**The need for homogeneity among Canadian clerkship examinations**

**Position Paper**

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**Background**

The National Board of Medical Examiners (NBME) develops Subject Examinations to assess students during their clerkship rotations of medical school. Used by American and international medical schools, many studies have found that the NBME subject examinations reflect performance on the USMLE Step 2 (1-5). From a Canadian perspective, many schools also use these subject examinations to assess students after individual clerkship rotations. A study based out of the University of Manitoba found that between the MCAT, pre-medical school GPA, and the NBME subject examinations, the NBME subject examinations most accurately reflected a student’s performance on the MCCQE-1(6). However, in Canada, there is inconsistency across the country with respect to which subject examinations are being used at which schools (Table 1), and from an educational perspective, standardization is key(7). Anecdotally, there appears to be a trend towards removing the use of the NBME exams in Canadian medical schools. For example, the University of Saskatchewan will be phasing out the NBMEs in the next couple of years and Queen’s University has recently removed the use of the pediatrics and obstetrics & gynecology subject examinations. In addition, UBC, UOttawa, NOSM, and Western do not currently use NBMEs for their clerkship exams.

A survey sent by the Authors of this position paper to all current Canadian Medical Students and Recent Graduates (Tables 2-5) found that the advantage of the NBMEs is their standardardized nature and the ability to prepare students for the Medical Council of Canada licensing exams (the MCCQE-1 and MCCQE-2), thereby subjectively affirming the results of the aforementioned University of Manitoba study.(6) However, the content of exams appears to not correlate well with what students experience clinically which has also been suggested by the literature.(8) This survey was biased however due to the large number of responses from current University of Saskatchewan students in particular. Study resources are expensive and the exam itself is American-focused. The survey results are limited in their generalizability due to a small sample size of 45 students, of which 25 were from the University of Saskatchewan, and 2 recent graduates. Overall, the results do suggest that an alternative to the NBME, such as a Canadian set of standardized exams is required, yet there are also hidden barriers to developing this.

Currently the NBMEs are not too resource intensive, in that they are already produced for American medical students. The idea of a set of national Canadian subject examinations has been floated to avoid the content on the NBMEs that is solely applicable to American medicine (e.g. several screening guidelines and different suggestions with respect to testing). However, such a Canadian subject examination would likely be more resource intensive than using NBME subject examinations. Students would also likely still need to use American preparatory resources, such as UWorld, CaseFiles, and Pre-Test. Creating Canadian-specific preparatory resources would simply not be cost-effective for the companies that have created these preparatory resources for the NBME subject examinations.

Here, we consider the previously described survey, studies, and the trend and inconsistency across Canadian medical schools to make recommendations regarding NBME subject examination usage in Canada.

**CFMS Stance**

1. The CFMS has identified that there is a significant amount of heterogeneity among clerkship examination structures, and this raises concerns in light of efforts to promote consistency across training programs.
2. The CFMS recognizes that standardized exams across the nation are needed.

**Recommendations**

1. **The CFMS recommends that clerkship examinations have a consistent structure across Canadian medical schools.**

Rationale: Through the CaRMS process, Canadian medical students match to residency programs across the country. Moreover, all Canadian students write a the same licensing exam at the end of medical school. Thus, it would be appropriate for a similar approach to clerkship exams to be taken across Canadian medical schools to best prepare students for the Canadian licensing exam.

1. **The CFMS suggests that clerkship examinations be clinically relevant. Specifically, the content of the exam reflecting patient demographics, conditions, and decision-making that is relevant to the clinical environments we work in.**

Rationale: Current examinations(the NBMEs) have been highlighted as not clinically relevant by our survey of Canadian medical students. Given that medicine is a clinical degree, we feel that the examinations used ought to reflect this. For example, the Internal Medicine NBME has a 55-65% ambulatory focus with a patient population significantly younger than those we interact with on Internal Medicine rotations. This dissonance leads to the lack of utility of the examination content to the wards and clinics.

1. **The CFMS would support either the development of a Canadian set of standardized exams to accomplish Recommendations 1 & 2 listed above.**

Rationale: Canadian exams would be ideal and help achieve the above recommendations, but we do acknowledge that cost and other barriers, such as the development of new preparatory resources may limit such an effort.

Table 1: Indication of which NBME exams are used at which schools

*\*Pass marks are in brackets if they were identified*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Internal Medicine | Surgery | Pediatrics | Psychiatry | Family Medicine | Obstetrics & Gynecology |
| University of British Columbia |  |  |  |  |  |  |
| Queen’s University |  |  |  |  |  |  |
| University of Calgary |  |  |  |  |  |  |
| University of Alberta |  |  |  |  |  |  |
| University of Saskatchewan |  |  |  |  |  |  |
| University of Manitoba |  |  |  |  |  |  |
| Northern Ontario School of Medicine |  |  |  |  |  |  |
| University of Western Ontario |  |  |  |  |  |  |
| University of Toronto |  |  |  |  |  |  |
| McMaster University |  |  |  |  |  |  |
| University of Ottawa |  |  |  |  |  |  |
| McGill University |  |  |  |  |  |  |
| Moncton - Universite de Sherbrooke |  |  |  |  |  |  |
| Dalhousie University |  |  |  |  |  |  |
| Memorial University of Newfoundland |  |  |  |  |  |  |

In-House Exam

NBME

**Legend**

**Table 2: Graduation Year of Survey Respondents**

|  |  |
| --- | --- |
| 2015 | 1 |
| 2016 | 3 |
| 2017 | 2 |
| 2018 | 0 |
| 2019 | 8 |
| 2020 | 29 |
| 2021 | 4 |
| 2022 | 0 |

**Table 3: Medical School of Survey Respondents**

|  |  |
| --- | --- |
| UBC | 0 |
| U of Alberta | 2 |
| U of Calgary | 1 |
| U of Saskatchewan | 25 |
| U of Manitoba | 1 |
| NOSM | 0 |
| Western | 1 |
| McMaster | 1 |
| U of Toronto | 0 |
| U of Ottawa | 0 |
| Queen's | 5 |
| McGill | 0 |
| Laval | 0 |
| Sherbrooke | 0 |
| U of Montréal | 0 |
| Dalhousie | 1 |
| Memorial University of Newfoundland | 9 |

**Table 4: Survey Responses to “I believe the NBMEs are …”**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree | N/A |
| Help(ed) me prepare for licencing exams | 8 | 10 | 7 | 2 | 2 | 18 |
| Help(ed) encourage me to study | 19 | 19 | 2 | 1 | 2 | 4 |
| Help(ed) me prepare for clinical activities | 3 | 14 | 8 | 17 | 1 | 4 |
| Are too American focused | 15 | 19 | 3 | 5 | 2 | 3 |
| Are preferable to local school-developed examinations | 6 | 4 | 11 | 12 | 9 | 5 |
| Would be better suited if adapted to a Canadian setting | 15 | 19 | 5 | 4 | 0 | 4 |

**Table 5: Survey Responses to “For the NBMEs …”**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Much too difficult | Difficult | Adequate | Easy | Much too easy | N/A |
| The difficulty is: | 5 | 27 | 10 | 0 | 0 | 5 |
| Finding study aids/resources is: | 1 | 10 | 18 | 11 | 1 | 6 |
| Studying is: | 2 | 21 | 17 | 2 | 0 | 4 |

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