

## Background

Physician human resource planning is a complicated process. The career choices made by medical students going into their residency program affects the supply of specialists available, which in turn affects health human resource planning. Several external factors affect this process including place of graduation and applicant motivations. This study sets out to explore these factors.

**Preliminary Analysis:** Figure 1 shows the percentage of CaRMS applicants interested in Family Medicine (FM), Internal Medicine (IM), and Surgery (SG) as their first choice. While IM and SG showed relatively flat variation over time, interest in FM steadily declined from 1994 to an all-time low in 2003. A review of the literature suggests that the decline in FM may have been attributable to:

- Insufficient remuneration (Gutkin, C., 2007);
- Rigid training system (Avinashi, V. & Shouldice, E., 2006);
- Accessibility to a medical education (Avinashi, V. & Shouldice, E., 2006);
- View of Family Medicine doctors as having low prestige (Bly, J., 2006);
- Minimal exposure to family medicine role models (Scott, I., 2007); and
- “Bad-mouthing” family medicine by specialist instructors (Scott, I., 2007).

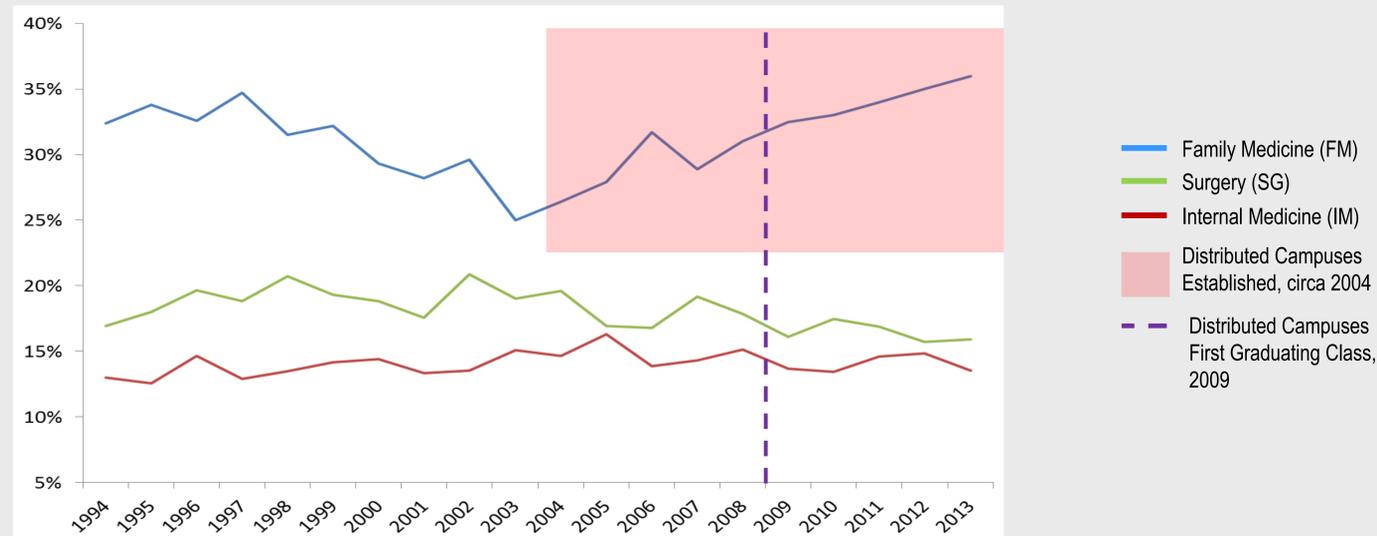
This decline has become a driving force in Canadian health human resource planning. Since the 1990s, governments have created initiatives to maintain the proportion of opportunities to FM at 40% / other specialties at 60%. The first distributed campuses were established in 2004 to help carve out a more suitable – “niche” – FM training environment, and to address the distribution of physicians in Canada by training physicians in more dispersed rural communities. Indeed, several other initiatives were put in place to promote FM as a specialty choice among medical students:

- Increased mentoring role from family doctors across Canada (Gutkin, C., 2007);
- Development of family medicine interest/focus groups (e.g., FMIGs) and advocacy groups (Gutkin, C., 2005; 2007);
- Revamped medical school curriculums to augment the role of a family doctor (Gutkin, C., 2005);
- Creating leadership awards, scholarships, and other financial incentives to prospective Family Medicine residents (Gutkin, C., 2005); and
- Better negotiated salaries.

**Purpose of Study:** Since 2004, interest in FM has begun to steadily increase and has currently hit a 20-year high. In order to understanding this increased renewed interest, this study was separated into two phases that looked at (A) geographical differences in graduates choosing FM as first choice career (e.g., main versus distributed campus), and (B) behavioural differences in graduates choosing FM compared to other disciplines, e.g. FM vs. IM vs. SG.

## Preliminary Analysis

Figure 1: % Choosing Family Medicine, Internal Medicine, and Surgery



## Career Choice Data

Table 1: Students Whose First Choice was Family Medicine: Graduation from Main Campus vs. Distributed Campus

Year	% Family Medicine First Choice Main Campus	% Family Medicine First Choice Distributed Campus
2011	32%	48%
2012	33%	47%
2013	35%	50%

## Summary of Work – Data Sources & Study Design

This study used 1994 to 2013 CaRMS match statistics and data from the CaRMS 2013 Post-Match Survey of Canadian Medical Graduates. The goal of the survey was to address issues concerning medical graduates. The survey focused on the following: post-graduate training and career planning, factors that influence graduates' decision to train and practice in a particular discipline and location, and socio-demographic characteristics. In the current analysis the percentage of applicants in either FM, IM, or SG, who deemed a factor as important, were tabulated. Note: sub-disciplines Cardiac Surgery, General Surgery, Neurosurgery, Ophthalmology, Orthopedic Surgery, Otolaryngology, Plastic Surgery, Urology, and Vascular Surgery were aggregated as Surgery (SG).

Table 2: How Important are the Following Twelve Factors on the Career Choice of Medical Students

Factor	Family Medicine (n=517)	Internal Medicine (n=223)	Surgery (n=227)
Income Potential	41%	53%	52%
Teaching Opportunities	62%	86%	77%
Opportunities for university/academic appointment	29%	70%	67%
Opportunity to establish long-standing doctor/patient relationship	85%	63%	48%
Opportunities to experience a diversity of patient problems	93%	93%	78%
Opportunities to encounter complex patient problems	73%	94%	74%
Work demands conflict with personal/family life	81%	64%	46%
Work related stress	73%	60%	41%
Flexibility to set/limit work hours	83%	55%	39%
Flexibility to choose geographic location of practice (e.g. urban, rural or specific city)	91%	68%	52%
A preference for a minimum of uncertainty related to diagnosis and therapy	21%	35%	36%
Malpractice insurance costs are affordable relative to other specialties	12%	13%	7%

## Results

### Phase A

Table 1 shows percent graduates choosing FM by main versus distributed campus. There is significantly greater interest in a career in FM among students educated at distributed campuses than those studying at main campuses of medical schools. The distributed medical education sites offer a cultural experience of full-time FM immersion, and this may be a major factor in influencing students to select FM.

### Phase B

Table 2 shows a list of 12 factors that may influence medical students' choice of specialty in either FM (n=517), IM (n=223), or SG (n=227). For each of the twelve factors, the table shows the percentage of medical students under each discipline who deemed the factor as important. For example, more medical students interested in IM rated *Income Potential* as important compared to students interested in FM or SG (53% vs. 41% vs. 52%).

Table 3 shows the top-3 factors that influence graduates interested in either FM, IM, or SG. For example the most important influence to a FM resident is an opportunity to experience a diversity of patient outcomes.

Table 3: Top-3 Factors Influencing Specialty Choice of Medical Students

Family Medicine	Internal Medicine	Surgery
1. Opportunities to experience a diversity of patient problems.	1. Opportunities to encounter complex patient problems.	1. Opportunities to experience a diversity of patient problems.
2. Flexibility to choose geographic location of practice.	2. Opportunities to experience a diversity of patient problems.	2. Teaching opportunities.
3. Opportunity to establish long-standing doctor/patient relationships.	3. Teaching opportunities.	3. Opportunities to encounter complex patient problems.

## Take-Home Message

**Phase A:** The introduction of the distributed medical education model in Canada in 2004 appears to show an impact of increased interest in FM as a career choice as shown in Figure 1 (red shaded area) and Table 1.

**Phase B:** Graduates who select FM as a career choice are different from students choosing other career paths such as IM and SG.



The Canadian Resident Matching Service (CaRMS), is a not-for-profit organization that works in close cooperation with the medical community to provide an electronic application and computer match for entry into postgraduate medical training throughout Canada.

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