



CAREER STRUCTURE IN THE CANADIAN MEDICAL PROFESSION

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Introduction

Canadians place a high value on the availability of and access to health system resources, including a skilled and knowledgeable physician workforce. However, given the physician shortages that this country is experiencing, the capacity of the system to deliver medical care and manage health services is seriously jeopardized. In fact, the recruitment and retention of physicians to support the timely access of patients to care has been one of the most important health system challenges that governments have faced in the past 10-15 years.¹

Addressing physician shortages by simply producing more physicians defies the range of potential solutions that involve the education, training and practice environments. The answer is much more complex than churning out more doctors. Identifying the factors that influence the development of careers in medicine has become increasingly important. Influences at each stage are multi-factorial – from the choices medical students make, to the way that residents respond during their training, to the changes that more experienced physicians pursue both in their early careers as well as closer to retirement. Along this journey, individual career decisions ultimately produce the makeup of the physician workforce in Canada – physicians in multiple specialties who strive to meet the health needs of Canadians.

This paper identifies issues of physician career development in Canada, the choices that are being made and the factors that influence choice. Producing the most suitable physician workforce in Canada depends on a network of factors both within as well as outside the control of medical educators and health system leaders. Having an ultimate goal to meet the health needs of Canadians, academic programs must produce well-qualified physicians who deliver high quality care to a diverse population – emphasizing the need for pan-Canadian planning and coordination in educating, training, recruiting and retaining physicians. With recommendations for further research, this paper contributes to the wealth of information now helping governments, medical schools, professional bodies and health system leaders to find the right numbers and mix of physicians necessary for quality health care delivery in collaboration with other health professionals.

¹ *Health Care Renewal in Canada: Clearing the Road to Quality*, Health Council of Canada, 2006.

Scope of Paper

This paper covers the breadth of career development from choosing to be a medical student, (i.e. choosing to be a physician), to choosing to be a certain kind of physician, to choosing how to shape a medical career based on the priorities that develop throughout a physician's life.

It is much easier to define what is in than what is out of scope for this paper. There are a wide variety of important influences coming to bear on how and what physicians-in-training and in-practice choose in their careers. Some are beyond the scope of this discussion. For example: regional health systems are much more complex than they used to be; we know little about the influences of various models of care, some with very sophisticated governance; the health system is encouraging physicians to practice more collaboratively and while this is an increasingly important part of practice, its influence on career choice and development has yet to be determined.

There are also enablers as well as impediments to career development beyond the scope of this paper. For example: where a physician practices and the influence of various aspects of location, (e.g. academic environment or rural community), requires more attention; the increasing adoption of tools for electronic communication and information sharing, (e.g. email messaging and electronic records), is presenting new challenges that influence practice choice; preferences to practice in large groups are evolving to influence not just inter-professionalism but also the choices physicians make as they organize themselves for work and after hours call.

Finally, there are many personal factors that impact physician career choice, not defined within the scope of this paper. As society evolves, each generation emphasizes different lifestyle preferences related to a variety of factors, (e.g. family size, language and changing personal values). In addition, socioeconomic factors influence choice and require much more analysis than this paper allows.

In conclusion, recommendations for further research will emphasize opportunities to explore some of the issues beyond the scope of this paper.

Data & Research

Methodology of Paper

This paper draws extensively from the 2004 and 2007 National Physician Survey (NPS) results in Canada. The NPS is a valuable source of information about what factors may have influenced the development of medical careers. Response rates for both 2004 and 2007 surveys were similar. In particular, the 2007 NPS supplied data from medical students (2800 for a 31% response rate), second year medical residents (730 for a 28% response rate) and practicing physicians in family medicine and other specialties (19,239 for a 32% response rate).

Given the available expertise from the three national medical organizations that released the NPS data – The Royal College of Physicians and Surgeons of Canada (RCPSC), Canadian Medical Association (CMA) and College of Family Physicians of Canada (CFPC) – the authors of this paper are in a unique position to offer an informed understanding of career development in the Canadian medical profession.

Physician Resources Tracking

Lacking a pan-Canadian system to track and plan for adequate health human resources, many professional organizations try to address this on their own. Moreover, whereas Canada is a federation of ten provinces and three territories constituting the whole, the delivery of health care has been increasingly decentralized to provinces and territories with the federal government assuming a diminishing role. While there is much excellence in the health system, the current approach to health human resources planning has left many professional organizations to track their own kind, often independent of the whole system and dependent on the capabilities of each organization.

Tracking physician resources is more robust than for most other health professions in Canada, even though there is clear room for improvement in terms of comprehensive and timely data analysis, research and planning. Most organizations agree with the need for a pan-Canadian approach^{2 3}. In its absence, physician resources tracking uses the data sources that are available, including but not limited to the Canadian Institute for Health Information (CIHI), the Canadian Collaborative Centre for Physician Resources (C3PR) supported by the CMA, the Canadian Post-M.D. Education Registry (CAPER) supported by the Association of Faculties of Medicine of Canada (AFMC) and the National Physician Survey supported by the RCPSC, CMA and CFPC. National, provincial and territorial medical organizations as well as governments, regulatory bodies and national medical specialty societies also have their own internal tracking mechanisms. The strength of these sources often depends on the availability of valid data and the ability of each organization to support committed staff.

² *Final Report of Task Force II: A Physician Human Resource Strategy for Canada*, March 2006: <http://physicianhr.ca/reports/TF2FinalStrategicReport-e.pdf>.

³ *A Framework for Collaborative Pan-Canadian Health Human Resources Planning*, ACHDHR, March 2007: http://www.hc-sc.gc.ca/hcs-sss/alt_formats/hpb-dgps/pdf/pubs/hhr/2007-frame-cadre/2007-frame-cadre-eng.pdf.

Current Supply and Capacity

Despite 50% increases in medical school enrolment in the last decade⁴ and a reduced flow of physicians to the United States, Canada continues to experience physician shortages in both urban and rural settings.⁵ 20% of Canadians live in rural areas but only 10% of all physicians work there⁶.

As of January 2008, Canada had approximately 66,000 licensed physicians. The vast majority of these provide clinical care, some working only part-time. Approximately half are considered to be general practitioners or family physicians while the remainder is classified as physicians in medical, surgical or laboratory specialties.

As of 2006 Canada's physician-to-population ratio stood at 1.9 practicing physicians (or 2.1 physicians, including medical residents) for every 1,000 people. In comparison, the OECD average for physicians (which also includes medical residents) per capita is 3.0, 43% higher than the Canadian ratio.⁷ Of note, Canada's physician to population ratio and the OECD average were equivalent in 1990. While many other OECD countries have seen their ratios improve since then, Canada's has only changed marginally.

A third of licensed physicians are female although this number is slowly increasing as in recent years, about 60% of all medical students have been female. This changing demographic is also reflected at the postgraduate level as **Figure 1** illustrates.

Women contribute an especially large proportion to the family physician workforce. The demographic profile emerging indicates that among family physicians under the age of 35 years, over 60% are women compared to 47% in other specialties.⁸

As in many countries, Canada's medical profession is beginning to experience the effects of the large "baby boomer" cohort reaching retirement age. Of Canada's 66,000 physicians, over 8,200 physicians are above the age of 65, representing 13% of the licensed physician pool.⁹ Some medical disciplines are more affected than others. For instance, almost half (48%) of all general internists are 55 years of age or older compared to one third of anesthesiologists.

⁴ AFMC, 2008: <http://www.afmc.ca/pdf/2EnrolmentbySex.pdf>.

⁵ CMA, 2008: http://www.cma.ca/multimedia/CMA/Content/Images/Inside_cma/Statistics/19-Abroad_Returns.pdf.

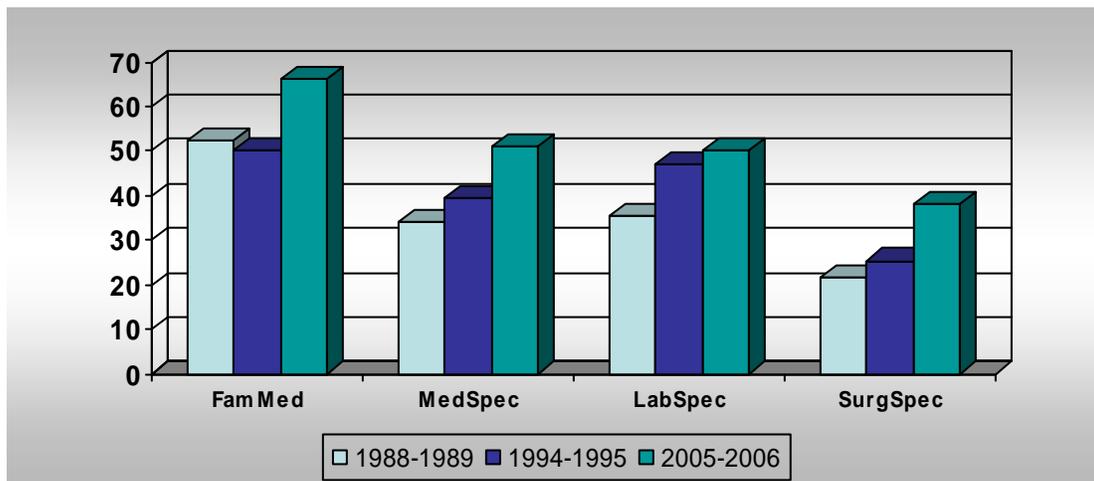
⁶ *Geographic Distribution of Physicians in Canada: Beyond How Many and Where*, Pong, Raymond W and Pitbaldo R, 2005.

⁷ OECD Health Data, 2007: <http://www.oecd.org/dataoecd/46/33/38979719.pdf>.

⁸ CMA, 2008: http://www.cma.ca/multimedia/CMA/Content/Images/Inside_cma/Statistics/02SpecAge.pdf.

⁹ CMA, 2008: http://www.cma.ca/multimedia/CMA/Content/Images/Inside_cma/Statistics/02SpecAge.pdf.

Figure 1: Percent women in Canadian residency programs, by broad specialty, 1998-2006



Source: Canadian Post-M.D. Education Registry

While there is no mandatory retirement age for physicians in Canada and many are choosing to work beyond the traditional retirement age of 65, it is also undeniable that a reduction of working hours or complete retirement from the profession is pending for a large proportion of older physicians. The 2007 NPS reports that 30% of physicians over 65 years of age have indicated they plan to retire from clinical practice within the next two years and 44% intend to reduce the number of hours they work.

Canada has a long history of depending on foreign-trained physicians to supply part of its physician workforce. In 2006, 22% of the physician workforce in Canada was educated and trained outside of the country. Many regions rely heavily on international medical graduates (IMGs). For example, over half of all physicians in the province of Saskatchewan are IMGs.¹⁰

¹⁰ Supply, Distribution and Migration of Canadian Physicians, CIHI, 2006: http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=download_form_e&cw_sku=SDMCP2006PDF&cw_ctt=1&cw_dform=N.

Overlapping Influences on Physician Career Development

Government

In Canada, government is the main funder for physicians. Although about 30% of the health system is privately funded, the Canada Health Act legislates public funding for physicians and hospitals. This means that most physicians receive greater than 90% of their pay from the public purse.¹¹ Remuneration is an important incentive for physicians and government support for appropriate levels of remuneration influences career choice. Contributing to this is the success or failure of negotiations between provincial or territorial medical divisions and governments trying to determine the size of the pool from which income can be drawn and proportioned to each specialty.

Physician career choice is also influenced by the degree of government support for developing and funding models of care that attract physicians. While there has traditionally been support for hospitals, physicians in the community as well as in hospital are increasingly feeling the influence of regional models of care under health authorities supported by government but not solely accountable to hospitals.

Professional Bodies

The College of Family Physicians of Canada, The Royal College of Physicians and Surgeons of Canada and the Canadian Medical Association advocate for the best possible quality in health care and for the resources that support good quality through medical education, training and practice. The mandates of the Association of Faculties of Medicine of Canada, Canadian Federation of Medical Students and Canadian Association of Interns and Residents also relate to medical education and training.

While the distinctive strengths of each of these bodies are beyond the scope of this paper, it is the collaborative whole that produces the strongest advocacy. Targeting health policy that is community and patient-centred and that supports quality in the system is a responsibility that each organization willingly embraces. In supporting the profession, there is considerable agreement among these organizations about what is best for physicians. Where there is disagreement, it is sometimes in defining what is best for the health system.

¹¹ NPS 2007:
http://nationalphysiciansurvey.ca/nps/2007_Survey/Results/ENG/National/pdf/Q33/Q33c_NON.CORE.only.pdf.

Licensing & Regulatory Bodies

From a licensing perspective, the Medical Council of Canada and the provincial and territorial regulatory bodies under the national umbrella of the Federation of Medical Regulatory Authorities of Canada have significant influence on the standards a physician must meet in order to practice.

The power of medical regulation in Canada cannot be under-estimated in its influence on the choices that physicians make in their careers. This influence is possibly greater in practice than in undergraduate education or postgraduate training. The ease of obtaining and maintaining a specific license to practice and the obligations that license imposes will sometimes affect physician choice for one type of practice over another.

Liability Coverage

The Canadian Medical Protective Association (CMPA) meets the needs of most physicians for medico-legal liability insurance in Canada. The CMPA has an excellent track record in settling claims while it operates in an environment that is not as eager to generate claims as in some countries.¹² Nevertheless, given the propensity for some disciplines to attract higher claims than others, (e.g. obstetrics), a physician's reluctance to accept medico-legal risk will sometimes influence career choice. Even within a chosen career, it may also influence the range of services that a physician is willing to provide.

¹² *CMPA Annual Report, 2006*: www.cmpa-acpm.ca.

Undergraduate Medical Students

When are medical students influenced?

When does a career in medicine enter into the realm of possibilities for young students in Canada? One fifth of medical students in the 2007 NPS said they decided to try to get into medicine before high (secondary) school. An additional 33% made the decision during high school and for 36% the decision came during their undergraduate years in university or college.

Students may be influenced both prior to as well as during medical school. 19% of students were drawn to a medical career because of a mentor. However, while only 2% of first year medical students were not familiar with the work of family physicians, by comparison 25% were not familiar with that of paediatricians, 29% with that of surgeons, 31% with that of obstetricians/gynecologists, 39% with that of internists and 44% with that of psychiatrists.

What influences medical students?

- *Family*

24% of medical students responding to the 2007 NPS indicated they were drawn to medical careers through family influences. One or more immediate family members were working as professionals in healthcare for 38% of the students. In fact, 10% of the students' fathers and 4% of their mothers were doctors.

- *Values*

What are the values that medical students strive for in their medical careers? An appropriate work-life balance was a clear priority for Canada's future physicians. 93% of NPS respondents identified this as a *key factor* in achieving a satisfying medical career. In fact, this was *the most important factor* for medical students wanting to have a satisfying and successful career (60%). Of further relevance, flexible working hours also figured prominently for 69% of students.

As factors that most attracted them, 93% of medical students identified intellectual stimulation and challenge; 83% identified the value of the doctor-patient relationship; and earning potential was identified by only 42%.

- *Personal*

30% of third and fourth year students (last two years of medical school in Canada) were married or living with a partner. Only 5% had children. We can form an opinion but do not know how these influenced career development.

83% of students anticipated having a debt when they left school, roughly one third with debts greater than 80,000 Canadian dollars. Only one in five said they would select a specialty with a high earning potential (often requiring the completion of a long training program) while another 16% said they would select a short residency program (such as

family medicine). 11% said they were already obliged to fulfill a return-of-service in practice and 34% said they would set up practice where they were offered a financial incentive. Half of all students with debt said they had no intentions to do any of the above. The relationship of debt to choice is thus a question that researchers and policy experts have not yet answered. To date, the evidence is mixed and sometimes contradictory.

What kind of practice?

- Areas of professional interest

What interest did medical students have in certain disciplines and what influenced those choices? 28% of final (fourth) year medical students indicated an intention to practice family medicine and 65% another specialty in medicine. However, it should be noted that while only 28% indicated an intention to practice family medicine, the distribution of training positions between family medicine and the other specialties results in approximately 40% of medical students eventually entering family medicine residency programs in Canada.¹³

The 2007 NPS suggested that third and fourth year medical students in Canada are exposed to different specialties to varying degrees. For example, while 73% said they were very familiar with the work of family physicians, only 58% were very familiar with that of obstetricians/gynecologists, 57% with that of internists, 54% with that of surgeons and 48% with that of paediatricians or psychiatrists. It is anticipated that the level of exposure to disciplines during medical school may have an impact on career choices made by students.

Medical students expressed an interest in other areas of a medical career as well, namely research and teaching. 40% of students responding to the 2007 NPS expressed an interest in research while 77% had an interest in teaching.

The NPS data raises many important questions about exposure as well as the nurturing of career values for medical students during their school years. There are still gaps in our knowledge about these influences. For example, growing evidence suggests that students and residents who are more exposed to certain settings, (e.g. rural or urban in distributive learning environments), are more likely to eventually practice in those areas.^{14 15} This requires ongoing evaluation.

¹³ CAPER, 2007: www.caper.ca.

¹⁴ Position Paper, CFMS, August 14, 2003.

¹⁵ *The future of rural surgical care in Canada: A time for action*, Canadian Journal of Surgery, Vol. 45, No. 2, April 2002.

Postgraduate Medical Residents

What influences medical residents?

- *Family*

Some of the same influences on medical students were reflected in responses from residents in the 2007 NPS. For example, the degree of career involvement of family members in healthcare or medicine was similar for both groups.

- *Values*

Why did medical residents choose their specialty? What kind of values were they seeking to satisfy as their careers matured? As with medical students, residents considered a satisfactory work-life balance to be crucial. When asked, 88% of *all* second-year residents ranked the ability to achieve an appropriate balance between their work and personal lives as a *factor* contributing to a satisfying and successful career. 52% said this was the *most important* factor.

The NPS suggested variations in the values that motivated residents to choose a career in family medicine or another specialty. When asked why they chose their discipline, 85% of 2nd year residents in family medicine (PGY2-FM) identified the doctor-patient relationship; 79% identified workload flexibility and predictability; and 65% identified intellectual stimulation and challenge. In contrast, 88% of 2nd year residents in specialty medicine (PGY2-SM) identified intellectual stimulation and challenge; 54% identified the doctor-patient relationship; and 50% identified workload flexibility and predictability. The ability to pursue non-work related interests was higher for PGY2-FM than PGY2-SM residents (55% and 28% respectively), as was the availability of training opportunities (27% and 18% respectively) and the influence of family (17% and 8% respectively).

There were other factors that ranked higher for PGY2-SM than PGY2-FM residents. 44% of PGY2-SM residents identified the influence of a mentor in career choice compared to 26% of PGY2-FM residents; 37% identified teaching opportunities compared to 23%; 28% identified earning potential compared to 8%; and 28% of PGY2-SM residents identified research opportunities compared to 2% of PGY2-FM residents. Each of these factors is important and deserves more detailed analysis.

- *Personal*

About 60% of medical residents were married or living with a partner and about one quarter had children. One third of all residents expected to have either maternity or paternity leave within their first few years in practice. Once again, it would be presumptive to say what effects these personal life factors had on career development.

What kind of practice?

- Areas of professional interest

In the short term, medical residents appeared to be uncertain about what they wanted to do in practice. 58% of PGY2-FM residents hoped to practice as a locum within the first 2-3 years for a variety of reasons ranging from assessing future practice locations (82%), flexibility in setting their own schedules (80%), clinical variety (60%), and finances (57%). With still a few more years of training left, 14% of PGY2-SM residents said they also planned to work as locums within the first 2-3 years of practice while another 35% were uncertain.

92% of PGY2-FM and 86% of PGY2-SM residents indicated they planned to provide patient care. PGY2-SM residents had a greater focus for their future career preferences in the areas of teaching (76% compared to 66% for PGY2-FM), research (48% compared to 12%) and administration (23% compared to 13%).

The future intentions of some family medicine residents suggested decreasing scopes in a variety of clinical areas. Research has shown that when this occurs, the intensity of services still provided tends to increase significantly.¹⁶ 33% of PGY2-FM residents indicated their intentions to focus their practices in certain areas within the first 2-3 years of entering practice (most frequently emergency medicine, obstetrics, palliative care and sports medicine). 41% of PGY2-SM residents also intended to sub-specialize in certain areas and with the need for more training, another 43% were still uncertain.

- Type of practice

The percentage of residents intending to set up their own practice decreased from 24% in 2004 to 18% in 2007. Only 61% of PGY2-FM residents intended to practice in a hospital setting compared to 81% of PGY2-SM residents.

Of interest, while 74% of PGY2-FM residents intended to practice in the province where they were training, only 41% of PGY2-SM residents expected to do likewise. In fact, 8% of PGY2-FM and 10% of PGY2-SM residents said that they wanted to leave the country.

Medical residents also had financial considerations. 71% of PGY2-FM residents were being actively recruited and 46% who anticipated a debt related to their education and training, wanted to practice where they were offered a financial incentive. Due to their stage in training, only 14% of PGY2-SM residents were being actively recruited but 37%, anticipating their debt, were already signaling their intentions to set up practice where there were financial incentives.

¹⁶ *The Evolving Role of Canada's Fee-for-Service Family Physicians, 1994-2003*, CIHI, 2006.

Practicing Physicians

Having moved into practice, what influences new physicians as they embark on their careers? Do their plans or anticipations become reality – or do they take an unexpected turn? What influences older physicians to change their careers or to make decisions about slowing down or retiring altogether? Unfortunately, we do not have a full picture but the NPS encourages us to examine the mindset of some of these physicians.

In this paper we will not be precise about the time that defines “early”, “mid” or “late” practice. The NPS uses physician age categories but much of the data is common to all ages.

When are practicing physicians influenced?

In the 2004 NPS, 12% of all practicing physicians said they decided on their current field of medicine before medical school; another 43% during medical school; 19% during residency; and 18% after a period of time in practice. Family physicians were most likely to choose their specialty before medical school. A large number of physicians under 35 years of age chose their specialty during clerkship (the third and fourth years of medical school in Canada).

What influences practicing physicians?

- Values

Why did physicians choose their specialty and what kind of values were they seeking to satisfy in their medical careers? In the 2004 NPS, the one most important factor for family physicians was the doctor-patient relationship (31%) while for other specialists it was intellectual stimulation and challenge (44%).

The NPS highlights attitudinal differences between generations and genders. For example, more young physicians in 2004 were influenced in their careers by the opportunity for workload flexibility and predictability – the one most important factor for 18% of those <35 years of age compared to 5% of those >65 years. This same value was also higher for female than male physicians (15% compared to 8%). Similarly, the ability to pursue non-work related interests was identified by 34% of those <35 years compared to 12% of those >65 years. Many of these choices reflected preferences for different workload balances among younger and older physicians.

- Personal

Some personal influences on career development could be deduced from the 2004 NPS data. Their family was said to influence only 1 in 5 physicians. Prestige was a slightly greater influence for older physicians (15% of those >65 years of age compared to 12% of those <35 years) whereas earning potential – although not as high overall as might be expected – was greater for younger physicians (31% of those <35 years compared to 22% of those >65 years).

A physician's personal life might also influence the choice of location for practice and this can evolve over time. 44% of women physicians responding to the 2007 NPS indicated family reasons for this choice. Finding a career opportunity for their spouse was another reason for 28% of women physicians and was a greater incentive for younger physicians than it had been for their older colleagues.

How much were practicing physicians enjoying their work in 2007? The answer from the NPS was not clear. 75% of all practicing physicians were generally satisfied with their professional lives but only 56% were satisfied with the balance between their personal and professional lives. Older physicians appeared most satisfied while physicians between the ages of 45-54 years least satisfied. Given the shortage of physicians in Canada, it is important to maintain the appropriate balance – to improve the retention of younger practicing physicians and to encourage older physicians to stay in practice at least part-time.

What kind of practice?

- Areas of professional interest

Several data sources indicate that a significant number of women are entering the medical profession in Canada. Many are choosing family medicine. Approximately 60% of family physicians <35 years of age are women. Given what we know about the work hours of women and men and the workload flexibility valued in family practice, it appears that women prefer family medicine because it provides opportunities for them to care for their families and children.

From the 2007 NPS, special interests within family medicine seemed to appeal most to younger physicians but did not increase significantly over time. About one third of all family physicians had focused practices, (i.e. a commitment to specific clinical areas in practice). This data may challenge the belief that physicians become more selective in their areas of practice as they grow older.

- Type of practice

In the 2007 NPS, 50% of physicians said they chose their practice location because it was available at the time of their search. 43% said their choice was driven by the availability of medical support systems and resources, 39% by their family, 38% by the match between community needs and their career interests and 26% by an opportunity to affiliate with a university. In addition, 19% of practicing physicians <35 years of age indicated a financial incentive was one of the reasons they chose their location. University affiliation was the only driver that differed between family physicians and other specialists, (14% compared to 40% respectively). These influences were not mutually exclusive.

While 75% of second year residents said they expect to use electronic medical records (EMRs) when they set up practice, only about one quarter of practicing physicians were using them in 2007. Yet 57% of family physicians identified paperwork as one of the greatest impediments to patient care. With the push by governments and health authorities to adopt EMRs, this uptake is expected to grow and given the challenges in

transitioning to an EMR, the choice of practice location is likely to be associated with settings where an EMR is already established.

Solo practice arrangements are losing their popularity. Physicians increasingly want to work together. Only 27% in the 2007 NPS reported practicing solo, compared to 32% in the 2004 NPS. 46% in 2007 indicated they were in a group medical practice and 24% in inter-professional settings with other care providers. Over 90% of physicians providing collaborative care felt these working relationships improved the care their patients received.

Practicing physicians appear to be making changes to attain a better work-life balance. 26% of physicians in the 2004 NPS reported that they planned to reduce their weekly work hours and 27% in the 2007 NPS said they had made the change. In addition, one third in 2007 said they planned to reduce their work hours over the next two years.

Access to care is important to patients as well as their physicians. While access to medical specialties with extreme shortages – such as psychiatry – may influence recruitment, access to community resources can also influence retention. For example, almost half of practicing physicians who responded to the 2007 NPS considered access to hospital care for elective procedures to be fair to poor and over one third considered access to operating rooms the same. In addition, over one third of family physicians indicated they didn't use a locum in 2007 because there were none available. The lack of access to locum services has the potential to increase the risk of professional burnout.

Areas for Further Research

Many research questions arise when reviewing career development in the Canadian medical profession. The following are a few to be considered.

a) Education and training

Medical Students

- What are the non-financial incentives that attract high school students to careers in medicine and do these align with any particular field of medicine?
- How strong a career influence is physician or health care provider role modeling in the student's family or community environment?
- How much of an influence is financial debt in medical student and resident career choice?

Medical Residents

- How can needy communities attract medical residents by appealing to the personal life factors that influence their choice of future practice location?
- Why are medical residents uncertain about what they want to do when they leave postgraduate training?
- What are the ethical limits of the active recruitment of medical students and residents?

b) Practice

- Which recruitment and retention incentives work best for physicians in the long term?
- What are the best ways to retain practicing physicians with developing careers in new models of care?
- What are the most successful ways to entice older physicians to stay in practice?

c) Socioeconomic

There are a number of interesting socioeconomic questions that arise when reviewing the career development of physicians-in-training and in-practice.

- How can educators and policymakers re-balance the professional and personal lives of physicians to achieve an overall gain in the physician workforce?
- To what extent should financial incentives, i.e. marketplace forces, be allowed to influence physician career choice in a publicly funded health system?
- Can students from ethnic minorities be enticed to service practice populations with whom they share culture and language?

Concluding Remarks

The National Physician Survey is an invaluable resource to inform medical schools, professional organizations, health authorities and governments in Canada. It provides a wealth of data that contributes to the analysis of many influences during developing medical careers – for students, residents and practicing physicians. The NPS is not the only resource and while this paper uses NPS data extensively to support its content, we acknowledge the risk of ignoring other important data.

The authors have only scratched the surface of this increasingly important topic on career development in the Canadian medical profession. The preferences of medical students, residents and new physicians are changing. It is clear that some of the strategies that have been effective in recruiting and retaining physicians are outdated and should be replaced with those that re-balance changing personal values with the professional values that remain constant for all physicians, (e.g. the continuing importance of caring for and maintaining professional relationships with their patients).

Much has been learned about the influences and desires of medical students, residents and practicing physicians. But much more needs to be learned if Canada is to successfully recruit and sustain a stable, committed workforce of satisfied physicians sought after by communities and patients. It is imperative that this knowledge be applied to support those whose evolving medical career choices are aligning with new and developing models of health care and service.

The task is great but the rewards even greater.

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