Reviewer's report

Title: Rural medical education and the impact on rural practice location: a scoping review

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Reviewer: Tarun Sen Gupta

Reviewer's report:

This is an ambitious review that provides a comprehensive coverage of an important topic in rural medical education. The authors demonstrate a sound knowledge and understanding of the literature, particularly relating to Australia and North America, and have developed a helpful typology.

Major Compulsory Revisions

1. I did wonder if the authors have chosen the right research question, and feel they should discuss this in some more detail. I have a couple of comments on the title, ‘Rural medical education and the impact on rural practice location’. Firstly, is the choice of terminology – ‘impact’. My concern relates to the causation argument and the effect of confounding factors and prior intent, as the authors do indeed acknowledge. Some papers do claim (or imply) causation; others describe ‘associations’ and I note that the word ‘produce’ is used in the 2nd para of the Discussion and Conclusions. It seems to me that ‘impact’ is somewhere in between – but it is still hard to claim impact without further data, perhaps via triangulation from interviews etc. I would therefore suggest the authors discuss their perspective on this point and how it relates to the findings in the literature (or, alternatively, synthesize the literature and provide some commentary on this point).

2. Secondly, I think the authors need to consider (and provide some discussion / justification) the issue of whether the effect of a rural placement can be separated from the other variables mentioned. The rural ‘pipeline’ is well described, and I suspect that it is a combination of many factors that contribute to graduate outcomes. For example, the program I am involved in (which provides some of the data cited) would argue that it is a combination of recruitment, selection, curricular time, placements, role models, regional location, contextual teaching and postgraduate pathways, among other things, that contribute to where graduates practise (along with other factors out of our control). In other words, any effect is due to much more than the rural placements alone, or, put another way, a program without any of these factors in place that introduces rural placements of one sort or another may find their outcomes are quite different.

This problem is similar to that described in the BEME guide to staff development (No 9), where the authors note: ‘Overall satisfaction with faculty development programs was high. Participants consistently found programs acceptable, useful
and relevant to their objectives’ but later describe that high satisfaction is not surprising given the programs were devised for a specific purpose or need i.e. in both cases a program designed to address a particular issue in a particular context may not work elsewhere.

I note the 'counterfactual' argument put in the discussion and agree that the observation that rural schools are providing opportunities that might not otherwise be taken up has considerable merit. I still cannot escape the conclusion that this is one factor among many, and that ‘rural medical education’ cannot be easily separated from the many other factors discussed

Minor Essential Revisions

3. Table 3 appears to be missing in the MS I reviewed, and the other Tables seem to have been duplicated

4. ‘PRACTISE’ is usually spelt this when used as a verb – this may need correction in a number of places, or referral to the journal’s style manual.

Discretionary Revisions

5. The authors mention some weaknesses and the need for ‘future high quality research’. They could perhaps strengthen the conclusion by making some specific recommendations on how these might be overcome. Issues like small sample size are significant: many smaller trials have demonstrated proportions in the desired direction – but the absolute numbers are what will make a difference to workforce, which begs the question whether there is capacity to train the numbers needed. While definitions of rurality vary across jurisdictions, much of this is about ‘non-metropolitan’ training (outside of RA-1 in Australia) – often called ‘regional’. Across jurisdictions there is likely to be at least some agreement across the metropolitan – non-metropolitan divide, or the metropolitan – regional – rural – remote spectrum. Finally, the lack of comparative data may be an issue in many countries without access to something like the MSOD database, and the point about self-reporting is well made, and perhaps should be augmented by suggestions like inviting external scrutiny/audit of data, or authors and/or collaborations from multiple institutions.

6. The paragraph under the heading ‘New rural medical schools’ could be read as suggesting that the Flinders NTMP is in Queensland, which is not the case.

7. Finally, the lack of page numbers in the MS made the reviewing process a little awkward

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests