Reviewer's report

Title: Wrong Schools or Wrong Students? - The potential role of medical education in regional imbalances of the health workforce in Tanzania.

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Reviewer: Kenneth L Leonard

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Wrong Schools or Wrong Students? – The potential role of medical education in regional imbalances of the health workforce in Tanzania

A review

Summary:

This paper presents evidence from interviews with almost all of the soon-to-graduate medical school students in Tanzania in a given year. The paper focuses on the willingness of these students to work in rural areas and the role that medical schools might play in molding this willingness through both the selection of students and their experience when they are in school.

Importance:

This paper addresses a serious problem in human resource management in all African countries, and in Tanzania in particular: the difficulty in getting medical school graduates to accept posts in the rural areas of their countries. The literature has focused on both the incentives to get graduates to move to the rural areas, and the role the training may have in shaping students’ willingness to move. As such, this paper is timely and important.

Review:

There are a few flaws in the paper that should be fixed, and some flaws that cannot be avoided but must be recognized. The paper, however, represents a contribution and I think the authors should be able to revise the paper so that it is suitable for publication:

Major Compulsory Revisions

1) The authors describe every variable in detail, except the dependent variable: the willingness to accept a rural post. Is this a yes/no question? Or are there degrees of willingness? I see from the probit analysis that 62% of respondents said yes to this question, which implies that 62% of soon-to-graduate students would be willing to accept a rural post. This number may seem too high, but hiding it is not the right way to go.

2) The authors should state the core problem with interviews, that they do not necessarily represent preferences and that they are likely to be biased towards
what are seen a socially acceptable views. This would go a long way towards explaining the 62% mentioned above. We know that many fewer than 62% will actually accept the posting. However, it is probably true that 38% would refuse a posting. Thus, the question does contain information about willingness even if it is biased towards socially acceptable views. Since the probit analysis includes a constant, it is not the raw percentage that matters, but whether or not we can describe the difference between those who say yes and those who say no. Here the authors need to be honest and to discuss what they think was happening, but the analysis is still valid.

Minor Essential Revisions

1) There is no such thing as a simple multinomial probit. In fact, it is essentially impossible to do a multinomial probit without very high tech simulation tools. I suspect that the dependent variable is simply yes/no, which means it is binary. Thus, the authors have almost certainly done a binomial probit, not a multinomial probit. This is straightforward. In addition, the sample mean for the dependent variable is different for each of the three regressions, which means the sample size is also changing. The authors need to be clear about how the sample size is changing across the three regressions.

2) In the third paragraph of the background section, the authors imply that poor access leads to low health outcomes and high levels of poverty. It is safe to say that poor access, poor health outcomes and poverty are all high correlated, but it is completely unjustified to imply that poor access causes both poor outcomes and poverty. This needs to be reworded to remove any suggestion of causality between health care and poverty.

3) The authors make much of the fact that medical schools do not recruit rural students. But is this a problem with medical schools, or with higher education in general? Is there any reason to believe that engineering or business schools do any better? It seems likely that the underrepresentation of rural students is a problem everywhere in the world. Your opinion on this matter would be interesting to any reader of the paper. Is this problem something special to medicine?

Discretionary revisions (but highly recommended)

1) The fact that you have students in three medical schools is very important and you must at least take this difference into account. The fact that students who grew up in urban areas outside of Dar are different that those who grew up in Dar, is probably completely driven by the fact that these students attend KCMC. You need to include a variable indicating the school they attended, at the very least. However: ...

2) Study the differences between the three schools. They must be different from each other and they must have different outcomes. Does one attract more rural students than the others. Is one more likely to graduate students who are interested in working in the rural areas? Does one manage to not discourage students? If they are different in outcomes, why? What are they doing differently. You should examine the differences between the schools to learn more about policy.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests