Article details: 2016-0144	
Title	A retrospective cohort study of Canadians who studied medicine abroad and other international medical graduates' realization of entry-to-practice milestones
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Reviewer 1	Dr. Gisele Bourgeois-Law
Institution	Island Medical Program, University of British Columbia, Victoria, BC
General comments (author response in bold)	This paper has political implications and as such, it will be scrutinized closely. Results need to be clearly stated in order to avoid misinterpretation.
	A couple of areas are unclear:
	The abstract results section states that "after controlling for other significant predictors, CSA-W were more likely to obtain a specialty designation (OR = 4.85). However, this is not mentioned in the results section of the paper and in Table 3 there does not appear to be any significant difference between the groups, so that I am confused. The second sentence in the Interpretation section states that "CSA were more likely to obtain a PGME position, but did not perform better than non-CSA in subsequent milestones." Are CSA-W more likely to obtain a specialty designation because they are more likely to be accepted into a program? If so, this needs to be clearly stated because "after controlling for other significant predictors, CSA-W were more likely to obtain a specialty designation" would seemingly contradict that they did not perform better in subsequent milestones.
	On page 9/page 10 of 21, line 19 "younger graduates were or 0.53 times as likely as older graduates" and line 41 "were or 0.65 times" are unclear. Are there missing words?
	In the Interpretation, I would have liked to have had some thoughts as to why younger graduates are less likely than older graduates to pass the MCCQE2 as this is counter-intuitive i.e. would have thought that being closer to training, plus likely having had more recent experience with OSCEs, they would have been more likely to pass the exam.
	You state in the introduction that "This study provides evidence to assess claims and inform policy"; I would have liked to see a fuller discussion of the implications of this study. I would also have appreciated thoughts regarding areas for future research beyond what was mentioned in the abstract. For example, are there reasons CSA do not perform better than non-CSA in subsequent milestones in spite of the fact that they have a better understanding of Canadian culture?
	This paper would benefit from being a bit clearer in a couple of areas, and from a discussion of the implications.
	We have corrected the abstract, edited these sentences, and added a statement about the age-related findings in the interpretation. We have also revised the interpretation to include policy implications and areas for further research.
Reviewer 2	Sten Ardal MA BAH
Institution	Touchstone Institute, Toronto, Ont
General comments (author response in bold)	The paper suggests we need to better understand why non-CSA do less well obtaining residency. Finding little difference once in PGME programs raises a challenging question "would those IMGs who were screened out perform as well as CSAs?" It would be interested to dig into this question.
	Unfortunately, it is not possible to research this question since there is no way to provide the intervention (PGME) to IMG who did not enter a PGME program.
Reviewer 3	Dr. Pishoy Gouda MB BCh
Institution	Division of Cardiology, University of Alberta, Leduc, Alta.
General comments (author response in bold)	Matthews et al report an interesting retrospective cohort study describing the achievement of licensure milestones of international medical graduates in Canada. Briefly they describe two cohorts to describe two outcomes
	1. 6,925 IMGs who passed the MCCQE1 between 2005-2010 to assess rates of obtaining a PGME position
	- Recent graduate are 1.77 more likely to obtain PGME positions
	- Canadians studying abroad (CSA) were more likely to obtain PGME positions, those in western schools more so than non western skills. 4.69x vs 1.49x respectively.
	2. 1,215 IMGs who entered a PGME position that would allow them (in theory) to finish full licensure requirements before 2011 (the end of their database)
	- Majority passed MCCQE2 (92.8%), and obtained a speciality designation (73.2%)
	- Younger graduates were less likely to pass MCCQE2 (0.53x as likely), fellows were even less (0.05x as likely)
	- Speciality designations were least awarded in non CSA, non western graduates.
	Overall
	- Interesting paper that describes a large cohort of IMGs going through the process of obtaining full licensure in Canada. A considerable feat, considering the length of time in takes to proceed from the first milestone to the last
	- However, the data may be out-dated as the database ends in 2011. In my opinion, and as the authors state, the demographics of IMGs applying to Canadian PGME programs is changing considerably with an exponential rise in CSA applicants. I will concede however that it is may be too early to be to see a change in outcomes as this is a relatively new change (in the past 5 years)
	Title
	- I would appreciate the type of study to be included in the title (retrospective cohort)
	Abstract
	- Not clear in the results section that there were two cohorts, should be more clearly described.
	- I think a brief description of both cohorts would be helpful, specifically # in Groups 1-4 in each.
	Methodology
	- Appropriate database was used, to capture that majority of IMGs applying to PGME programs. I am just curious why 2011 is the last year that data was available.
	- I am also curious if an applicant has written the MCCQE2 before entering a PGME program in Canada, if their pass status would be recorded.

- In my experience, many non CSA non western applicants pass the MCCQE2 several years before they obtain a PGME position, possibly underestimating their pass rate.

- At first glance statistical analysis plan appears appropriate, but is beyond my expertise.

- Would be interested in seeing what counts as "skills assessment program". It should also be considered that many programs require passing these programs, before admission to a PGME program, such as the AIMG program in Alberta. Does this include the NAC OSCE which is now mandatory for all IMGs in all programs? As NAC OSCE was not mandatory <2011, and is now, likely this outcome will not be useful in more current datasets.

Results

- No comments

Interpretation

- You state that CSAs perform better in obtain PGME positions, but not subsequent milestones. I think a more appropriate statement is that they were equal to non-CSAs in subsequent milestones. Either way, I had to do some data extrapolation from the tables to demonstrate this. Either add the numbers in the text, or make it clearer in the tables to support this. Group 1 pass QE2 180/192, Group 4 pass QE2 561/611. Group 1 obtain speciality designation 158/194 vs Group 4 429/611. For the later, I do see a difference in achieving specialty designation. Although, I am unsure of the statistical significance as the p value corresponds to differences between all 4 groups.

- You state a considerable proportion of IMG did not pass the QE2, I find that a bold statement considering the the n value is 52, out of 1,123. I would be fairly certain that the vast majority may have passed the MCCQE2 before your database started, however I have no data to support this claim and only know this through working with the IMG community. This is much more common in the non CSA non western cohort.

- You make a casual inference that there is no correlation between skills assessment program and lack of long term success, that you evaluate by licensure. Considering that licensure is not mandatory to practice, I am not sure if that is a fair assumption from the data.

Conclusions

- The study highlighted some useful and rich data, however there is a paucity of information about what to do with this data. Does this data, support any policy change? Is there other data, that was not collected that would be more useful and an area of future research?

References

- Appropriate

Tables

- Appropriate

Conflicts of interests: As a matter of disclosure, my comments should take into consideration that I myself am a Western CSA in a **PGME program. However, I do believe that my critiques were not influenced by that fact.**
We have revised the title, revised the abstract to identify the two cohorts in as much detail as word count would allow, and added a statement on why 2011 was the last year of data. In the limitations, we have included recent statistics that suggest that our data and findings remain relevant. We have also added comments about the NAC OSCE in the interpretation and noted, as did the reviewer, that some programs require IMG to pass skills assessment programs as an admission criterion. We have also reviewed the manuscript to state that all groups of IMG have similar (or no different) performance in passing the QE2 or obtaining specialty designations. We also specify that participation in the programs do not correlate to longer term success in the post-graduate program. We have added the need to identify and evaluate other selection criteria, such as the NAC OSCE. Lastly, we have revised the interpretation to include policy implications and areas for further research.

The pre-requisite for writing the MCCQE2 (and specialty examinations) is a year of "recognized clinical experience" (such as residency or fellowship training). IMG who qualified to write the exam would not need to do a residency (and could proceed directly to practice). As described in the original methods, we restricted our second cohort (used for examining the QE2) to only IMG who had never been enrolled in a post-graduate program in Canada and verified that QE2 pass dates were after the start of the post-graduate training program. The proportion who do not pass the MCCQE2 are also consistent with data from the Medical Council of Canada.