APPENDIX 3

BUILDING MOMENTUM FOR CHANGE IN THE POSTGRADUATE MEDICAL TRAINING SYSTEM

(Backgrounder — Strategic Session 3)

Inertia may be defined as "resistance or disinclination to motion, action or change".[1] A reflection on the Canadian postgraduate medical training (post-MD) system over the past two decades or more would suggest that this is an apt descriptor for the following reasons that have been in evidence for some time:

- The size of the post-MD system does not permit sufficient flexibility
- Many Canadian medical graduates (CMGs) and residents do not feel that they receive adequate career counseling and lack information on future practice opportunities
- There is a lack of national coordination in the specialty mix of the post-MD system

The burning platform

One indication of a problem is the growing number of CMGs remaining unmatched after the second iteration of the Resident Year One (R-1) match of the Canadian Resident Matching Service (CaRMS). This has increased from seven CMGs in 2005 to 104 in 2014.[2] A second indication is evidence of what may be a growing gap between the specialty mix of the output of the post-MD system and that of the advertised physician practice opportunities in Canada. In October 2013, the Canadian Medical Association (CMA) compiled a count of all advertised practice opportunities on provincial/territorial government recruitment websites. When the specialty distribution was compared against the 2012 practice entry cohort exiting the post-MD system it was observed that 10% of the practice opportunities were in surgical disciplines, compared with 15% of the practice entry cohort. This exercise was repeated again in October 2014, and a wider gap was observed, with surgical disciplines accounting for 8% of the practice opportunities versus 16% of the 2013 practice entry cohort.[3] Conversely, in October 2014, family medicine accounted for 55% of practice opportunities versus 41% of the 2013 practice entry cohort. It is noted that not all practice opportunities are advertised. Continued monitoring of these data will be important to establish if what appears to be a misalignment between practice opportunities and post-MD output continues to grow.

Size of the post-MD system

In 1999 the Canadian Medical Forum Task Force on Physician Supply in Canada put forward two key recommendations:

- Increase medical school enrolment to 2000 first-year places by 2000; and
- Increase provincially-funded residency positions from a 1:1 ratio of positions to graduates to a ratio of 1.2:1.[4]

Since 1999 there has been much greater progress on the first of these recommendations than on the second. In fall 2013, first-year medical enrolment was 2,915, 85% higher than 1997 (the trough year after the post-Barer/Stoddart enrolment cut of 10% in 1993).[5] With regard to the second recommendation, in the 2000 CaRMS R-1 match, the ratio of positions offered per CMG was 1.03:1 and in 2014 the ratio had only

improved to 1.07:1.[6,2Table 12] In striking contrast in the U.S., the ratio of post-graduate year one positions in the National Residency Match per U.S. senior (fourth-year medical student) has increased from 1.43:1 to 1.54:1 over the same period.[7]

Over the past decade, the Canadian post-MD system has significantly increased the capacity to accommodate International Medical Graduates (IMGs) (i.e., persons who received a medical degree from other than Canada's 17 medical schools). In 2000, 39 IMGs were matched in CaRMS' second iteration.[6 Table XV] In 2014 there were 346 dedicated positions for IMGs in the first iteration of the R-1 match. Including the results of the second iteration, a total of 476 IMGs (including 27 U.S. grads) were matched in 2014, representing 15% of the total.[2] A growing phenomenon has been the number of Canadian-born students pursuing medical degrees internationally, in places such as Ireland, the Caribbean and Australia. The last published estimate put their numbers at 3,570 in 2010.[8] The most recently published data indicate that the proportion of Canadian-born IMGs among those matched by CaRMS increased from 27% in 2008 to 48% in 2011.[9]

One of the consequences of the constrained post-MD system has been reduced opportunity for re-entry training. In 2014 just 15 prior-year CMGs were matched in the second iteration. Looking ahead one might imagine that the growing trend toward sub-specialization will result in even greater demand for additional post-MD training. In addition to its 29 specialties and 36 sub-specialties, the Royal College of Physicians and Surgeons of Canada (Royal College) has approved 16 diplomas in areas such as aerospace medicine.[10] For its part the College of Family Physicians of Canada (CFPC) recognizes 19 areas of special interest and/or focused practice, such as prison health.[11] At almost 100, these begin to approach the 133 specialties and sub-specialties recognized in the U.S. by the American Board of Medical Specialties (ABMS).[12]

Career counseling and future practice opportunities

Recent surveys of medical students and residents have revealed evidence of shortcomings in preparation for a medical career in terms of likely future practice opportunities. On the 2012 National Physician Survey just over one in three (36%) medical students indicated that they had received no formal career counseling, although just over one on two (52%) indicated that they had formally received information on career path options.[13] Similarly, on the 2013 National Resident Survey, nearly 3 in 10 residents (28%) indicated that they had not received any career counseling, and just 1 in 10 (10%) indicated that they had received formal counseling that was specialty-specific.[14] Most recently a 2014 survey of medical students, conducted by Sharma through the Canadian Federation of Medical Students, found low levels of information provision on some specific topics of what to expect after graduation:

- 35% reported that their medical school offers career counseling and provides enough information about the job market for when they graduate;
- 26% reported that their medical school provides enough information about the income of various specialists; and
- 35% reported that their medical school provides enough information on the lifestyle of various specialists.[15]

While "career advising" is included in the accreditation standards for Canadian medical schools, one should not discount the reports of medical students and residents claiming to receive little or no formal career counseling. There may be significant variability in the type and scope of the counseling that is offered. Moreover, current career counseling services may focus more on individual medical students' and residents' strengths and motivations rather than on future practice opportunities.[16]

Initiatives are underway to develop better information. The Association of Faculties of Medicine of Canada (AFMC) is nearing a launch of *Future MD Canada*, a comprehensive question and answer document that

covers topics including admissions, costs and funding, Canadians studying abroad, earnings and residency and practice.[17]

For its part the CMA has developed 38 specialty profiles in collaboration with Dr. June Harris of Memorial University of Newfoundland and various specialty societies. These contain information on the profile of the discipline, supply trends, demographics, workload, remuneration and training statistics.[18]

In summary, there is an ongoing challenge of producing timely information, packaging it and effectively marketing it to medical students and residents, not to mention the difficulty in measuring and projecting demand for services. A further complicating factor is the long time required to educate and train physicians through specialty and sub-specialty training. This has implications for any adjustment to the size and mix of the education and post-MD system and for the individual career choices that medical students have to make.

National coordination

Canada's medical workforce has always been characterized by a high degree of mobility across all levels of the medical career lifecycle. Unfortunately physician resource planning has occurred at best at the provincial/territorial level. In 1992 the Conference of Deputy Ministers of Health established the National Coordinating Committee on Post-graduate Medical Training (NCCPMT). This was a multi-stakeholder committee comprised of government representatives and those from national medical organizations. NCCPMT was initially charged with coming up with a plan to reduce the post-MD system by 10%, although ultimately this did not occur as the shift to two-year prelicensure took up more post-MD positions than was anticipated. One early accomplishment of the committee was to achieve consensus on the principle that "all graduates of Canadian medical schools have access to postgraduate training in Canada which will lead to a portable licence to practise in all provinces and territories".[19] Other NCCPMT initiatives such as exploring a portable training card met with opposition and were unsuccessful. Once physician shortages began to emerge around 1995, interest in physician resource planning waned, and attention turned to primary care reform.[20]

At the national level, it is fair to say that looking at the big picture of specialty mix has not drilled below the level of seeking to maintain the 50:50 ratio of family physicians to consulting specialists.

Hence it is no surprise that there are some clear examples of how the mix of training positions does not appear to reflect the evolving health needs of Canadians. Geriatric medicine is a clear example. In November 1993 there were a total of 25 post-MD trainees in geriatrics (22 Royal College, 3 CFPC Care of the elderly).[21] Twenty years later, this number had barely more than doubled to 54 (36 Royal College, 18 CFPC).[22] Over the same period, however the number of seniors aged 65+ increased by more than 2 million, rising from 11.4% to 15.3% of the total population by 2013.[23] While the number of geriatricians has more than doubled since 1995, rising from 107 to 261 in 2015,[24,25] at the end of February 2015, there were 61 vacant positions in geriatrics in Quebec alone.[26] Moreover the 65+ population is expected to almost double in size by 2036, adding almost five million seniors.[27]

Another consideration in the allocation of the mix of residency positions is the fact that residents have a dual role as postgraduate trainees and health care providers. This raises the possibility that some smaller programs might wish to maintain training positions for service requirements such as call shifts and assisting with procedures, rather than on population needs and future practice opportunities.

Another element of inertia in post-MD training is the push for continued sub-specialization. In the U.S. there were just 10 specialties that established the ABMS in 1933, doubling to 20 by the 1970s.[28] In Canada

the National Committee on Physician Manpower included reports on 33 specialties and sub-specialties in 1975 – half the number recognized today.[29] Concerns about a loss of generalism given the diversity of the practice scene across Canada have been expressed by disciplines such as general internal medicine. [30] One potential moderating influence for the future may be a shift to a combination of foundational and enhanced training. For example the Task Force on the Future of General Surgery has recommended the redesign of general surgery training through the introduction of enhanced areas of expertise tailored to different practice contexts in addition to foundational training.[31]

There may be grounds for optimism however. In 2012 the AFMC's Future of Medical Education in Canada project completed a component on post-MD education. The first of its 10 recommendations was: #1. Ensure the right mix, distribution and number of physicians to meet societal needs.[32]

In June 2012 the Conference of Deputy Ministers of Health directed the Federal/Provincial/Territorial Committee on the Health Workforce to examine ways of advancing this recommendation. The committee undertook a survey of the jurisdictions to identify the planning tools in use. This survey resulted in more than one dozen specialty areas being identified as being in greater need. The top three were:

- Psychiatry
- General internal medicine
- Geriatric medicine

In addition, three specialty areas where jurisdictions indicated a lesser need included:

- Orthopaedic surgery
- Thoracic surgery
- Cardiac Surgery[33]

Subsequently the committee provided funding for a Physician Resource Planning Task Force (PRPTF) that includes medical stakeholders and government representatives. A key deliverable is the development of a pan-Canadian physician planning tool. This work is getting underway. At their January 2015 meeting, PRPTF members discussed guiding principles that would support a collaborative process to improve alignment of physician resources across identified specialties.

In conclusion, while much remains to be done, there is at least growing recognition that we need to pay attention to the national dimension of our medical education and post-MD training system in the context of emerging needs.

Strategic questions

Delegates are asked to consider the following strategic questions for discussion and debate:

1. What options are there to provide sufficient capacity in the post-MD system to ensure that all Canadian medical graduates have access to post-MD training sufficient to become eligible for licensure to practice in Canada?
2. What more do faculties of medicine and medical organizations need to do to provide useful information and counseling about future physician practice opportunities by specialty and practice location?
3. What can medical organizations and governments do to facilitate the integration of physician workforce data both horizontally (e.g., training/licence/practice) and longitudinally (over time) to provide timely and relevant data for planning purposes?
4. How can post-MD programs realign residency positions in a manner that balances the need for resident service with the needs of the Canadian population?

[1] The Free Dictionary. Inertia. http://www.thefreedictionary.com/inertia. Accessed 03/21/15.

[2] Canadian Resident Matching Service. 2014 R-1 Main Residency Match Report. Table 62. http://www.carms.ca/assets/upload/Match%20reports/2014%20R-1%20match/2014-r-1-match-report-full-EN.pdf. Accessed 03/23/15.

[3] CMA Physician Data Centre. October 2013 results may be seen at https://www.cma.ca/Assets/assets-library/document/en/advocacy/38-PracOpp.pdf. Accessed 03/23/15.

[4] Tyrrell L, Dauphinee D. Task force on physician supply in Canada. http://www.effectifsmedicaux.ca/reports/PhysicianSupplyInCanada-Final1999.pdf. Accessed 03/23/15.

[5] Association of Faculties of Medicine of Canada. Canadian Medical Education Statistics 2014. Table 9. http://www.afmc.ca/pdf/Cmes2014-Enrolment.pdf. Accessed 03/23/15.

[6] Canadian Resident Matching Service. Residency Match Report 2000. Table II. http://www.carms.ca/wp-content/uploads/2014/09/CaRMS-PGY-1-Match-Report-2000.pdf. Accessed 03/23/15.

[7] National Residency Matching Program. Results and data 2014 main residency match. http://www.nrmp.org/wp-content/uploads/2014/04/Main-Match-Results-and-Data-2014.pdf. Access 03/23/14.

[8] Canadian Resident Matching Service. Canadian students studying medicine abroad. http://www.carms.ca/assets/upload/pdfs/2010_CSA_Report/CaRMS_2010_CSA_Report.pdf. Accessed 03/23/15.

[9] Thomson G, Cohl K. IMG Selection: Independent review of access to postgraduate programs by international medical graduates in Ontario. Volume 1: findings and recommendations. http://www.health.gov.on.ca/en/common/ministry/publications/reports/thomson/v1_thomson.pdf. Accessed 03/23/15.

[10] Royal College of Physicians and Surgeons of Canada. Information by discipline. http://www.royalcollege.ca/rc/faces/oracle/webcenter/portalapp/pages/ibd.jspx?lang=en&_afrLoop=9268834391819415&_afrWindowMode=0&_afrWindowId=null. Accessed 03/23/15.

[11] College of Family Physicians of Canada. Section of communities of practice in family medicine. http://www.cfpc.ca/CPFM/. Accessed 03/23/15.

[12] American Board of Medical Specialties. Specialty and subspecialty certificates. http://www.abms.org/member-boards/specialty-subspecialty-certificates/. Accessed 03/23/15.

[13] College of Family Physicians of Canada, Canadian Medical Association, Royal College of Physicians and Surgeons of Canada. National Physician Survey, 2012. Results for medical students. http://nationalphysiciansurvey.ca/wp-content/uploads/2013/02/2012-Stu-Q9-EN.pdf. Accessed 03/23/15.

[14] Canadian Association of Internes & Residents. Summary of key findings: 2013 national resident survey. http://residentdoctors.ca/wp-content/uploads/2014/08/Summary-of-Key-Findings-CAIR-2013-National-Resident-Surve.pdf. Accessed 02/23/15.

[15] Sharma A. Factors influencing medical students' training and practice preferences. http://www.royalcollege.ca/portal/page/portal/rc/common/documents/advocacy/hhr2014_sharma_influencing_students_preferences.pdf. Accessed 03/30/15.

[16] Committee on Accreditation of Canadian Medical Schools. CACMS standards and elements. https://www.afmc.ca/pdf/CACMS_Standards_and_Elements_June_2014_Effective_July12015.pdf. Accessed 03/30/15.

[17] Association of Faculties of Medicine of Canada. Future MD Canada. Forthcoming 2015.

[18] Canadian Medical Association. Canadian specialty profiles. https://www.cma.ca/En/Pages/specialty-profiles.aspx. Accessed 03/23/15.

[19] National Coordinating Committee on Post Graduate Medical Training. First Report to Conference of Deputy Ministers. Fredericton, NB, 1992.

[20] Kilshaw M. The Victoria report on physician remuneration. Advisory Committee on Health Services, 1995.

[21] Canadian Post-MD Education Registry. CAPER Annual census of post-M.D. trainees 1993-94. Table A-1i. Ottawa, 1994.

[22] Canadian Post-MD Education Registry. 2013-2014 Annual census of post-M.D. trainees, Table B-1i ,Ottawa, 2014.

[23] Statistics Canada. CANSIM Table 051-0001. 1993 and 2013. Accessed 03/23/15.

[24] Canadian Medical Association. Health Facts 1995. Ottawa.

[25] Canadian Medical Association. Number of physicians by province/territory and specialty, Canada, 2015. https://www.cma.ca/Assets/assets-library/document/en/advocacy/01-physicians-by-Specialty-Province-2015-e.pdf. Accessed 03/30/15.

[26] Ministère de la Santé et des Services sociaux. Plans d'effectifs médicaux (PEM) en spécialté 2011-2015 – année 2015. http://www.msss.gouv.qc.ca/sujets/organisation/medecine/prem/download.php?f=b1d732d96d6b7d1ea60c6c0b80f7c905. Accessed 03/30/15.

[27] Statistics Canada. CANSIM Table 052-0005. Projected population by projection scenario, age and sex, as of July 1, Canada, provinces and territories. Accessed o3/30/15.

[28] Cassel C, Reuben D. Specialization, subspecialization and subsubspecialization in internal medicine. NEJM 2011;364:1169-73.

[29] National Committee on Physician Manpower. Report of the requirements committee on physician manpower, part III. Ottawa: Minister of National Health and Welfare, 1975

[30] Canadian Society of Internal Medicine. Care-fully: summarizing the issues facing general internal medicine and the health care system in Canada. https://www.cma.ca/Assets/assets-library/document/en/advocacy/Int_Med_Care-Fully_Summary_(Oct2005).pdf. Accessed 04/01/15.

[31] Royal College of Physicians and Surgeons of Canada, Task Force on the Future of General Surgery. The future of general surgery: evolving to meet a changing practice. http://www.royalcollege.ca/portal/page/portal/rc/common/documents/educational_initiatives/future_of_general_surgery_report_e.pdf. Accessed 04/01/15.

[32] Future of Medical Education in Canada. A collective vision for postgraduate medical education in Canada. 2012. https://www.afmc.ca/future-of-medical-education-in-canada/postgraduate-project/pdf/FMEC_PG_Final-Report_EN.pdf. Accessed 03/23/15.

[33] Slade S. Overview of CHW/AFMC/CAPER activities on physician resource planning. Presentation to the Canadian Collaborative Centre for Physician Resources Management Advisory Committee Meeting, November 22, 2013.