

THE CLASS OF '94

What has changed in post-M.D. training since 1989?

Dianne Thurber, M.A. Director, CAPER
Lynda Buske, BSc. Associate Director of Research, CMA

Background

This longitudinal study was based on data accumulated from tracking on an individual record basis, all physicians who were awarded the M.D. degree in Canada in 1994. With a view to the physician resources of Canada, the post-M.D. training pathway, final training field and practice location in 2001 were determined. Similar research had been completed previously concerning the final contribution to the Canadian physician workforce of the 1989 Canadian M.D. graduates.^{1,2} The current study compares results of the 1994 research cohort with the earlier (1989) group of Canadian graduates.

Subjects and data sources

The subjects in this study were the 1685 men and women who were awarded the M.D. degree by a Canadian university in 1994.

The graduation records of the Association of Canadian Medical Colleges [ACMC] provided the initial listing of Canadian medical graduates for 1994 who were included in this longitudinal study. Information concerning post-M.D. training in Canada was provided by the Canadian Post-M.D. Education Registry [CAPER] which tracks annually the training field, rank and training location of all physicians in post-M.D. training in Canada. Initial training information of physicians who did not enter residency in Canada was supplied by the undergraduate medical education faculty. Certification information was obtained from the College of Family Physicians of Canada [CFPC], le Collège des médecins du Québec [CMQ] and the Royal College of Physicians and Surgeons of Canada [RCPSC]. Eventual practice location (2001) was provided from the Canadian Medical Association [CMA] Masterfile and the American Medical Association [AMA] Masterfile. The co-operation and participation of these many organizations was essential to obtain all of the data required for this project.

Methodology

A longitudinal file was developed for each record using a study identification number. Each record contained the university which awarded the M.D. degree, the location and field of training and rank level for each year of post-M.D. training between 1994 and 2001, the total number of years of post-M.D. training, changes in training field, breaks in training, certification (in Canada) and eventual practice location or training location in 2001. Breaks in training and changes in training field were calculated using the CAPER data.

The practice location data from the CMA was obtained by a methodology using linked identification numbers. Once the linkage was made, all identifiers were removed and replaced with the study ID number. Data were purchased from the AMA Masterfile to provide USA practice locations of all physicians who were awarded the M.D. degree in Canada in 1994 and were practising or training in the United States in 2001.

Results

Activity in 2001

By 2001, 86.2% (1452 of the original 1685 physicians included in the study) of the M.D. graduating class of 1994 were in Canada, either in active practice (1279 or 75.9%) or continuing in post-M.D. training (173 or 10.3%). There were 212 physicians abroad (mainly in the USA). One hundred and ninety-two (192) or 11.4% of the class were in practice abroad, and 20 or 1.2% of the class were still in training outside Canada (*Table 1*).

Final field of post-M.D. training

We will concentrate on the 1452 physicians who were in practice or continuing in training in Canada. By 2001, 627 (43.2%) of the graduates were in family medicine, 594 (40.9%) were in medical or laboratory specialties and 231 (15.9%) were in surgery or surgical subspecialties (*Table 2*). Thus the class of '94 resulted in "specialty mix" of those located in Canada of 43% in family medicine and 57% in specialties.

Comparisons with the class of '89

Breaks in training and changes in training programs

For members of the class of '89, it was relatively easy to change the post-M.D. training pathway and take breaks from training in order to practise medicine temporarily. For example, 12.9% (n=222) of the 1989 graduates actually took a break of from 1 to 5 years from their training program, and 17.5% (n=301) made major career changes during training. By 1994, breaks from training were minimal (only 3.6% (n=60) took such breaks) and only 9.3% (n=157) made career changes (*Figure 1*). The loss of flexibility in training was one of the two major differences we found between the class of '89 and '94.

Field of medicine

The eventual medical practice field of graduates was the second major difference we found between the class of '89 and the class of '94. In the 5-year period between 1989 and 1994 there was a major shift from general practice/family medicine to specialty medicine (*Figure 2*).

We found that 58% of the class of '89 who remained in Canada were in family medicine, whereas only 43% of the 1994 graduates in Canada were in family medicine. Medical specialties (as a group) were the main practice areas to which the new graduates moved (from 27% of the class of '89 to 39% of the class of '94). Laboratory medicine specialties and surgical specialties also gained proportions of the more recent graduates (*Figure 2*). Both men and women moved toward the specialized areas of medicine.

Gender

The proportion of men and women in each class ('89 and '94) was identical, with 44% of the both classes female and 56% male.

Geographic mobility between Canada and the USA

There was very little difference in the proportion of Canadian graduates who eventually entered practice or undertook training in the USA up to 7 years after graduation. According to *Table 1*, by 2001, 86% of the graduating class (1452 physicians) were either practising or continuing training in Canada. For the class of '89, we found 88% (1516/1722) in Canada 7 years after graduation.

Geographic distribution in Canada

Table 3 compares the provincial distributions of the practice location (7 years after receipt of the M.D. degree) with the population distribution by provinces in Canada for the class of '89 and the class of '94. The members of the class of '94 and also the class of '89 were found in each province or territory of Canada. Provinces which had a higher proportion of the 1994 graduates relative to their population in 2001 were: Nova Scotia, Quebec, Ontario and Alberta. The proportion of Canadian graduates in Manitoba was almost equal to the population proportion in that province.

The proportion of 1994 graduates who eventually located in Nova Scotia, Quebec, Saskatchewan and the Northwest and Yukon Territories had increased relative to the 1989 graduates. The proportion of graduates who had located in Ontario and British Columbia had dropped slightly.

Conclusions

Class size

Between 1989 and 1994, there was a 6% increase in the Canadian population (from 28,031 million to 29,672 million) according to Statistics Canada data. There was also a major increase (16%) in the number of Canadians who were aged 75 years and older. The number of physicians graduating in 1994 was actually 2% less than the number who received the M.D. degree in 1989 (1722 vs. 1685). Thus, the class of 1994 had less capacity to meet the physician resource needs of Canadians than did the 1989 graduates (assuming the way in which medical services were delivered had not changed). Because of the new licensure requirements there was also a considerable lag in the time frame as to when this new class would be counted as practising physicians by the various provincial licensing authorities. Previously, new M.D. graduates could be added to workforce after 1 year of training. By 1994, it would be 2 to 7 years before they would officially enter the workforce.

Less flexibility in post-M.D. training

We see the results of a tighter, more rigid post-M.D. training system in 1994, with fewer physicians interrupting training to spend some time in practice and fewer physicians making career path changes during training.

By 1994, full certification had become a licensure requirement nationally. Two major changes in the post-M.D. training system resulted from this change in licensure requirements. The first effect of the change in licensure requirements was that residents could no longer work as physicians before all the training and exams required for certification had been completed. Secondly, all physicians now required a minimum of two years of training prior to practicing medicine. The additional training requirement without additional training positions resulted in the removal of flexibility from the post-M.D. training programs. This flexibility had allowed room for residents to change post-M.D. programs even if the change resulted in additional years of training.

There were 222 physicians from the class of '89 who took a break from training ranging from 1 to 5 years. This young, mobile, and flexible cohort of new physicians provided much needed services working in locum positions and/or in rural and remote areas before making decisions related to their future career plans. The gradual shrinkage to this important sector of the Canadian physician workforce in recent years is certainly having a negative impact on the physician services available to Canadians and the stress felt by practising physicians unable to find locum relief.^{3,4}

Besides adding an essential component to the physician workforce, these 222 members of the class of '89 had practice experience on which to base their future career choices while experiencing clinical medicine in an independent role. In the

class of '94 the pressure to make permanent career decisions prior to graduation from medical school was very difficult for many medical students.

The shift to specialty medicine

A most significant change between the two classes was the shift in the decisions of new graduates concerning their final medical career. Compared to the class of '89 when 58% of the Canadian graduates chose to work as general practitioners or family physicians, only 43% of the physicians in the class of '94 were working or training in family medicine 7 years later. The many factors related to change in the career choices of Canada's new physicians are beyond the scope of this paper. The data provided here, however, show the extent of this shift to specialty medicine for the physicians who graduated in Canada in 1994. At the time of writing this paper (2002) this shift is continuing for more recent graduates.

We acknowledge and appreciate the collaboration of the following organizations: ACMC, AMA, CMA, CFPC, CMQ and RCPSC.

References:

- ¹Ryten, E., Thurber, A.D., Buske, L. The Class of 1989 and Post-M.D. Training, CMAJ, March 24, 1998 pp731-737
- ²Ryten, E., Thurber, A.D., Buske, L. The Class of 1989 and Physician Supply in Canada, CMAJ, March 24, 1998 pp723-728
- ³Chan, B. How Canada Can Better Manage Its M.D. Supply, The Medical Post, June 25, 2002
- ⁴Newbery, P. Maintaining Direction, Canadian Family Physician, May, 2000, pp1232-1233

September 10, 2002

**Table 1: THE CLASS OF 1994
WHERE ARE THEY? WHAT ARE THEY DOING?**

Activity status in 2001	Location in 2001						Total
	Active in Canada		Abroad		Not applicable		
	Numbers			Percentages			
In practice	1279	75.9%	192	11.4%	-	-	1471 87.3%
In training	173	10.3%	20	1.2%	-	-	193 11.5%
Inactive or not reported	-	-	-	-	21	1.2%	21 1.2%
Total	1452	86.2%	212	12.6%	21	1.2%	1685 100.0%

Table 2: FIELD OF MEDICINE OF GRADUATES IN CANADA OR ABROAD IN 2001

Principal field* (aggregated)	Graduates of 1994 [†]				Total
	In Canada		Abroad		
	No.	%	No.	%	No.
General or family med.	627	43.2%	67	31.6%	694
Medicine or med. specs.	557	38.4%	93	43.9%	650
Laboratory medicine	37	2.5%	7	3.3%	44
Surgery or surg. specs.	231	15.9%	45	21.2%	276
Total	1452	100.0%	212	100.0%	1664

* Includes those in practice and in residency training.

† Excludes 21 graduates who were not located either in practice or in training in Canada.

Table 3: Comparison of the Geographic Distribution in Canada of the 1989 and 1994 M.D. Graduates of Canadian Faculties of Medicine 7 Years After Graduation

Canadian Population Distribution by Province (1996, 2001)

Province	Class of '94 location in 2001		Canadian Population % distribution 2001	Comparison with the class of '89 location in 1996	
	Graduates in each province	% of 1994 graduates in each province		% of 1989 graduates in each province	Canadian Population % distribution 1996
Newfoundland	17	1.2	1.73	1.3	1.91
Prince Edward Island	3	0.2	0.45	0.3	0.46
Nova Scotia	49	3.4	3.04	2.9	3.15
New Brunswick	25	1.7	2.43	2.8	2.54
Quebec	395	27.2	24.02	26.3	24.66
Ontario	562	38.7	38.16	39.5	37.55
Manitoba	51	3.5	3.68	3.9	3.82
Saskatchewan	31	2.1	3.26	1.6	3.41
Alberta	145	10.0	9.40	8.4	9.31
British Columbia	168	11.6	13.47	12.9	12.87
Territories	6	0.4	0.36	0.2	0.33
Total	1452	100.0	100.00	100.0	100.00

Figure 1: Training Flexibility: Comparison of the Number of Career Changes and Breaks in Training Between the Canadian Medical Graduates of 1989 and 1994

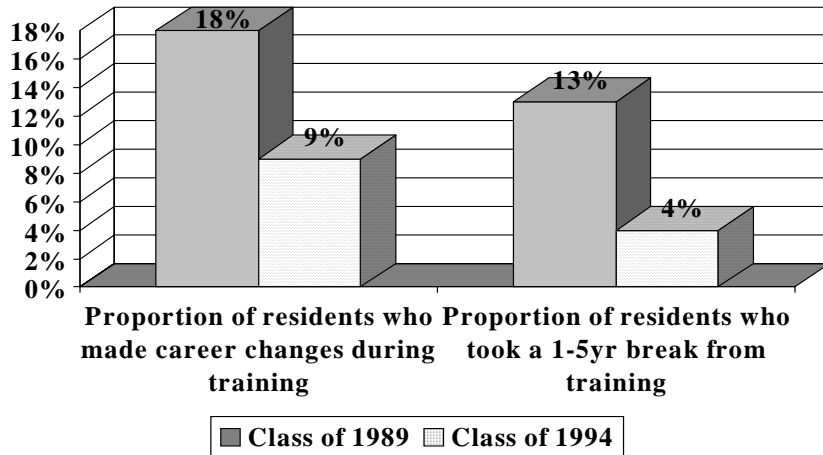


Figure 2: Comparing the Class of 1994 and the Class of 1989 Proportion of Physicians in each Medical Field Active (in practice or in training) in Canada 7 Years after Earning the M.D. Degree

