Author's response to reviews

Title: The need for national medical licensing examination in Saudi Arabia

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Version: 2 Date: 26 September 2008

Author's response to reviews: see over
Dear Editor,

Re: The need for national medical licensing examination in Saudi Arabia (MS: 4714605152119598)

Please find attached the updated version of our manuscript titled “The need for national medical licensing examination in Saudi Arabia”.

We thank the reviewers for their time and their thoughtful comments. We have tried to address the points raised by the reviewers as much as possible. Please find below a point-by-point response to the concerns raised. The reviewers’ comments are in Italic Bold font. Our reply is in unformatted font.

Reviewer 2: W. Dale D. Dauphinee
i. This is an extremely well written and clear article that presents a novel set of arguments for an innovation physician licensure examination in Saudi Arabia based on cutting edge approaches and backed by citation for several relevant international experiences.

ii. It would of broad interest to any scientist involved in medical education. It is well argued, well organized and well referenced.

iii. The arguments are comprehensive and use principles and frameworks in keeping with best practices in this field.

iv. I have surprisingly little to add to a job well done. I enjoyed it and thought that their points of view were fair and they considered both advantages and disadvantages - with logical and valid counter arguments on the possible points of resistance by those who might be opposed. In particular, it was easy to read and the reasoning was very clear and flowed logically.

Response to points i-iv:
We are delighted and humbled with these words of praise by a reviewer with a caliber of Dr. Dauphinee.

v. My one possible recommendation would be to consider one revision. My reason is that any licensing examination needs an accompanying legal framework and structure through which the process can be administered and executed and from a candidate's point of view, challenged in the case of an appeal. It is implied by the authors' references to the GMC in the UK or the USMLE in the USA or the MCC in Canada. It would assist naïve readers and non-professionals if this point were made explicitly.

Response to pint v:
We totally agree with the point raised by the reviewer. We have indicated (please see page 14 of the manuscript) a general format to the way we thought this process might be carried out under the supervision of the licensing body (such as the Saudi Commission for Health Specialties - SCHS). The details of the process were beyond the scope of the current article.
Reviewer 1: Bogda Koczwara

1. Does the debate present a novel argument, or a novel insight into existing work?
   As authors of the paper indicate, they are not presenting a novel concept but rather summarizing the existing arguments that have been well covered elsewhere. The novel aspect of it is the specific relevance to Saudi Arabia.

2. Does the debate address an important problem of interest to a broad biomedical audience?
   The issue of standards of education and merits of licensing exam is an important issue for educators although as stated in 1 – the authors do not contribute a lot of new insights.

Response to points 1 & 2:
   We are delighted that Dr. Koczwara appreciated our upfront declaration that we were not presenting new empirical evidence as we stated in page 6: “In this paper, we are not presenting new empirical evidence. In fact, we are summarizing the available debates on the need of a national licensing medical examination.” However, we brought the existing argument into a practical application in the case of medical education in Saudi Arabia. We think that many other educational programs in different countries will benefit from such a debate. In addition, we are not aware of any report that reviewed the literature of licensing examination as extensive as our manuscript.

3. Is the piece well argued and referenced?
   Given that this issue has been covered before, the key arguments are well presented but the argument is too lengthy, there are many aspects of the paper that could be edited out as they really represent educational background rather than contributing to the argument (for example detailed description of the types of curricula).

Response to point 3:
   As requested by the reviewer to shorten the manuscript, we have made the following deletions:
   1. Page 6, we deleted the sentences “at King Abdulaziz University in Jeddah, 1975; King Faisal University in Dammam, 1975; King Khalid University in Abha, 1982; and Umm Al Qura University in Makkah, 1996)”
   2. Page 7, we deleted the sentence “As a matter of fact, students enrolled in these medical schools are supported financially by the government with an annual allowance equivalent to around $3,000 US.”
   3. Page 8, we deleted the sentences “Furthermore, the methods of assessment of final year students are variable among different departments within the same medical school. We are not aware of any medical school that uses Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedural Skills, or 360-degree evaluation for the assessment of its medical students on a regular basis or standardized fashion.”
   4. Page 10, we deleted the following section: “For example, the Royal College of Physicians and Surgeons of Canada published the “CanMEDS Physician Competency Framework” to guide the curriculum reform in undergraduate and postgraduate medical education in Canada [21]. Similarly, the Accreditation
Council for Graduate Medical Education in the United States published the “Core Competencies” that must be incorporated into any graduate medical education curriculum [22]. Furthermore, the American Association of Medical Colleges published the “Medical School Objectives Project” to reach consensus among medical schools on the minimal acceptable competencies the graduating students should possess [23]. Unlike the US and Canada, medical students in UK do not sit for a medical licensing examination. However, the General Medical Council published the “Tomorrow’s Doctors” and “Good Medical Practice” to guide medical schools and medical students to the required competencies of a practicing physician in the UK [24]. Similarly, the Institute for International Medical Education published the “global minimum essential requirements in medical education” to assist in the establishment of standards for graduating medical students across the world [25](Table 2). We replaced the section with the sentence: “Table 2 summarizes examples of national and international competencies of physicians.”

5. Page 11, we deleted the following section: ” For assessment of knowledge and competencies, the available methods of assessment include: MCQs, short answer questions, structured short answer questions, modified essay questions, extended matching items, structured oral examination/viva, and structured essays. For assessment of performance, the available methods include: OSCE, and the use of long and short cases. For the assessment of actions, there are many available methods of assessment including, Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedural Skills, Clinical Work Sampling, 360-degree evaluation, logbooks and portfolios”. We replaced the section with the sentence: “Figure 2 summarizes the appropriate methods for each level of assessment according to Miller’s framework.” We added text boxes in Figure 2 with the appropriate methods of assessment.

We assumed the educator role in writing this manuscript. It does not only address the medical community in Saudi Arabia, but also similar communities in other developing countries in the state of improving their medical education system. Hence, we strongly believe that supplementing the manuscript with educational background (such as the detailed description of the types of curricula) would assist people understand the argument and relate to their local circumstances.

4. Has the author used logical arguments and sound reasoning?
The arguments are well presented but rather biased into supporting one solution which may be worthwhile but may not be the only solution to the problem. The other title for this paper could be “insufficient standards of medical education in Saudi Arabia” an issue that clearly should be addressed. Given that authors do not propose strategies on how to improve curricular standards or standards of delivery, approaching the problem at the exit alone may prove to be an inefficient strategy – eventually assessment will drive the learning but this will be delayed and inefficient unless other aspects are addressed as well. The authors’ focus on licensing exam presents a rather narrow view where the arguments are set to support the agreed solution rather than carefully evaluate the problem and alternative solutions.

The paper invites a debate but it can be argued that not many people who may be stakeholders to the debate may come across the paper in this journal – I am curious
why the paper is not published in the Saudi Arabian journal where it may be more accessible to relevant readers. The authors also do not offer the way forward. But if they themselves cannot implement the solution they are proposing how effective is the solution? Maybe if they thought of intermediate steps to improve standards, these would be easier to achieve and would start the process?

Response to point 4:
The arguments are well presented but rather biased into supporting one solution which may be worthwhile but may not be the only solution to the problem.

We were surprised by the reviewer’s comment that our arguments were biased into supporting one solution and hinting that we proposed that it is the only solution. We have dedicated around 4 pages for the driving forces for the licensing examination and around 3 pages for the hindering forces for the licensing examination. While presenting the strengths of the licensing examination in slightly longer than a page of the manuscript, we elaborated on the weaknesses of the licensing examination in two pages. Furthermore, we recommended alternatives to the national examination at the end of the manuscript in two pages. We clearly compared the strengths and weaknesses side by side in Table 4 to provide a well rounded argument and hence avoid any perceived bias.

We would like to quote some scripts of the manuscript that highlighted our unbiased opinion towards the national examination:

1. Page 16: “Although a national medical licensing examination is not the only safeguard to ensure high quality of curriculum, instruction and learning outcomes, it is a tool with a tangible and standard measurable outcome that can be used to identify areas in need for potential improvement in the curriculum and instructional methods used in all medical schools.”

2. Page 24: “Fifth, although we do not necessarily propose the exclusive use of this examination as a method of assessing students for readiness to practice, since there are other aspects of competencies (such as professionalism) that cannot be assessed thoroughly by such an examination. The implementation of a standardized national exam (which potentially substitutes for the final exams in medical schools) will decrease the time constrains on the faculty (teachers and educators) thus allowing more time for ongoing global assessment of the learners and the exploration of new methods to rectify the identified weaknesses in medical curricula.

3. Page 26: “Third, some authors argue that a one time assessment is not as comprehensive as ongoing assessments of medical schools [37]. We totally agree with this opinion. We are not proposing an exclusive national exam while discounting other important or relevant methods of assessment used by individual medical schools. Instead, we propose the use of the national exam to ensure that minimal competencies are met for all graduating medical students. This can be supplemented by any number of other methods of ongoing assessments used by the medical schools.”

4. Page 28: “Hence, an alternative to a national medical licensing examination is the establishment of a national center for assessing medical competencies. The function of such a center will be to provide training, advice and technical support in the planning, conduct and analysis of different methods of medical education assessment conducted by local medical schools. Additionally, the center may host a shared bank of assessment methods that can be used by any medical school in the region.”
The other title for this paper could be “insufficient standards of medical education in Saudi Arabia” an issue that clearly should be addressed.

We appreciate the suggestion of changing the title. However, we believe that the current title fulfills the aim and the content of the manuscript. In addition, we believe that the suggested title, which may have some truth in it, is too direct and potentially infuriating to the medical community in Saudi Arabia and may trigger an unpleasant opposing reaction.

Given that authors do not propose strategies on how to improve curricular standards or standards of delivery, approaching the problem at the exit alone may prove to be an inefficient strategy – eventually assessment will drive the learning but this will be delayed and inefficient unless other aspects are addressed as well. The authors’ focus on licensing exam presents a rather narrow view where the arguments are set to support the agreed solution rather than carefully evaluate the problem and alternative solutions.

We agree, in part, with the reviewer that we did not propose specific strategies on how to improve curricular standards or standards of delivery. This is one of the responsibilities of the National Commission for Academic Accreditation and Assessment (NCAAA) in Saudi Arabia. It has recently developed an accreditation system for the country’s medical schools that encompasses curricular and delivery concerns (as mentioned in the section on alternatives to the national licensing examination, page 27). Hence, we believe that we would be re-inventing the wheel if we proposed what was done by the NCAAA. On the other hand, addressing the assessment domain will help benchmarking the accreditation process indirectly by focusing on the medical schools curriculum outcomes.

Once more, we were surprised by the reviewer’s comments that our arguments were set to support the licensing examination rather than carefully evaluating the problem and alternative solutions. As we indicated earlier (first section in reply to point 4), we dedicated around 5 pages to the driving forces and strengths of the examination and roughly similar number of pages to the hindering forces and weaknesses of the examination. Furthermore, we concluded our article by elaborating on the alternatives in two pages.

The paper invites a debate but it can be argued that not many people who may be stakeholders to the debate may come across the paper in this journal – I am curious why the paper is not published in the Saudi Arabian journal where it may be more accessible to relevant readers.

As we indicated in our initial cover letter to the Editor, we decided to submit this debate to BMC Medical Education, despite the national flavor of the discussion for multiple reasons, including: First, the fact that Saudi Arabia does not have a national medical licensing exam is shared by many countries across the globe, and hence this debate can be extrapolated to other countries considering this licensure process as a mandatory requirement to practice medicine. Second, the fact that The Journal is an open access journal will increase the readability of the article and hence its impact on stimulating discussions and future direction of medical education in Saudi Arabia and the region. In this letter, we add another reason. Saudi Arabia plays a pivotal role in the regional healthcare system, especially with the establishment of many new medical schools and significant increase in governmental interest in issues related to medical education. What happens in Saudi Arabia may influence the region either directly or indirectly. For example, the General Aptitude Exam for high school graduates, which was
introduced in Saudi Arabia four years ago, is now used in many Gulf universities and institutions. Another example is the fact that the training requirements for post graduate medical education enforced by the Saudi Commission for Health Specialties (SCHS) are now used by countries like Egypt and the Arab Board for Health Specialties.

The authors also do not offer the way forward. But if they themselves cannot implement the solution they are proposing how effective is the solution? Maybe if they thought of intermediate steps to improve standards, these would be easier to achieve and would start the process?

We acknowledge that we cannot implement, at least currently, the solution we are proposing. However, the authors contributing to the article come from various medical schools around the country. Some of them have a direct role in the licensing and legislative medical bodies. Therefore, we anticipate serious discussions in the medical community in Saudi Arabia around the topic. We believe that this debate will be a key publication in the Saudi medical education literature and will be very helpful in the decision making process.

As far as the intermediate steps to improve standards, we refer the reviewer to our response regarding the recent establishment of National Commission for Academic Accrediation and Assessment (NCAAA).

5. Is the piece written well enough for publication?  
The language and style are adequate but the paper is too long. The level of detail may be unnecessary to experienced educators for whom the background information is familiar and confusing to non-educator clinicians who may lose track of the argument. The paper would be much more effective if it were half the size. Authors need to avoid abbreviation as there are many of them. Please note it is not Peter Ducker but Drucker and the quote attribution has been debated.

Response to point 5:  
The language and style are adequate but the paper is too long. The level of detail may be unnecessary to experienced educators for whom the background information is familiar and confusing to non-educator clinicians who may lose track of the argument. The paper would be much more effective if it were half the size.

We have tried our best to shorten the manuscript by deleting some sections as indicted in our response to point 3. As we indicated in response to point 3, we totally agree with the reviewer regarding the length of the manuscript. However, we wrote this manuscript to address the general medical community in Saudi Arabia and in countries with similar situation of the absence of a licensing examination. Hence, we strongly believe that supplementing the manuscript with educational background information is of paramount importance to the argument. We used a logical stepwise approach to address the problem with clear subtitles and subheadings to guide the non-educator clinicians to keep them on track of the argument.

Authors need to avoid abbreviation as there are many of them.

We thank the reviewer for noticing our overuse of abbreviations. We agree with the reviewer. Most of the abbreviations were deleted and only few were kept as follows:

Changes made:
1. The abbreviation “MCCQE” was deleted from page 5 & 20. We replaced “MCCQE” with the phrase “Medical Council of Canada Qualifying Examination”.

2. The abbreviation “USMLE” was deleted from page 6 & 20. We replaced “USMLE” with the phrase “United States Medical Licensing Examination”.

3. The abbreviation “NBME” was deleted from page 6, 14, and 20. Instead, the phrase “National Board of Medical Examiners” was used.

4. The abbreviation “GMC” was deleted from page 6, 20, and 21. Instead, the phrase “General Medical Council” was used.

5. The abbreviation “UK” first appeared in page 6 in the manuscript. We added the phrase “United Kingdom” before “UK”.

6. The abbreviation “SAQs” was deleted from page 7 and 14. We replaced “SAQs” with the phrase “short answer questions”.

7. The abbreviation “MEQ” was deleted from page 7. Instead, the phrase “modified essay questions” was used.

8. The abbreviation “OSPE” was deleted from page 8.

9. The abbreviation “DOPS” was deleted from page 8 and 11.

10. The abbreviation “ACGME” was deleted from page 10.

11. The abbreviation “US” was deleted from page 10. The abbreviation “US” was inserted after the phrase “United States” first appeared in page 6.

12. The abbreviation “AAMC” was deleted from page 10.

13. The abbreviation “MSOP” was deleted from page 10.

14. The abbreviation “IIME” was deleted from page 10.

15. The abbreviation “GMER” was deleted from page 10.

16. The abbreviation “SSAQ” was deleted from page 11.

17. The abbreviation “EMI” was deleted from page 11.

18. The abbreviation “CWS” was deleted from page 11.

19. The abbreviation “MCC” was deleted from page 14 and 20. We used “Medical Council of Canada” instead of “MCC”.

20. The abbreviation “MRCGP” was deleted from page 16.

21. The abbreviation “AMC” was deleted from page 18.

22. The abbreviation “NCAAA” was deleted twice from page 27. We replaced the second “NCAAA” with the phrase “The commission”.

**No changes with abbreviations and our rationale:**

1. The abbreviation “MCQs” was kept as it is because it was repeated 12 times in the manuscript. The phrase “multiple-choice questions” was removed from page 8.

2. The abbreviation “OSCE” was kept as it is because it was repeated 11 times in the manuscript. The phrase “objective structured clinical examination” was deleted in page 11 and replaced with “OSCE”.

3. The abbreviation “SCHS” was kept as it is because it was repeated 10 times in the manuscript. SCHS stands for Saudi Commission for Health Specialties (as indicated in the manuscript).

4. The abbreviation “PLAB” was kept because the test is more commonly known by its abbreviated name compared to its spelled out name “Professional and Linguistic Assessments Board Test”.

5. The abbreviation “Mini-CEX” was kept as it is because it is more commonly known by this abbreviation than its spelled out name “Mini Clinical Evaluation Exercise”. Hence, we kept the two versions.
Please note it is not Peter Ducker but Drucker and the quote attribution has been debated.

We thank the reviewer for noticing this error and controversy. We have decided to delete the whole sentence, page 22, because of the debate around the quote attribution.

We look forward to hearing your favorable decision.

Regards,

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