Author's response to reviews

Title: The Implications of the Feminization of the Primary Care Physician Workforce on Service Supply: a Systematic Review

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Author's response to reviews: see over
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We thank the reviewers again for their constructive suggestions regarding our manuscript. We have done our best to address all of the concerns presented.

Reviewer 2

1. I was pleased with your responses to my earlier review, and felt you have satisfied the issues I raised. There is one general comment you make that is a bit strong. You say that most studies did not adjust for multiple comparisons. If the studies used 95% confidence intervals they don’t need to because a 95% CI (with adjustment for the cluster if applicable) gives a very very

This comment is incomplete. We assume that the reviewer is stating that adjustments for multiple comparisons aren’t necessary as long as confidence intervals are cited. It is our understanding that this is not the case. Consider a single confidence interval with a 95% coverage probability. There is a 95% probability that this interval contains the true population parameter. If, on the other hand, one considers, 100 simultaneous confidence intervals with 95% coverage, it is likely that at least one of those intervals will not contain the population parameter. The expected number of such non-covering intervals is 5, and if the intervals are independent, the probability that at least one interval does not contain the population parameter is 99.4%. Thus, even when confidence intervals are used, some correction for multiple comparisons is certainly warranted, and the lack of that correction is a limitation of several of the articles included in this review.

However, the issue raised by the other Reviewer re your rejection of searches related to generalist pediatricians and internists is of concern. While you do raise the issue in the paper, you do not tell the reader you intend to investigate this in another paper (which you say you are going to do in the response to the reviewers). Since people can attend without referral to any specialist or primary care provider in the US your argument seems a bit erroneous (re why you did not include literature re above groups).

However, the final decision on this issue, I will leave to the other Reviewer who is clearly from the US and has a deeper understanding of the issue. At a minimum reference to your future planned work is required.

Please see my response to reviewer 3 below on this point.

Reviewer 3

1. The authors state that they clarified their definition of ‘primary care’, but they do so only very late in the article, in the limitations section. Most people who do research in this area consider primary care physicians to include those physicians who are the first contact for a patient with an undiagnosed health concern or for maintenance of health; for most people this generally included family practice, general practice, general internal medicine and general pediatrics. And there’s consistency in that women are much more likely to go into those practices (and OBGYN) than other specialties. In AMA surveys, for those practices, physicians self-identify as PCPs – while not all so self identify (for instance, the internist or pediatrician with a subspecialty in gastroenterology or cardiology), most of them are considered PCPs. This might be a difference between Canada and Europe, where general practitioners prevail, and
the US, where there are fewer and fewer GPs, as they’ve been replaced by FPs and general internists and pediatricians.

Indeed, the first two citations reference GPs, and the AMA document (citation 3) notes this: ‘In Figures 3-17, primary care specialties (internal medicine, family medicine/ general practice, pediatrics, and internal medicine/pediatrics) are shaded differently for easy reference.’ So I believe that the authors need to be explicit about what they are really studying, and they should clarify for readers very early in the paper what they mean by PCPs, like in the introduction, or at a minimum in the methods section.

If they really are studying FPs and GPs, as seems to be the case when examining their search terms, that’s fine, just say that. I don’t think that referring to general internists as ‘specialist physicians’ clarifies anything, rather it creates confusion.

We have further clarified our definition of what constitutes a primary care physician in the introduction, page 5, paragraph 2: “Our specific population of interest is general practice and family medicine (which we henceforth refer to as PCPs); other primary care specialties such as internal medicine and pediatrics will be discussed in a subsequent manuscript.”

We have also reworded the limitations (page 21, paragraph 4) section as follows: “Our decision to include only those studies that focused on primary care physicians, defined here as general practitioners or family medicine specialists, (rather than also including specialists – like general internists or pediatricians – who may practice like primary care physicians under certain circumstances) may limit the generalizability of our results particularly with respect to research from the United States.”

2. I don’t think I’d add the limitation of including only if they provide raw comparisons of hours. If that’s in the methods, then you just follow the methods. It’s not a limitation unless you think including other papers that did not provide raw comparisons of hours would have come up with different results – which, having written several such papers, I don’t think would be the case.

We have removed this limitation.

3. I think I’d still have a second reviewer look at the 74 full text articles. Just because of my familiarity with the work, I found a couple of errors with one article. Generally, with a systematic review, two people independently review at least the chosen full-text articles and they generally even present kappa statistics. Sorry, but that there isn’t enough time isn’t a good excuse.

In response to this suggestion, we had a second qualified reviewer independently examine the 74 articles for inclusion (using the stated inclusion criteria) and allocation of articles to thematic categories. We calculated percent agreement and a kappa score and edited the methodology (page 6, paragraph 2) and results (page 8, paragraph 1) sections accordingly: “Two reviewers independently reviewed all full-text articles using the inclusion and exclusion criteria in Table 1, and thematic typology in Table 2, and disagreements were resolved by discussion. We computed a Kappa statistic for inter-rater reliability.” Our kappa score was 0.84, representing a raw percent agreement of 91%. Discussion between the two reviewers resulted in the addition of four articles to the final review; these extra articles did not change our conclusions.
4. In your statement that ‘in Canada, at least, the proportion….’ Is also the case in the UK and some other European countries. If you’re going to include all the countries, and you’re going to make generalizations about them, you ought to be thorough.

We have corrected this. Discussion, page 15, paragraph 2 now reads: “In Canada, and in the UK and other parts of Europe, the proportion of medical students who are female ensures that the overall supply of physicians will continue to become increasingly female in the near term.”

5. There is an unneeded comma in the sentence beginning ‘An important issue that was not covered…’ Also, an unneeded comma in the phrase starting ‘however, small numbers….’

Both of these commas have been removed.

6. When the authors write ‘there were at least 36 healthcare systems’, do they mean countries?

Health care systems and countries are not synonymous in this context. Canada, for example, can be considered to have 10 different provincial health care systems and three territorial health care systems, since health care is constitutionally a provincial/territorial responsibility. While systems from all Canadian provinces and territories share some core characteristics dictated by federal government legislation, they vary in other respects. Thus, a study from Ontario would be counted differently than one from British Columbia, though both are Canadian studies.

7. You cannot really say ‘an additional 7…’ when one of the seven was already in the prior statement, to which you are supposedly adding new studies. Better would be: ‘In addition, seven….’

This has been corrected, page 18, section 4.2, paragraph 2.

We wish to note, with thanks, the considerable time and effort that has been committed to this paper by the reviewers. The paper has been considerably improved as a result. We have now noted the important role of the reviewers in our acknowledgements.

Sincerely,

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