Post-Graduate Match Location Bias

Past diminished physician supply combined with increased demands on the healthcare system has led to underserved populations within certain healthcare sectors and geographical parts of Canada. This is particularly true for primary care services in rural and northern areas [1]. A wide variety of factors have led some provinces to face greater challenges than others to recruit and retain physicians to serve those populations.

A logical strategy used by governments to increase their physician workforce has been to increase the number of local trainees. Provincial governments have increasingly invested in the education of future physicians in an effort to increase the locally trained physician workforce leading to expansion of both undergraduate and post-graduate programs in all provinces. First-year undergraduate classes have risen from 1,763 in 2000 to 2,829 in 2010 [2]. Some schools, including McMaster University and the University of British Columbia have more than doubled the size of their undergraduate entry classes in that period. Prior to the turn of the millennium, these numbers had remained relatively stable between 1,600 and 1,900 for decades. These investments have indeed increased the number of graduating Canadian physicians with physician growth rates outpacing the Canadian population growth three-fold between 2007-2011 [3], but have also led to increasing strains on the capacity of academic learning environments. Still, many provinces are dissatisfied with the return on their investment in terms of physician recruitment and retention to underserved areas.

Facing increasing public pressure, a number of further solutions to address this problem have been proposed by governments and medical schools nationwide including limiting the admission of out-of-province students to undergraduate medical education (UGME) programs, government return of service grant programs, mandatory return-of-service agreements, distributed medical education and the acceptance of International Medical Graduates into post-graduate residency training programs. Limiting access to UGME programs to local residents is a long-used strategy of many institutions having the expectation that local residents are more likely to remain in province for further training and practice following graduation. Most Canadian medical schools have developed UGME admissions processes to increase enrolment of students from the school’s province (4-14). For instance, the University of Manitoba limits selection of out-of-province applicants to no higher than 5% of the incoming undergraduate class (8). Other examples include McMaster University, which grant 90% of undergraduate admission interviews to Ontario residents (11), and Dalhousie University, which limits non-maritime admission to nine out of 108 seats (13). The Northern Ontario School of Medicine has committed to increasing the number of physicians in rural Ontario and reflects this goal with its admissions process; 94% of students in the 2012 class originate from northern Ontario (10).
The medical education community has gradually seen this same strategy applied at the post-graduate level, albeit less formally. Undergraduate medical students find it far more difficult to visit certain institutions for electives compared to others or their own. For instance, there is no cost associated with elective applications to one’s own institution, while costs to apply elsewhere are increasing. There are blackout dates at most institutions when only in-school electives requests are accepted. Further, the application requirements for another institution’s elective might include additional vaccination/serology requirements, registration with that province’s College of Physicians and Surgeons, and proof of malpractice insurance while an in-school request would require nothing beyond what is required for annual registration.

Furthermore, some institutions have a higher retention of undergrads than others through the Canadian Residency Matching Service (CaRMS) process. In the first iteration of match years 2010-12, Universite Laval matched local graduates to an average of 75.6% of total Canadian medical graduate (CMG) spots [15]. Outside of Quebec, University of Manitoba was highest with an average of 68.7% of CMGs matched being local graduates and 58% of all Manitoba graduates who successfully matched, doing so locally in that period. In contrast, only 24.6% of the students selected for the Queen’s University residency programs in this period were previously Queen’s University UGME students. These figures compare to national averages of 50.5% and 48.5%, respectively. It is not clear if this is the result of PGME programs favouring their own local students, of local students favouring their own program, or what role the faculties of PGME might play in the process.

A 2011 CaRMS and Canadian Post M.D. Education Registry (CAPER) data review by the Office of Rural and Northern Health in Manitoba suggested that the physicians who were most likely to stay in Manitoba were those who had completed both their UGME and PGME training in Manitoba (16). In the fall of 2012, the University of Manitoba’s Faculty of Medicine used this rationale to propose a target retention rate of 70% of University of Manitoba MD graduates into their post-graduate residency programs. It has been proposed that this will be accomplished with the adoption of an additional weighting criterion to CaRMS applications of students from Manitoba or graduating from the University of Manitoba to ensure that they are given a competitive advantage over students from other provinces (17). In addition, all Manitoba applicants will be granted an interview to any program to which they apply. This policy effectively removes the autonomy of a program to interview and rank applicants as they may choose. Potentially, this policy formalizes the process of favouring local graduate that is already done at other schools informally. Post-graduate faculties reserve the right to re-rank residency program lists for CaRMS in the interest of retaining their own students.

The Canadian Federation of Medical Students (CFMS) would like to express the following concerns about policies targeting the retention of students into PGME.
**Reciprocity** - We are concerned that if multiple institutions adopt similar retention policies, it will harm the ability of students to move between institutions that are not of their home province. This directly undermines the intention of the CaRMS process that was created by students to promote the ability for students to move laterally between institutions should they be desired by the program to which they are applying. It may also lead to the de-selection of students from institutions with retention policies by other institutions that do not adopt such policies.

**Health Human Resource planning** - This policy is being applied to all post-graduate residency programs, even programs with very poor job prospects locally. There would be no benefit to the province in terms of physician to retain a student through post-graduate training if they are unable to offer employment following completion of that training.

**Academic Isolation** – Clinical and research teams benefit from cross-pollination with other institutions through the introduction of expertise and techniques learned. We are concerned that this policy will eventually lead to an academic environment that lacks influence from other institutions; that physicians who are trained through their undergraduate and postgraduate studies at the same institution where they are employed would be unable to provide a new approach in the way that someone trained elsewhere could.

**Decreased program value** – Residents of any given program are a key component to the quality and value by which that program is judged. If an institution earns the reputation of selecting their candidates internally, it may discourage high quality candidates from applying to that program. Furthermore, student retention policies could lead to high quality or otherwise well-suited candidates being de-selected from a program in favor of a local candidate.

**Poor evidence** - There is no data to suggest that an arbitrary cut-off (eg. the 70% target proposed at the University of Manitoba) will accomplish any particular goal of physician recruitment. Retaining a particular percentage of undergraduate students through residency may or may not lead to an increase in physician retention.

**Not selecting for excellence** - We believe that programs should be focused on the excellence of candidates, not the location of their undergraduate studies at a Canadian accredited institution. Furthermore, we are concerned that these policies will breed a level of complacency among undergraduate students who may assume that they do not have to strive to improve themselves if their candidacy for residency is protected by their home institution.

The CFMS recognizes the issues with respect to physician recruitment and retention and have been actively involved in lobbying for strategies that students believe will work toward a long-term solution and respect the rights of students, such as Distributed Medical Education and improved Health Human Resource Planning. We recognize that the student retention strategies pose some benefit to students who
wish to gain entry into a local program, but are equally concerned about the possible ramifications for those residency programs or for students who wish to leave the institution where they completed their medical degree. In light of the above concerns, the CFMS recommends the following:

- That these policies be applied only to programs that train residents to become physicians who may serve an underserved population and who may gain employment at the completion of their studies, such as primary care.
- That Faculties of Medical Education improve the competitiveness of their students as candidates for residency programs they desire through emphasis on interview/application skills, professional development and clinical training.
- That governments and medical schools improve the attractiveness of their health care programs and institutions as excellent places to train and work in order to better recruit and retain future trainees and physicians.
- That governments and medical schools improve their health human resource planning strategies to ensure that they are appropriately training physicians to appropriately serve the population of their province.

*Terry Colbourne, CFMS Western Regional Representative, University of Manitoba
Thomas McLaughlin, CFMS VP Advocacy, University of Toronto
Peter Bettle, CFMS Atlantic Regional Representative, Dalhousie University
Melanie Bechard, PAC Chair, University of Toronto*
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