and natural environment variables, such as access to clean water, exposure to pollution, isolation (extreme rural vs. rural vs. urban etc.), and so forth. I believe a slight extension of the limitations might include an expanded imagining of what variables might not be accounted for, or which might be subsumed within the economic variables the authors did include (but in an ideal world, would be studied for their own effects).

2. In some places, particularly the Discussion, the written English becomes somewhat choppy. I would recommend a very close copy-edit by a strong, native English speaker, be undertaken before final publication.
Other than these brief recommendations, I think this manuscript would offer a solid contribution to the literature, the underlying methods and data are sound, and the writing is clear (albeit in need of the editorial pass described above).

**Level of interest**  
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

Needs some language corrections before being published

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