

BMJ - Decision on
Manuscript ID
BMJ.2018.044856.R
1

Body:

06-Aug-2018

Dear Prof. Jena,

Manuscript ID BMJ.2018.044856.R1 entitled "Association between physician medical school ranking and patient outcomes in the United States: An observational study"

Thank you for sending us the revised version of your paper and for your response to reviewer and editor comments. We sent the paper back to one of the reviewers, who continues to have important concerns about the ranking system. I've discussed this with other editors and we would like to give you a chance to reflect on these comments and perhaps revise the paper or at least acknowledge these views.

Dr. Phillips sent an email after he submitted his review to clarify one portion of it. It read: "My apologies, in my review I said the paper was at high risk of a Type 1 error, they are really at risk of both Type 1 and Type 2 in that they had one statistically significant finding and several that were not. The fallacy of the ranking process on which it hinged risks both types of errors. Thank you."

I will look forward to learning your thoughts about the remaining concerns.

Very truly yours,

Elizabeth Loder, MD, MPH
eloder@bmj.com

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Report from The BMJ's manuscript committee meeting

These comments are an attempt to summarise the discussions at the manuscript meeting. They are not an exact transcript.

Members of the committee were: xxx (chair), yyy (statistician), [and list other eds who took part]

Decision: Put points

Detailed comments from the meeting:

First, please revise your paper to respond to all of the comments by the reviewers. Their reports are available at the end of this letter, below.

Please also respond to these additional comments by the committee:

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In your response please provide, point by point, your replies to the comments made by the reviewers and the editors, explaining how you have dealt with them in the paper.

** Comments from the external peer reviewers**

Reviewer: 1

Recommendation:

Comments:

I appreciate the efforts of the authors to address my concerns with this paper. It remains a valiant attempt to assess relationships between training environment and future practice patterns. The analytic methods are world class. However the medical school ranking scheme on which it hinges is so fundamentally flawed that the likelihood of a Type 1 error is high.

The authors fundamentally seek to test an inverse cost law (BMJ readers are no doubt familiar with the inverse care law), ie, does school ranking relate to trainees' future cost-related behaviors. They test both USNWR primary care and research rankings for association. As I previously described, the primary care ranking bears little association with empiric rankings that use actual primary care output. Please look at table 2 of the appendix of Fitzhugh Mullan's 2010 NEJM paper which ranks all medical schools by primary care output

(<http://annals.org/data/Journals/AIM/20208/152-12-804-Appendix.pdf>) NONE of the top ten USNWR schools make the top 10, and only OHSU breaks the top 20. An opinion poll does not pass muster as the key criterion for a study that declares whether or not an important relationship between training and practice behavior exists, especially when much better criteria are available. For example, why not use Mullan's ranking? If they think is dated, repeat it--the data are already in their hands to do so. If they don't like that method, and the goal is really to see if there is a relationship between medical school and future outcomes, then use cluster analysis or a similar method--cluster graduates by school and analyze whether there is variance in outcomes associated with school. This would mean that they could include international graduates whom they currently exclude. Similarly, why use research rank when a more objective measure sits on the NIH website, specifically, the ability to rank institutions based on their NIH funding? If that is deemed to be too limiting, it is still worth comparing the rankings to see if the USNWR opinion poll bears any relationship?

Previous, related studies of USNWR rankings and opioid-related prescribing patterns suggest that graduates of lower-ranked schools are more likely to prescribe opioids. In our own analysis, we found is that lower-ranked schools were much more likely to produce primary care physicians who, because they provide more than half of the outpatient care in the US, are far more likely to care for patients presenting with pain. The relationship was not about quality of medical school, the relationship was between primary care production, care volume, and prevalence of pain as a presenting or comorbid symptom. The problem in this case was different from that in the current paper in that its main problem hinged on the explanatory relationship between ranking and outcome. In this case, the ranking was a viable criterion because the opinion-based ranking does affect the types of students who apply and matriculate, and the cultural influence on choosing primary care careers--both negative; this despite the fact that the authors focused on quality (ranking) rather than on primary care output. It is important though, because it signals that the authors accepted it as a quality ranking rather than on the relationship between ranking and workforce outcomes

that might explain the research outcome of interest. That is still a problem in this paper, that is, that they accept the rankings as valid.

BMJ would do a huge disservice to the field by publishing this study in its current configuration because it would communicate that there is little to no association between medical school of training (more specifically, its rank for primary care or research) and future cost-related behaviors when that is not what they have tested. I think what it really revealing is that the USNWR ranking process has no relationship to reality. Alternative, objective data are available for creating rankings to test, and they could simply look at outcome variance related to school of graduation. I strongly recommend not publishing the current manuscript.

Additional Questions:

Please enter your name: Robert Phillips

Job Title: Executive Director, Center for Professionalism and Value in Health Care

Institution: ABFM

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: Yes

Funds for a member of staff?: No

Fees for consulting?: No

Have you in the past five years been employed by an organisation that may in any way gain or lose financially from the publication of this paper?: No

Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper?: No

If you have any competing interests (please see BMJ policy) please declare them here: I have previously received research funding from the Josiah Macy Jr. Foundation to study related relationships between training and trainee costs of care