

CAPER-ORIS FORUM

Canadian Conference on Medical Education
Montréal, 3 May 2008

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Health Research
Recherche en santé


Impact  Health Services
Science & technology **Éthique**
Biomedical Research Commercialisation




Data & Analysis
Données et analyse

Data Collection **AFMC.CA** Modeling
Synthèse Evidence
Planification Ressources humaines en santé

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Medical Education
Éducation médicale

Agrément  Accreditation
Distributed Medical Education Education médicale continue
Continuing Professional Development **Cyberapprentissage** Undergraduate Postdoctoral



Social Accountability
Imputabilité sociale

Soins palliatifs **AFMC.CA** Francophone Minorities
Professionalism **Santé publique** Indigenous Health
Education interprofessionnelle End-of-Life Care



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AFMCs Data Roots

During the postwar years, the schools devoted much time and energy to integrating returning medical officers into civilian medical practice and coping with the influx of veterans, who comprised up to 25 per cent of entering classes. Postwar demands on the schools also focused attention on the need for nationwide planning and action, and the association became the repository for data on student applications and admissions.

- AFMC History, www.afmc.ca/about-history-e.php



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AFMCs Data Roots - ORIS

- Work carried out by the Office of Research and Information Services (ORIS) dates back to the post-WWII period
- Main data areas covered by ORIS include:
 - MD program application, enrolment, graduation
 - Tuition fees
 - Faculty and graduate student counts
 - Research funding



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AFMCs Data Roots - CAPER

- Founded in 1986, the Canadian Post-MD Education Registry (CAPER) is a partnership of professional medical organizations and F/P/T governments.
- Main data areas covered by CAPER include:
 - Post-MD enrolment & exits
 - Ongoing practice location



Health Canada
Santé Canada



The Royal College of Physicians and Surgeons of Canada
Le Collège royal des médecins et chirurgiens du Canada



Medical Council of Canada





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AFMC Data and Reports

- 9 Data Holdings
- Annual data collection
 - Individual level
 - Aggregate surveys
- 5 annual reports
- 8 quarterly reports
- Special reports, publications, presentations
- Data requests



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AFMC Data and Reports

Data Holding	Data Source	Collection Mode	Annual Report (release date)
MD program application	Undergrad admissions offices; OMSAS	Individual level data files	Canadian Medical Education Statistics (September)
MD program enrolment	Faculty of Med UGME offices	Individual level data files	
MD program graduation	Faculty of Med UGME offices	Individual level data files	
Annual Faculty of Medicine Survey	Faculties of Medicine	Aggregate level survey	
Research Revenues	Faculties of Medicine	Aggregate level survey	
Faculty of Medicine Admission Requirements	Faculties of Medicine	Aggregate level survey	Admission Requirements of Canadian Faculties of Medicine (August)



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AFMC Data and Reports (cont'd)

Data Holding	Data Source	Collection Mode	Annual Report (release date)
Canadian Post-MD Education Registry (CAPER)	Faculty of Medicine PGME offices; OPHRDC	Individual level data files	CAPER Annual Census of Post-MD Trainees (March) CAPER Individual Field of Training Tables (May) CAPER Provincial Reports (May)
National IMG Database	CAPER, CFPC, RCPSC, MCC, Registrars, Assessment Centres	Individual level data files	<i>In development</i>
J-1 Visa Trainee Database	Health Canada; ECFMG	Individual level data files	<i>In development</i>

Visit www.afmc.ca and www.caper.ca



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Main areas we'll look into:

- MD program application
- MD program enrolment
- Post-MD program enrolment
- Generalist and specialist training
- International medical graduates
- Visa students and trainees
- Physician migration and retention after training



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*This means
something...*

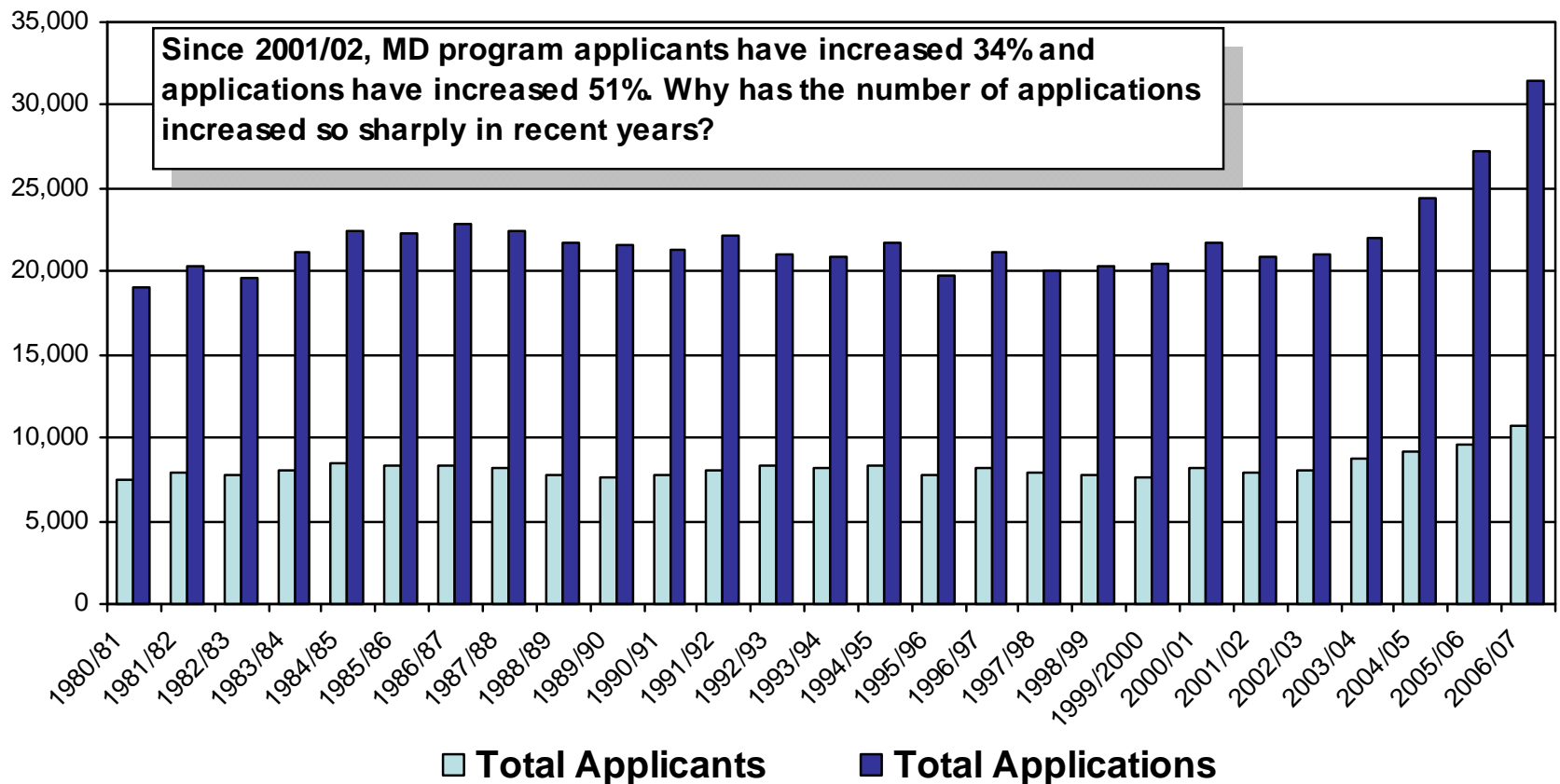




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MD Program Application

Total Number of Applicants and Applications to MD Programs,
Canada, 1980/81 - 2006/07



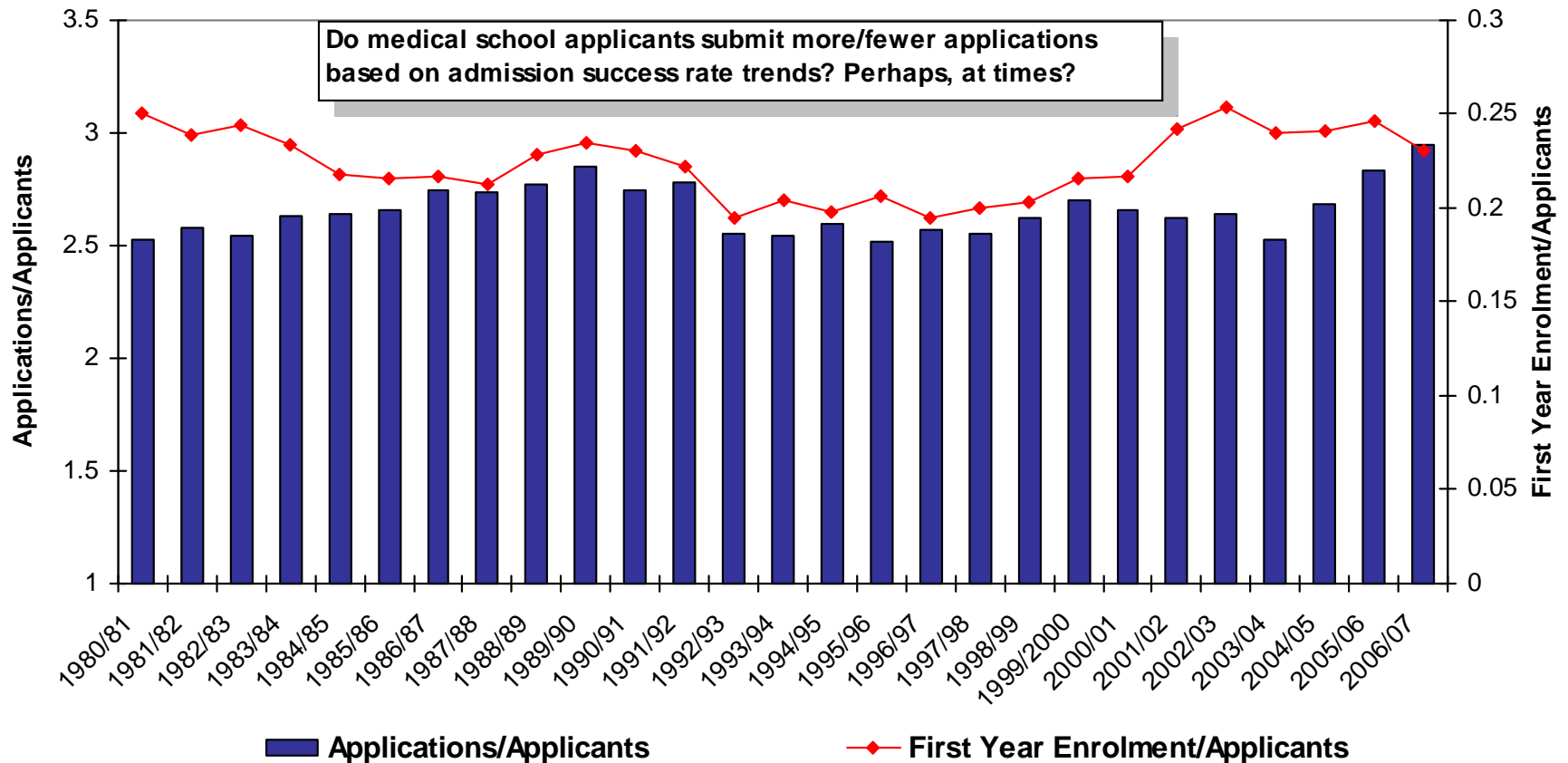
Source: AFMC ORIS, 2008



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MD Program Application

MD Program Applications/Applicants and First Year Enrolment/Applicants, Canada, 1980/81 - 2006/07



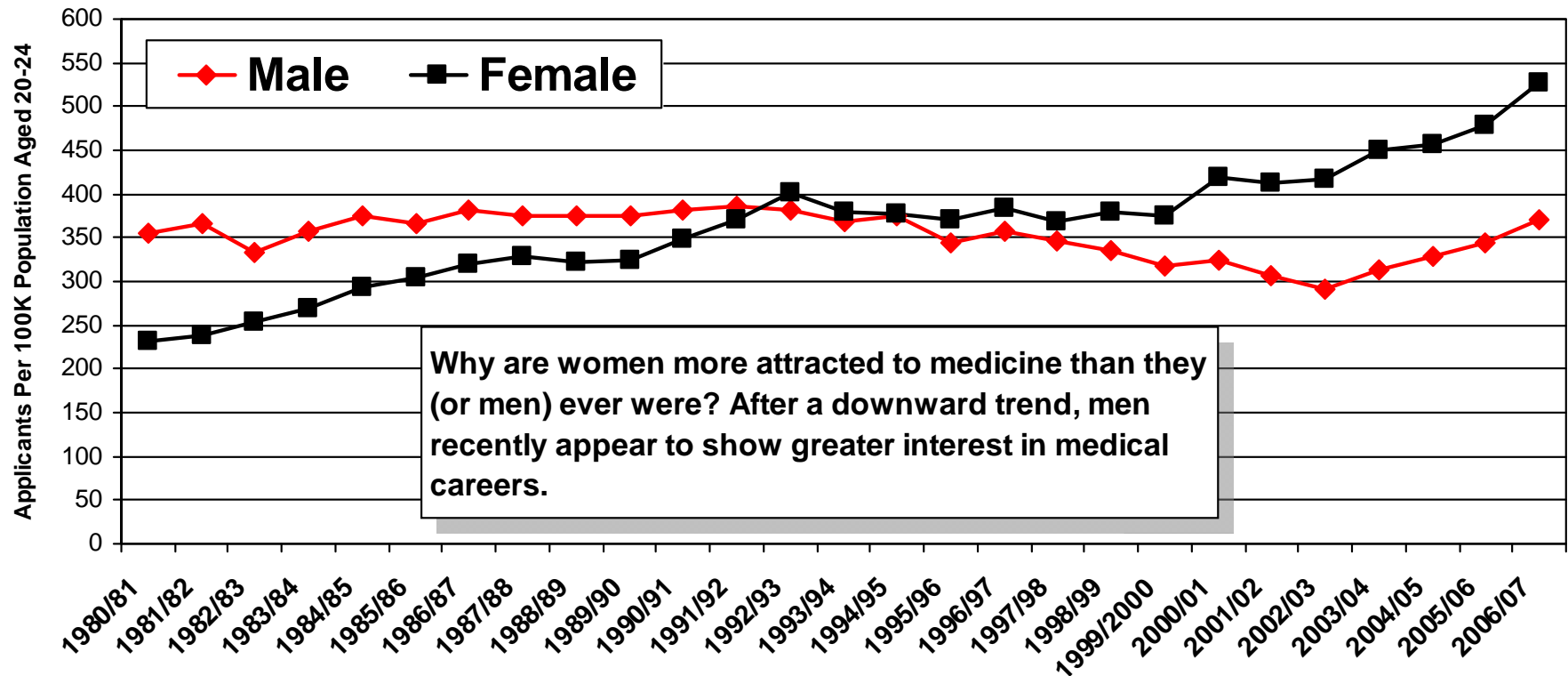
Source: AFMC ORIS, 2008



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MD Program Application

MD Program Applicants Per 100,000 Population Aged 20-24 Years, by Sex, Canada, 1980/81-2006/07



Source: AFMC ORIS, 2008

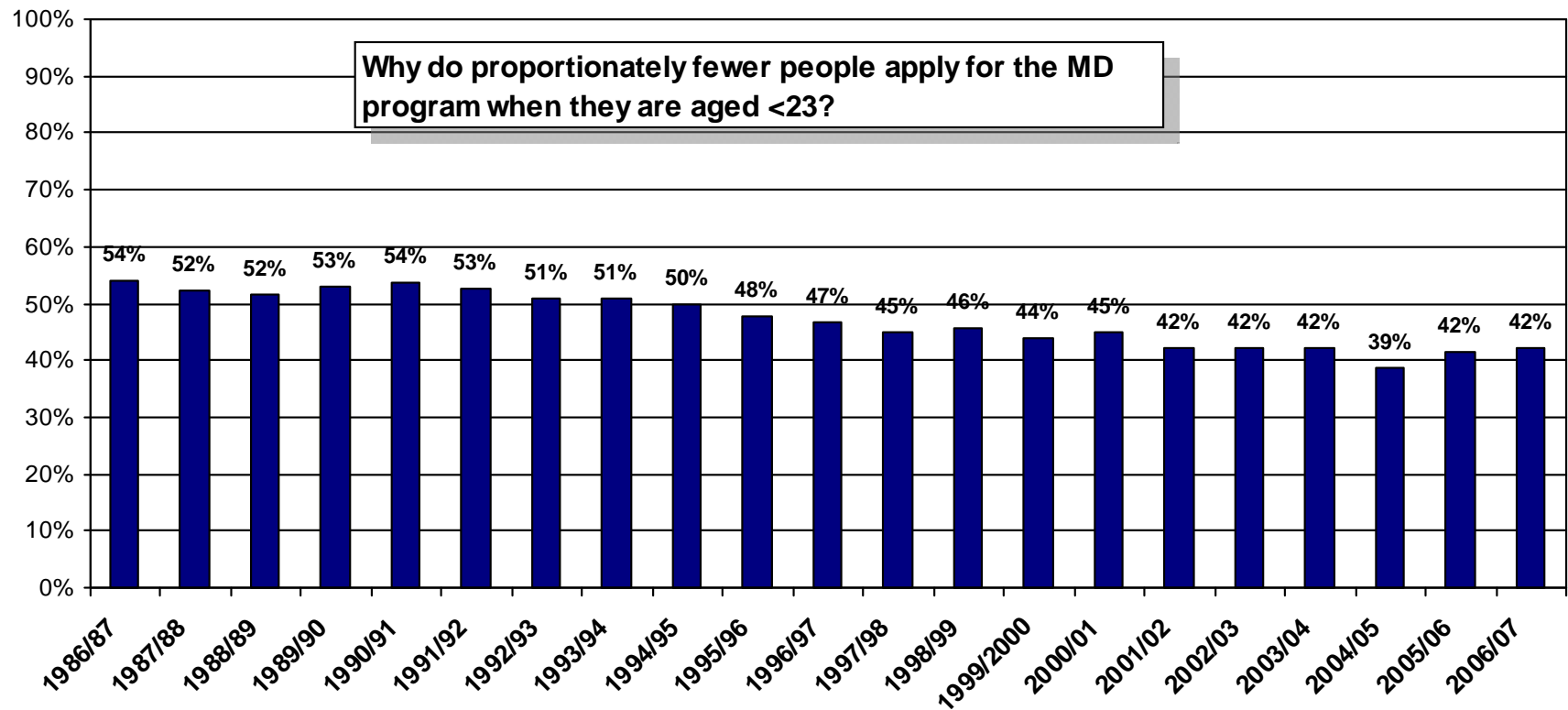
Note: Male and female applicant rates are expressed in relation to the male and female population.



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MD Program Application

Percent Of MD Program Applicants That Are <23 Years of Age,
Canada, 1986/87-2006/07



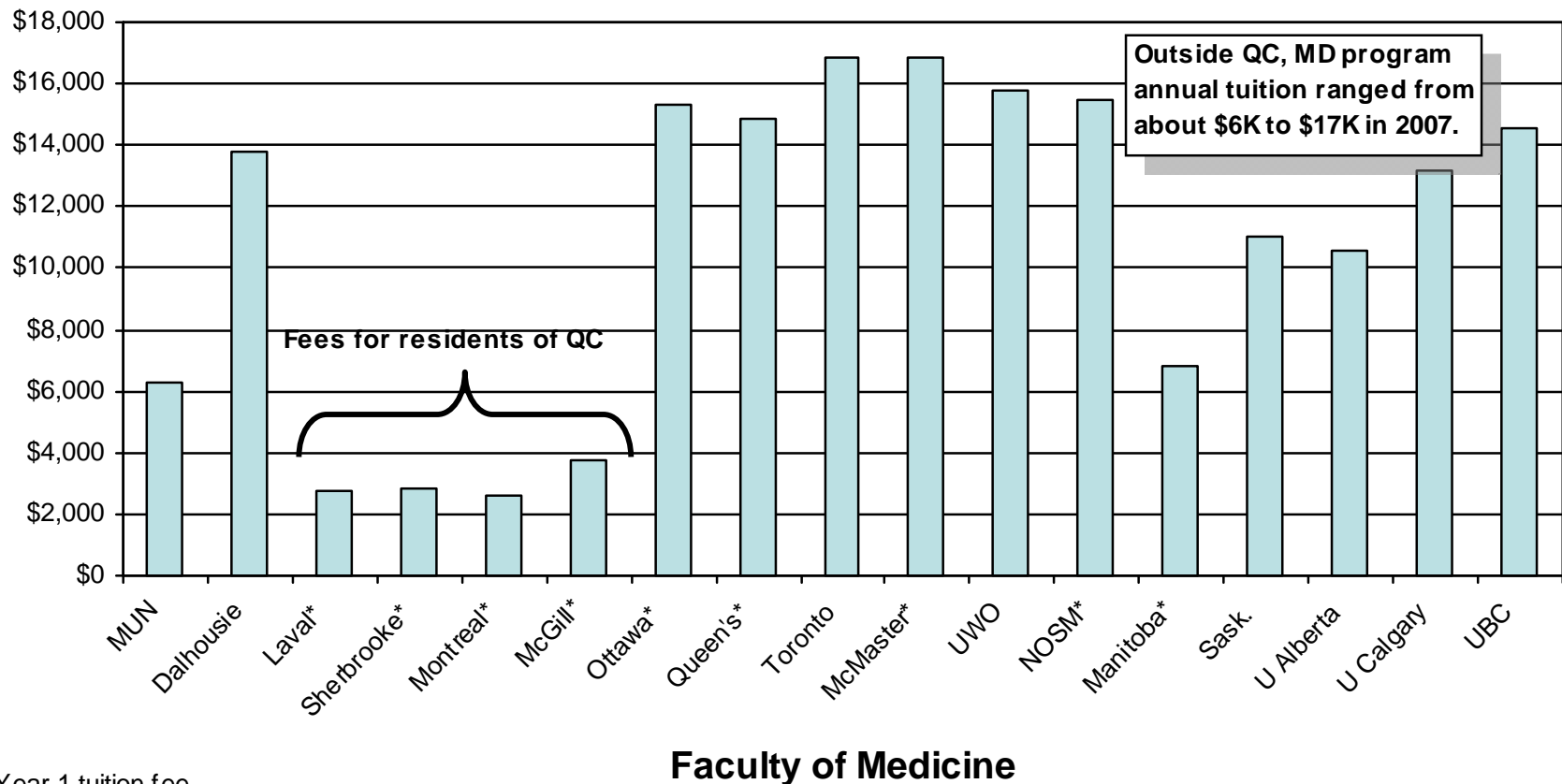
Source: AFMC ORIS, 2008



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MD Program Tuition

Canadian Citizen/Permanent Resident MD Program Tuition Fees
by Faculty of Medicine, Fall 2007



*Year 1 tuition fee.

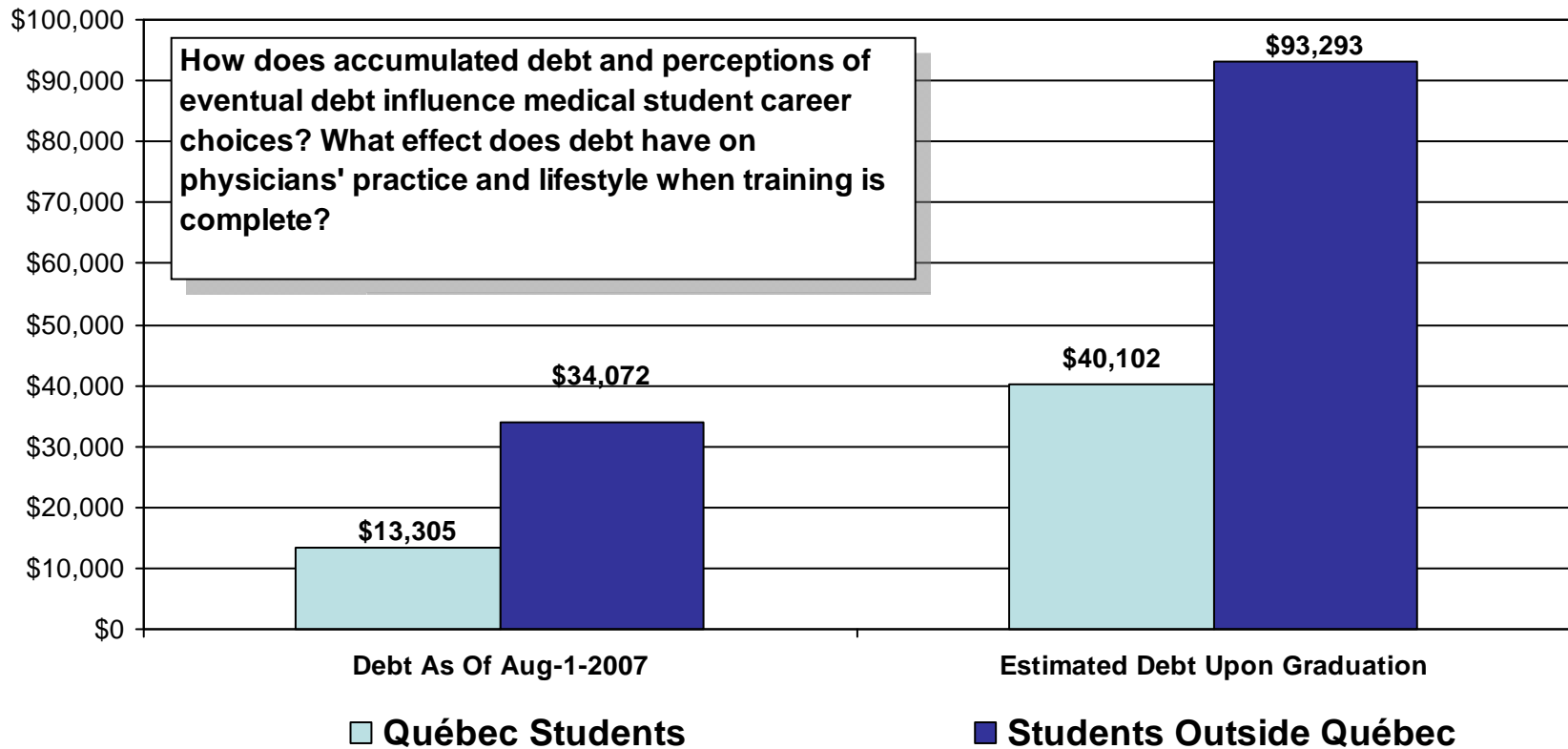
Source: AFMC ORIS, 2008



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Medical Students' Estimated Debt

Medical Students' Self-Reported Debt,
Québec Students Vs. Students Outside Québec, 2007/08



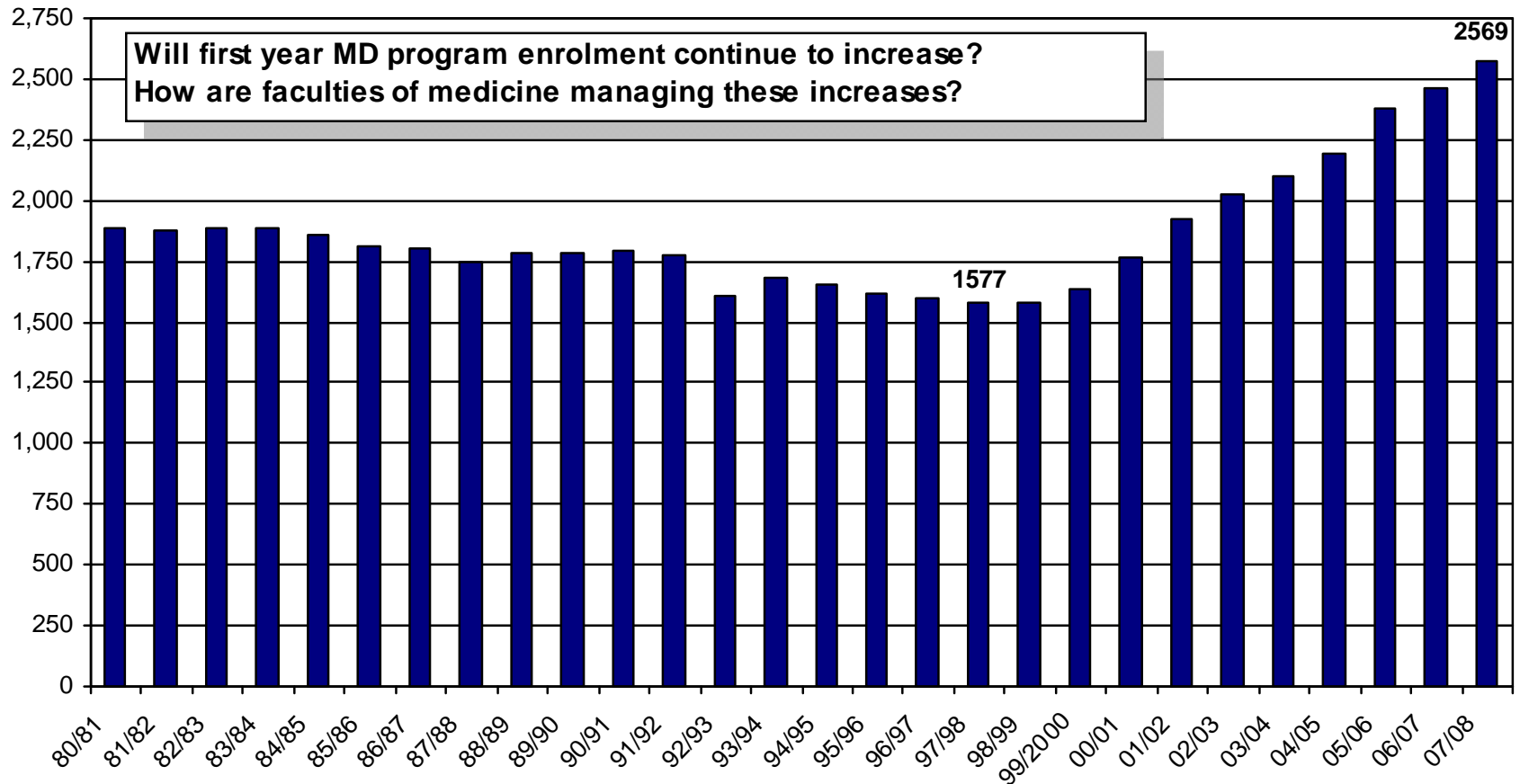
Source: Canadian Federation of Medical Students, 2008



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MD Program Enrolment

First Year MD Program Enrolment, Canada, 1980/81 - 2007/08



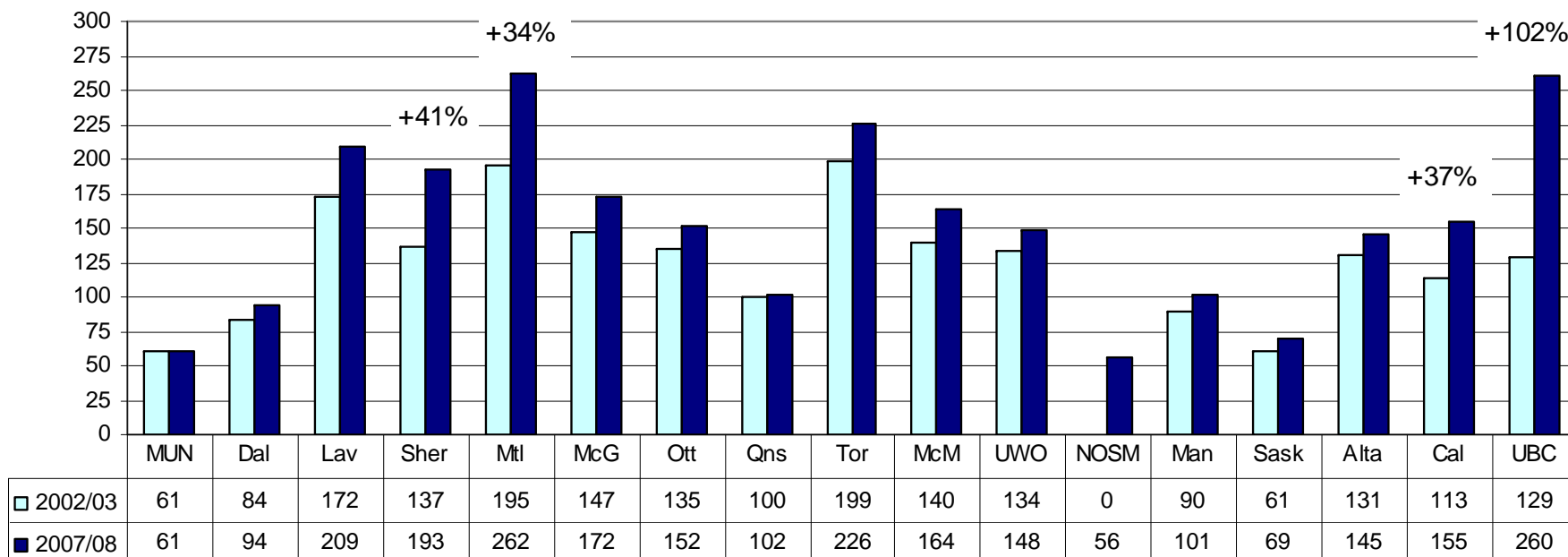


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MD Program Enrolment

**First Year MD Program Enrolment, by Faculty of Medicine
Canada, 2002/03 and 2007/08**

Canada +27%



Source: AFMC, ORIS, 2008.

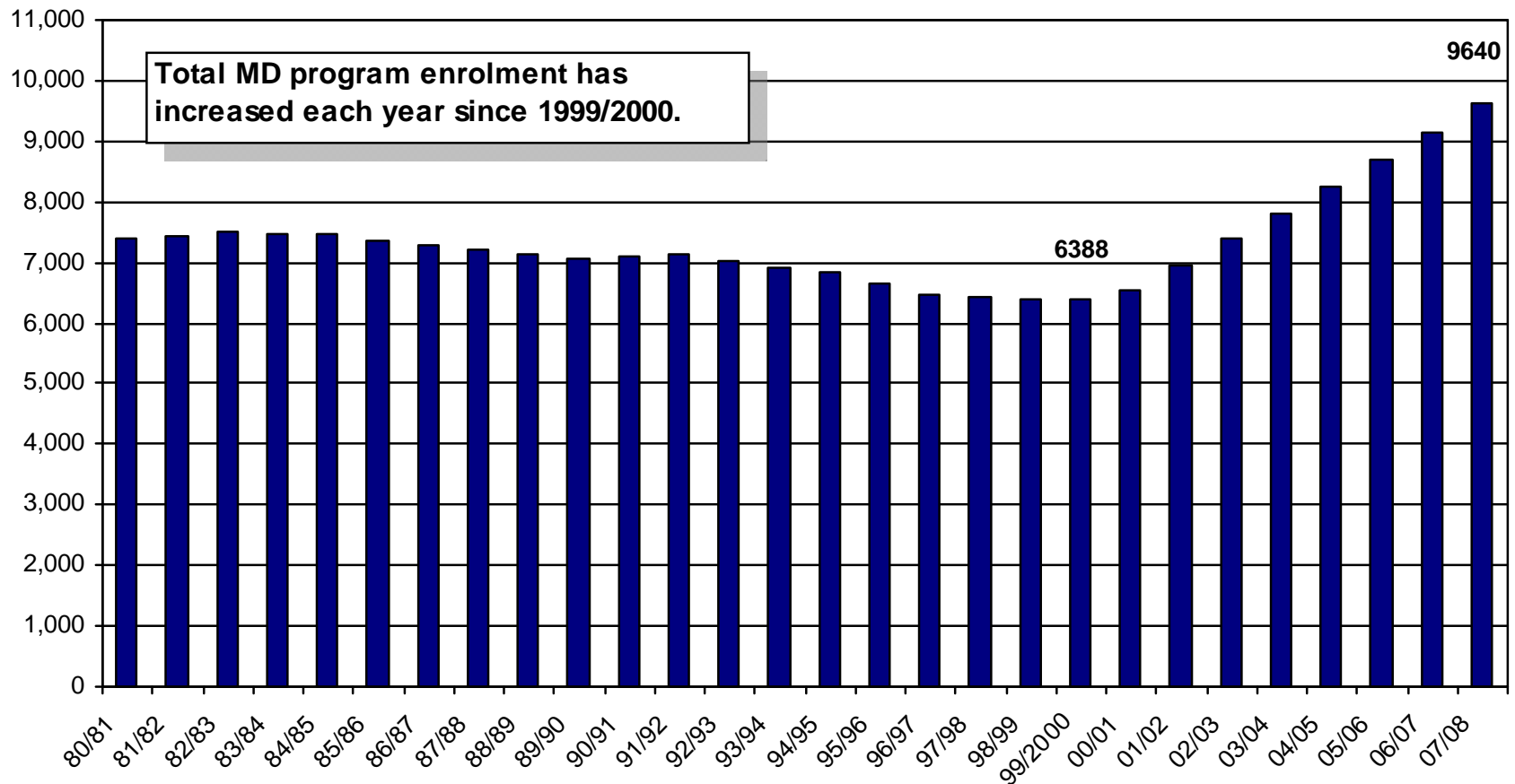
Note: The Northern Ontario School of Medicine started to enrol medical students in 2005/06



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MD Program Enrolment

MD Program Enrolment, Canada, 1980/81 - 2007/08



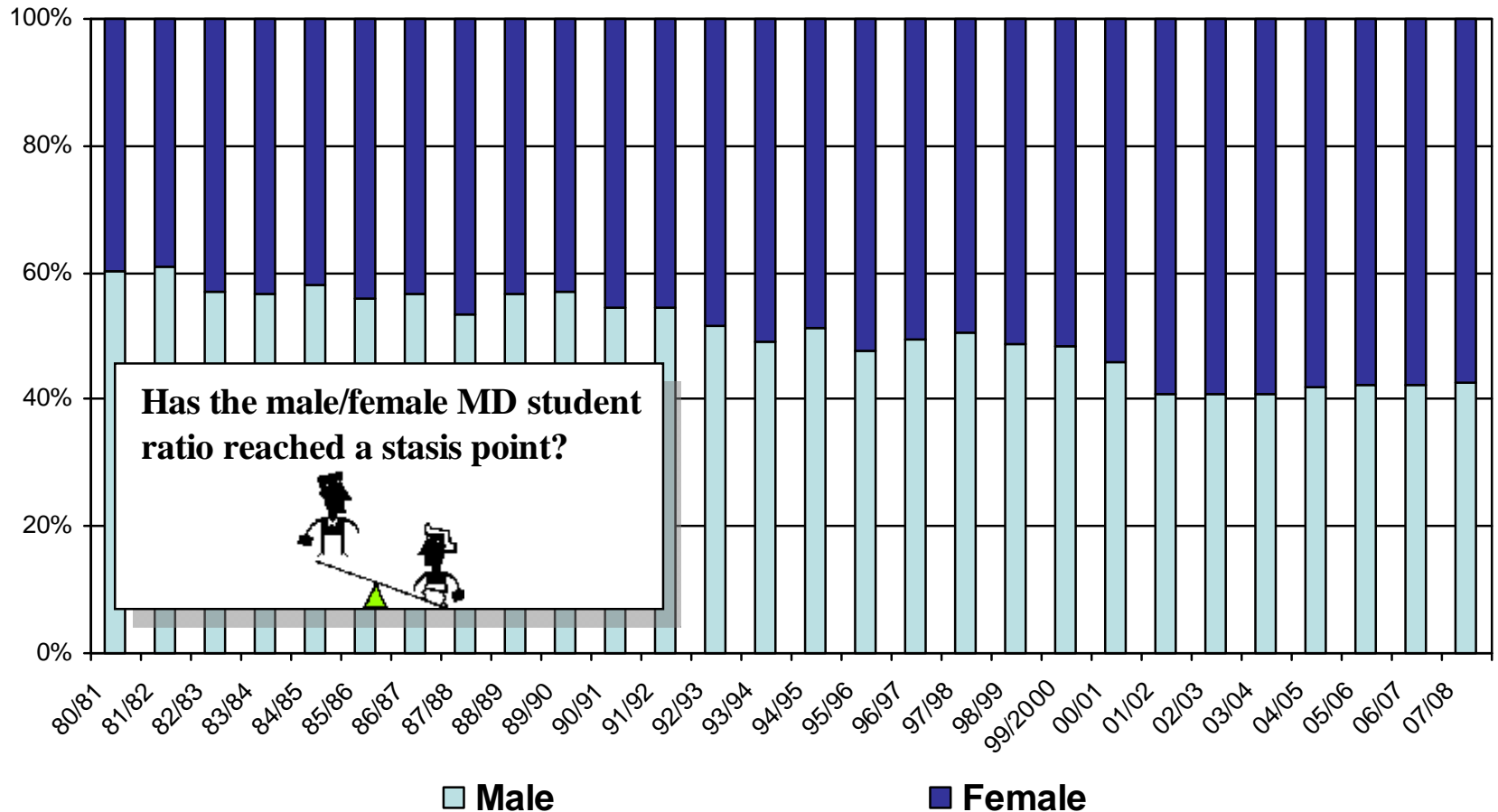
Source: AFMC ORIS, 2008



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MD Program Enrolment

First Year MD Program Students by Sex, Canada, 1980/81 - 2007/08



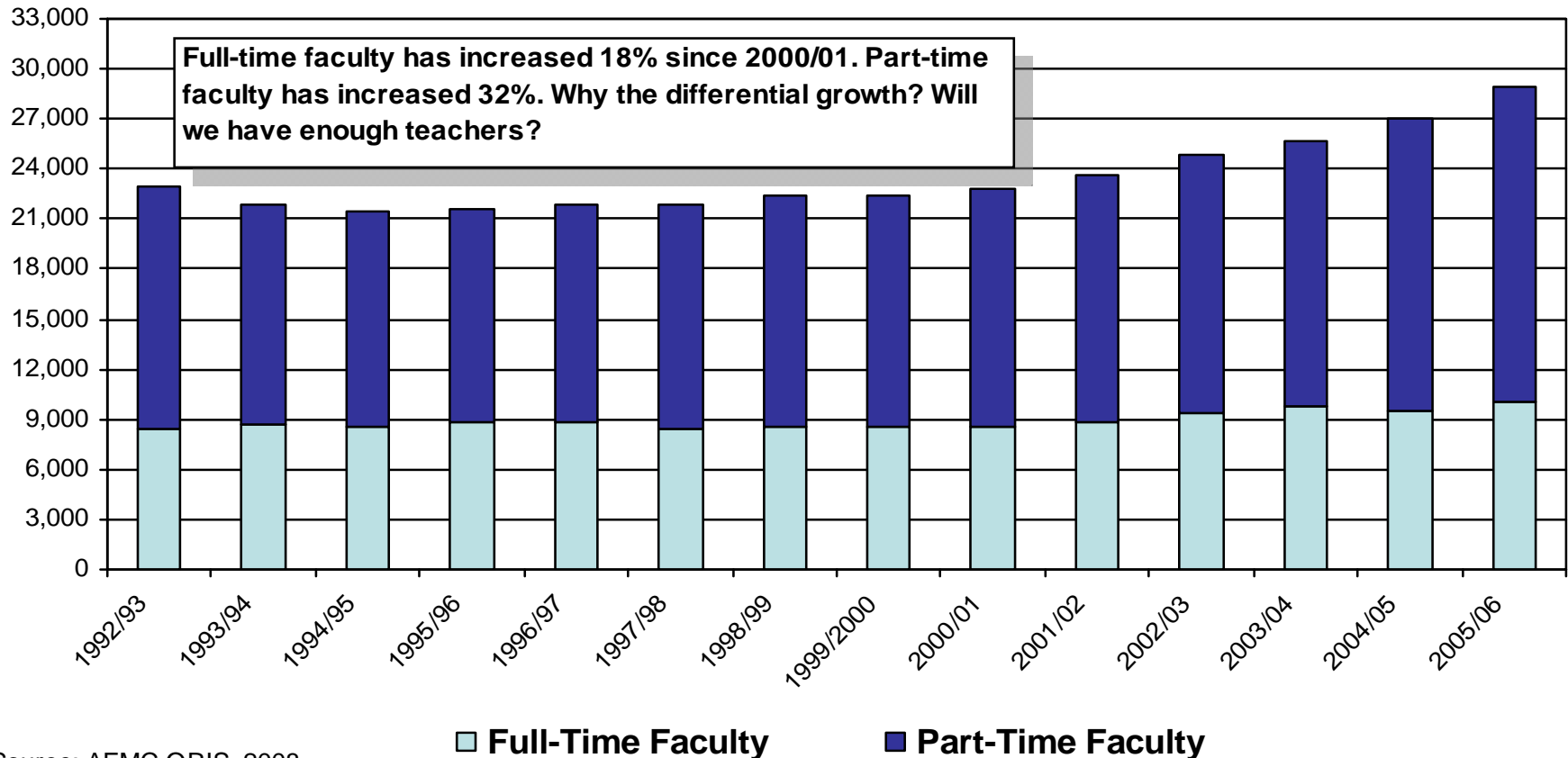
Source: AFMC ORIS, 2008



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Full-Time and Part-Time Faculty

Faculty of Medicine Faculty Counts, Canada, 1992/93 - 2005/06



Source: AFMC ORIS, 2008.

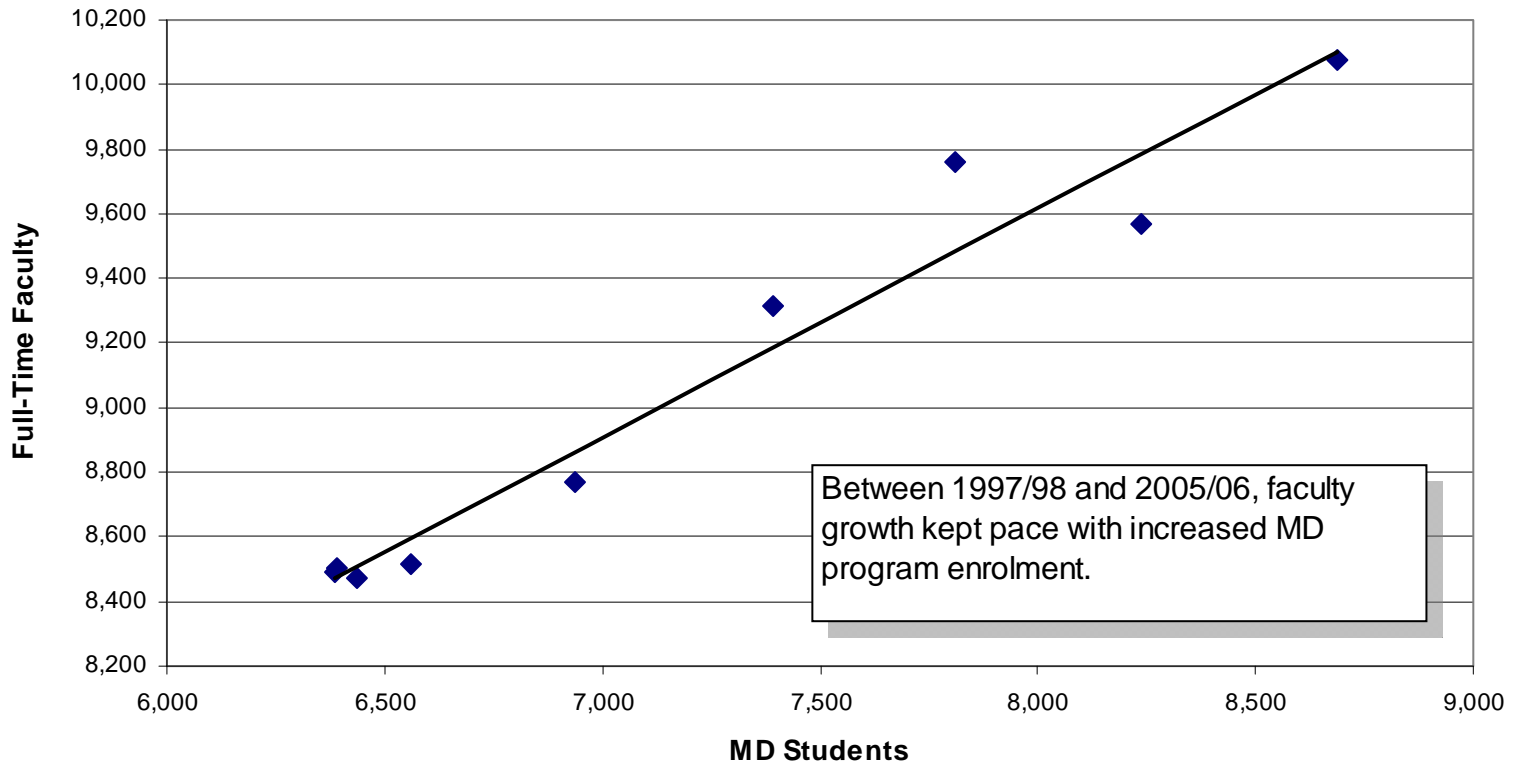
Note: Full-time faculty include professors, associate and assistant professors, instructors and other faculty. Part-time faculty includes paid and volunteer faculty members.



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Faculty and Students/Trainees

Faculty of Medicine Full-Time Faculty and MD Students,
Canada, 1997/98-2005/06



Sources: ORIS, AFMC, 2008.

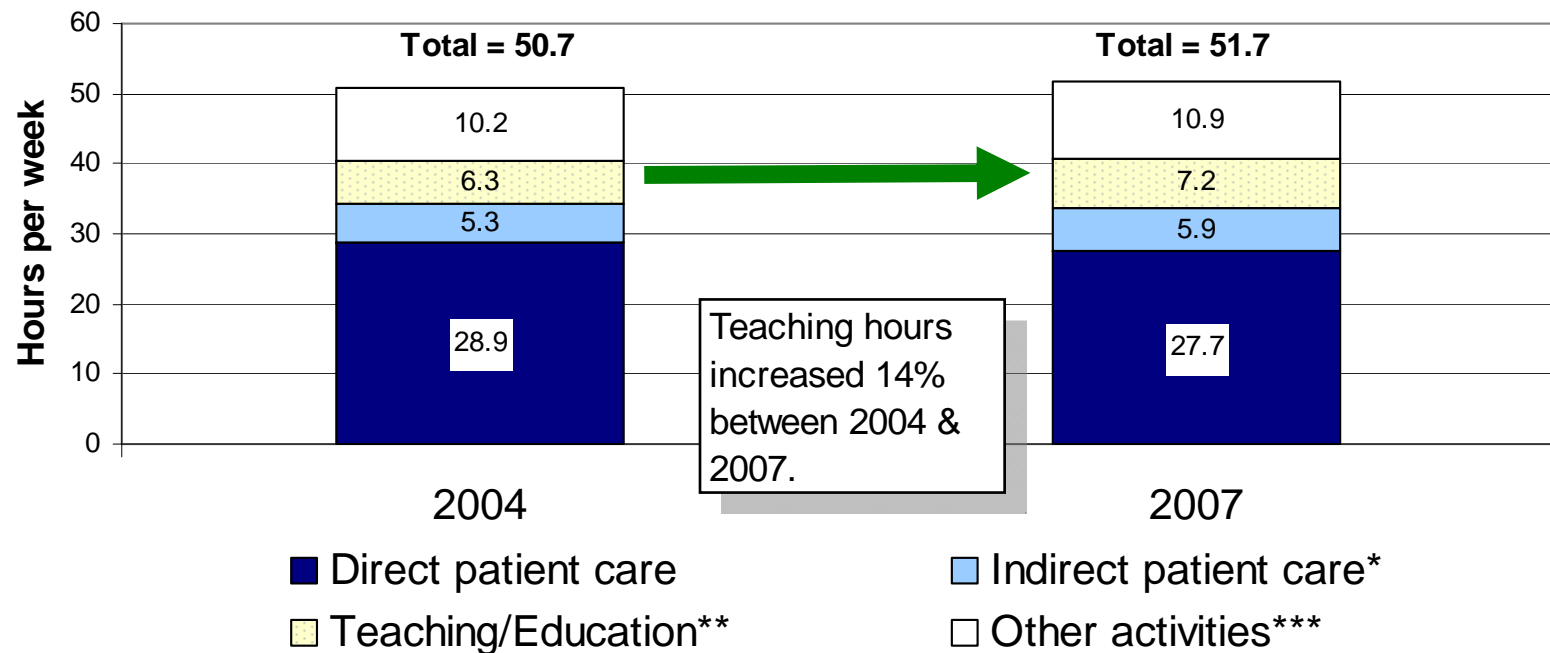
Note: Data points plot Canadian faculty of medicine full-time faculty counts and MD students between 1997/98 and 2005/06.



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Physicians' Weekly Work Hours

Physician Average Weekly Work Hours (excluding on-call),
by Type of Activity, 2004 and 2007



*Includes review of chart and lab results, telephone consultation, etc.; **Includes teaching activities in the classroom and in clinical settings;

***Includes activities such as research, administrative, CME and committee work.

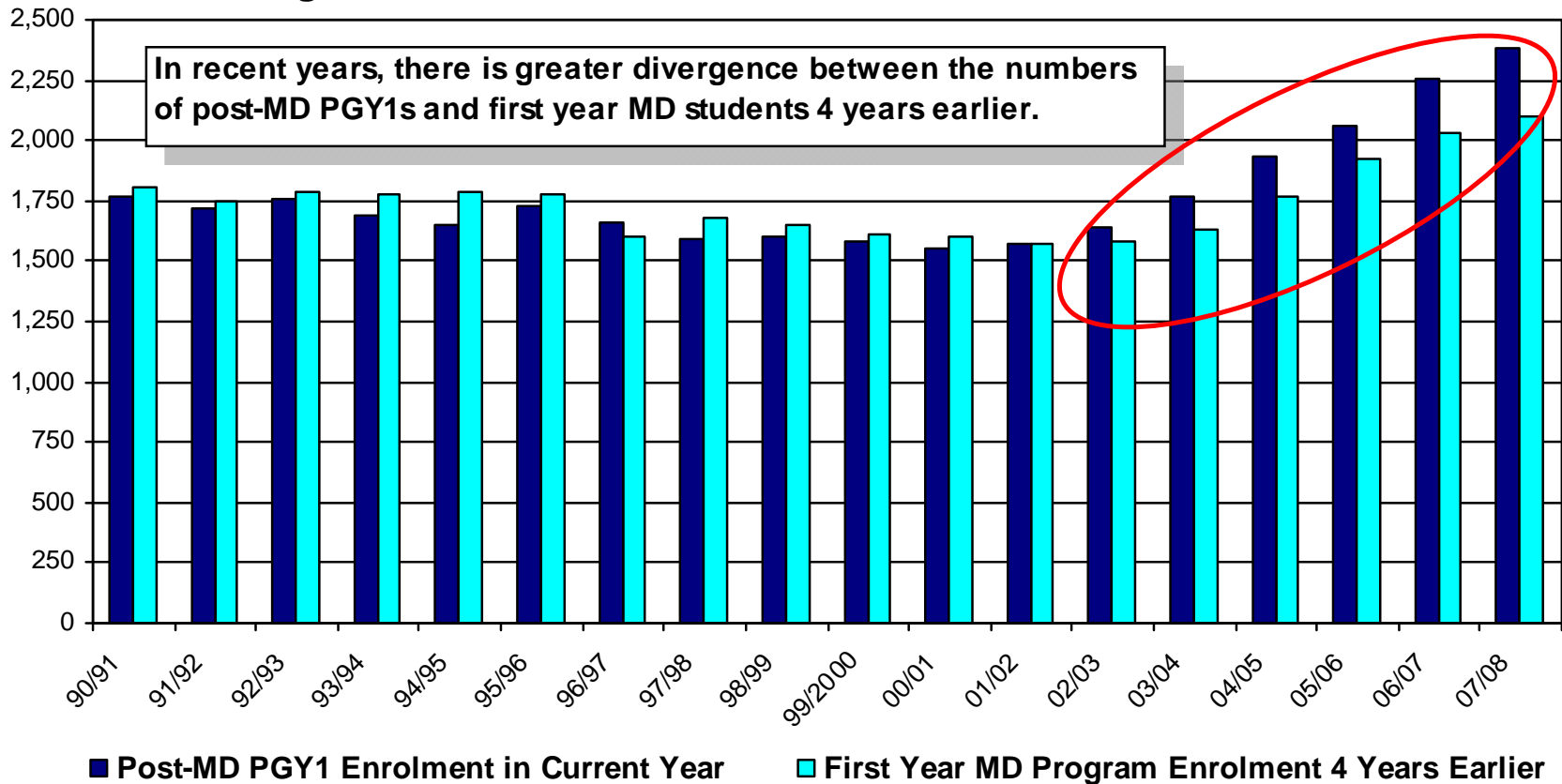
Source: 2004 and 2007 National Physician Survey. The College of Family Physicians of Canada, Canadian Medical Association, The Royal College of Physicians and Surgeons of Canada.



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Post-MD Program Enrolment

Post-MD PGY1 Enrolment in the Current Year and First Year MD Program Enrolment 4 Years Earlier, Canada, 1990/91 - 2007/08



Source: CAPER and ORIS, AFMC, 2008

Note: Post-MD data includes Canadian citizens and permanent residents only. Visa trainees are excluded.



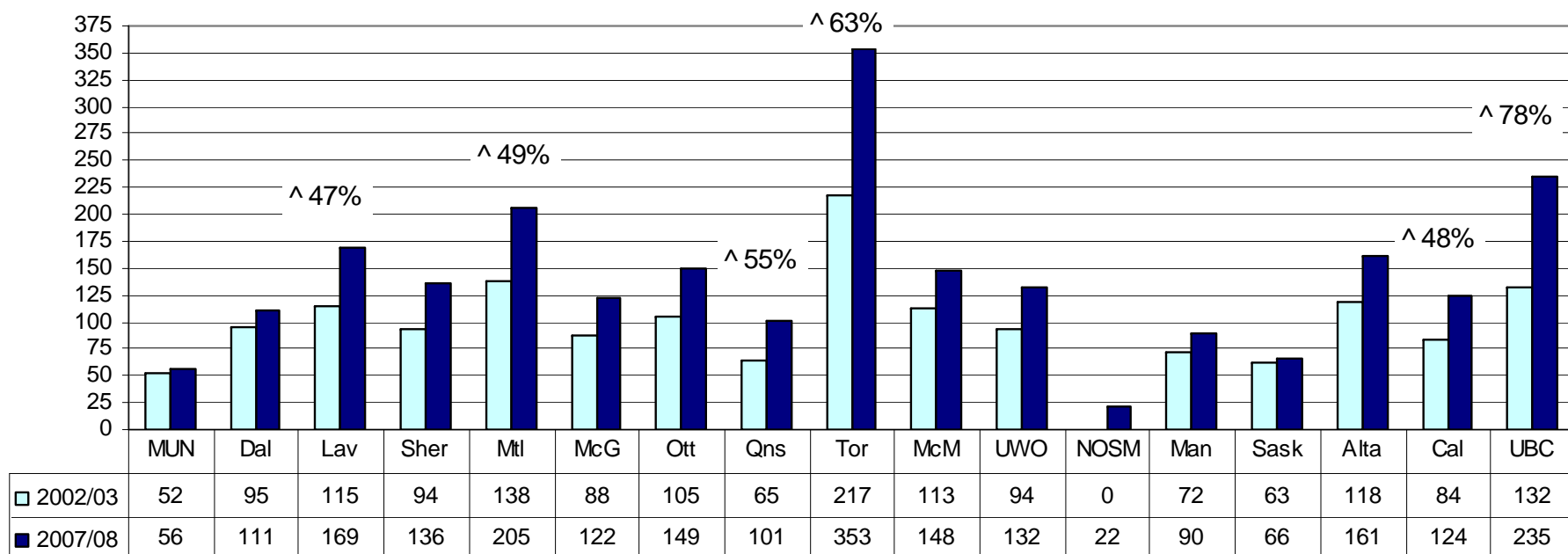
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Post-MD Program Enrolment

First Year Post-MD Residency Enrolment, by Faculty of Medicine

Canada, 2002/03 and 2007/08

Canada ^ 45%



Source: CAPER, AFMC, 2008.

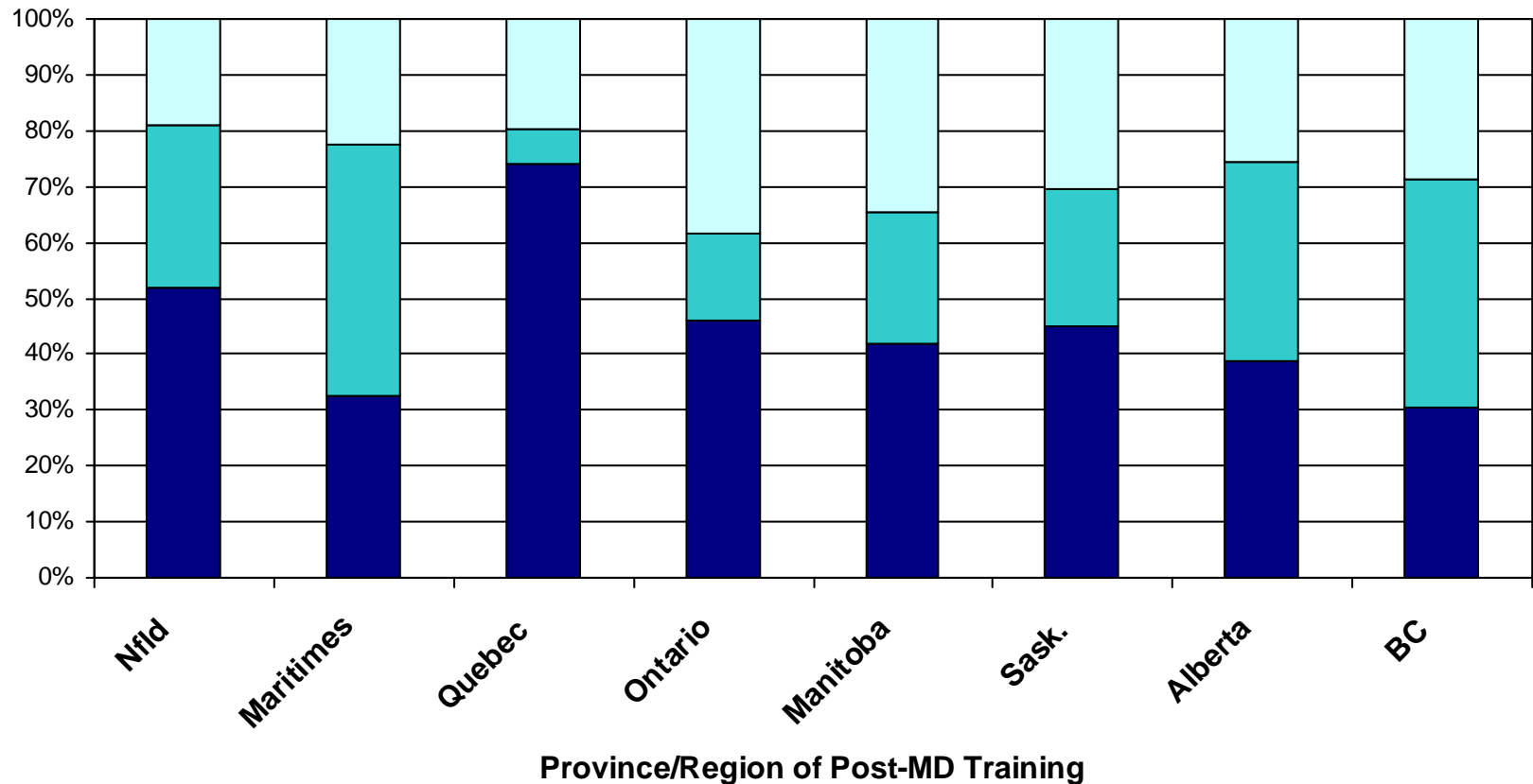
Note: Includes Canadian citizens and permanent residents only. Visa trainees are excluded.



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Post-MD Program Enrolment

Distribution of Post-MD Trainees by Place of MD Graduation, Canada, 2006-07



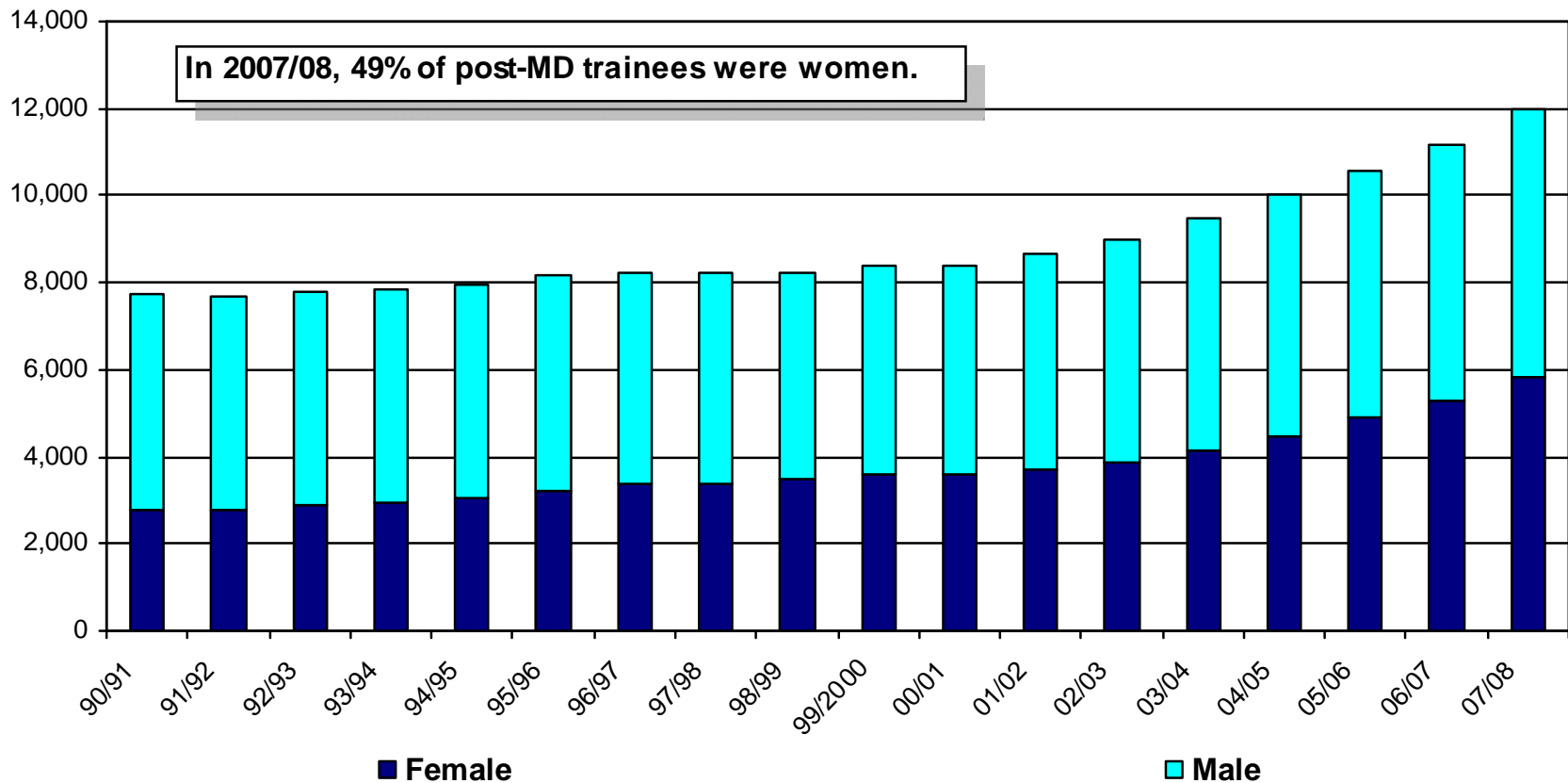
■ MD Within Post-MD Prov/Region ■ MD Inside Can, Outside Post-MD Prov/Region ■ MD Outside Canada



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Post-MD Program Enrolment

Total Post-MD Enrolment by Sex, Canada, 1990/91 - 2007/08



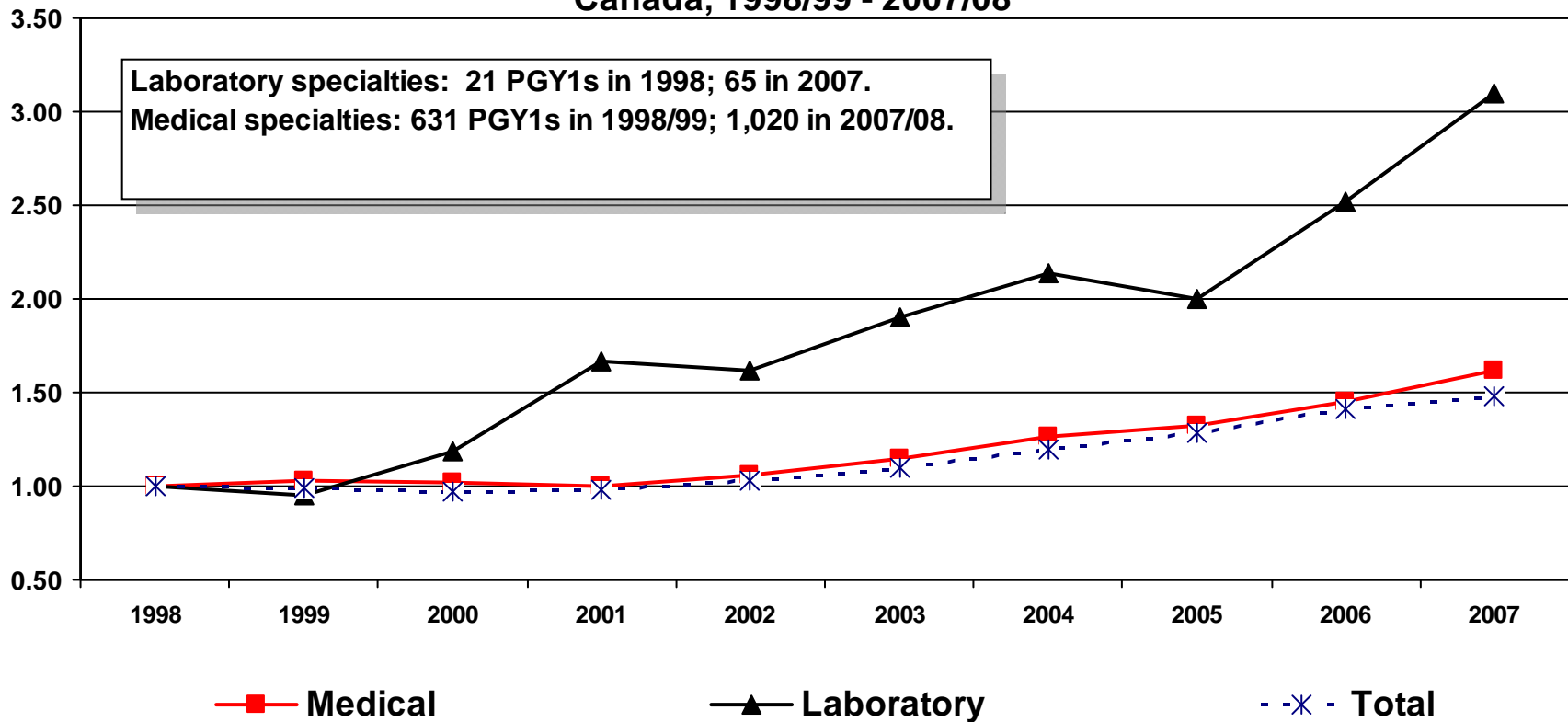
Source: CAPER and ORIS, AFMC, 2008



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Post-MD Program Enrolment

Change in First Year Post-MD Enrolment by Broad Specialty,
Canada, 1998/99 - 2007/08



Source: CAPER, AFMC, 2008.

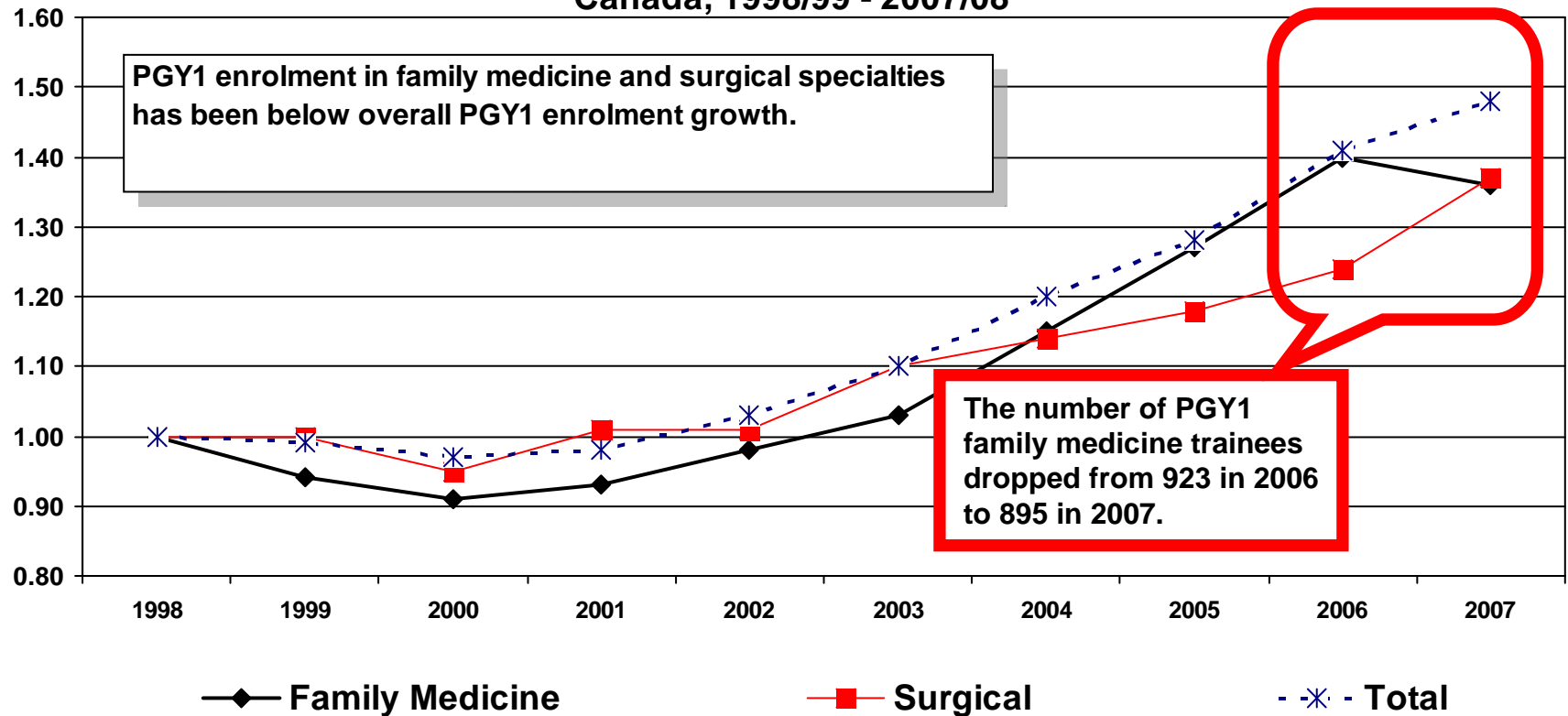
Note: Change = Current Year PGY1s / 1998 PGY1s.



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Post-MD Program Enrolment

Indexed Change in First Year Post-MD Enrolment by Broad Specialty, Canada, 1998/99 - 2007/08



Source: CAPER, AFMC, 2008.

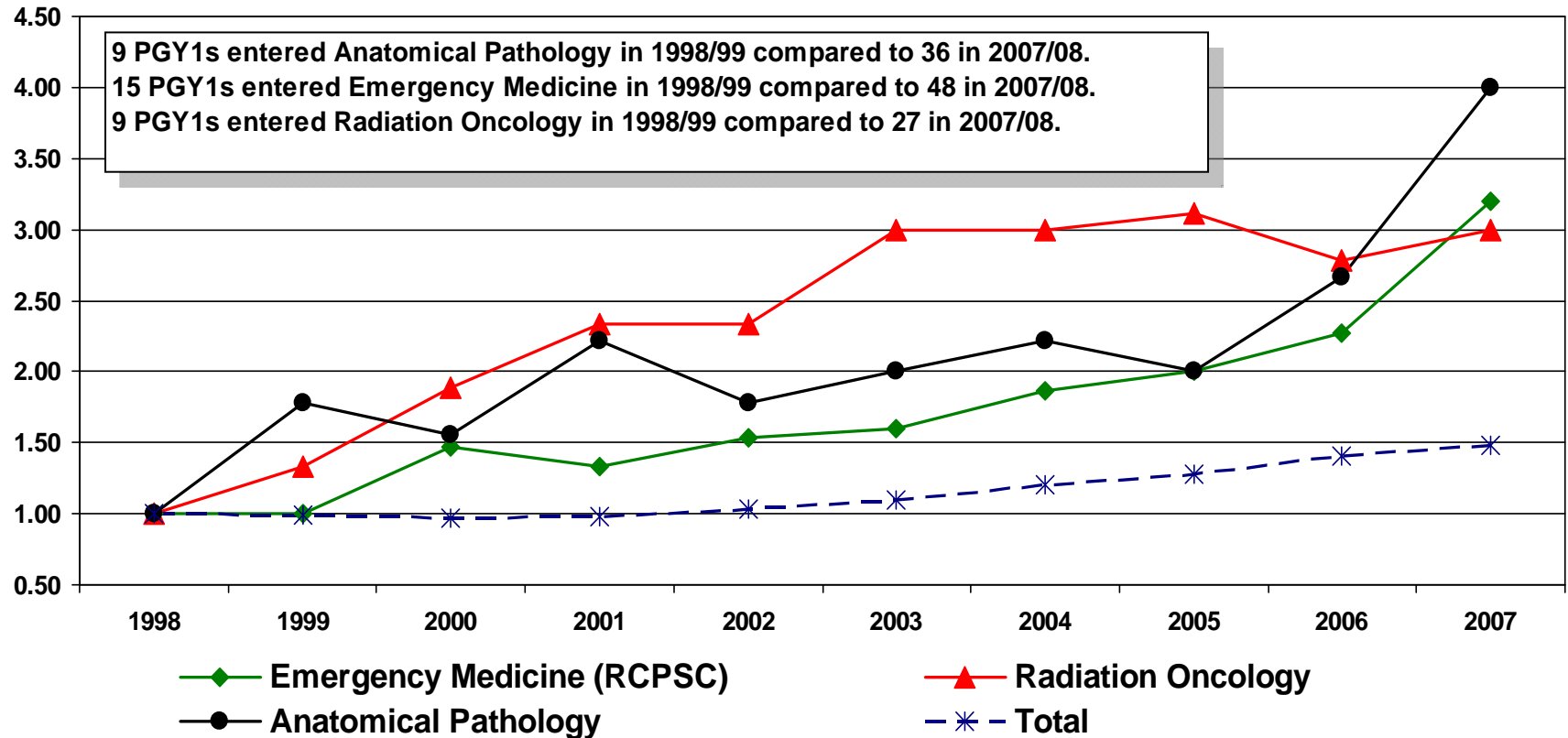
Note: Change = Current Year PGY1s / 1998 PGY1s.



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Post-MD Program Enrolment

Change in First Year Post-MD Enrolment for High Growth Programs, Canada,
1998/99 - 2007/08



Source: CAPER, AFMC, 2008.

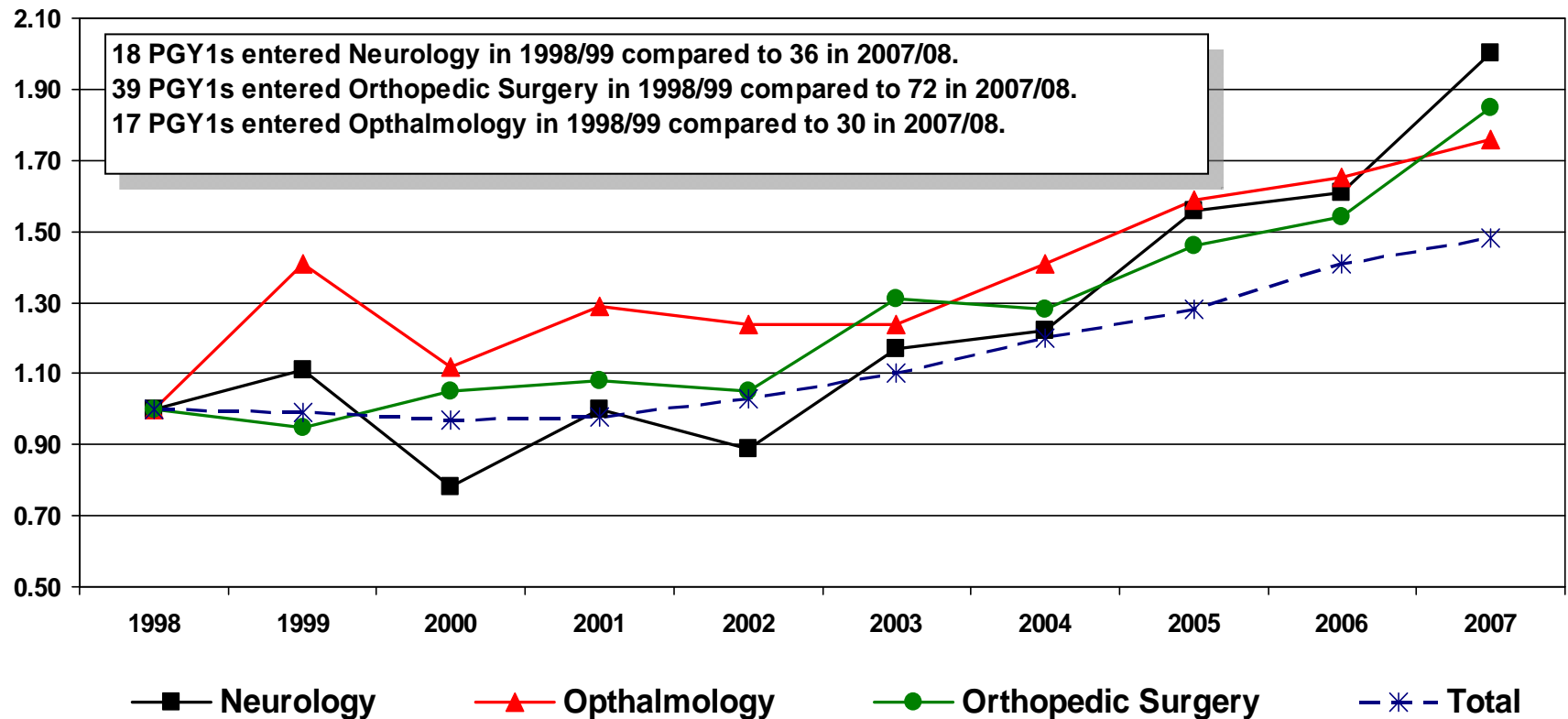
Note: Change = Current Year PGY1s / 1998 PGY1s.



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Post-MD Program Enrolment

Change in First Year Post-MD Enrolment for High Growth Programs, Canada,
1998/99 - 2007/08



Source: CAPER, AFMC, 2008.

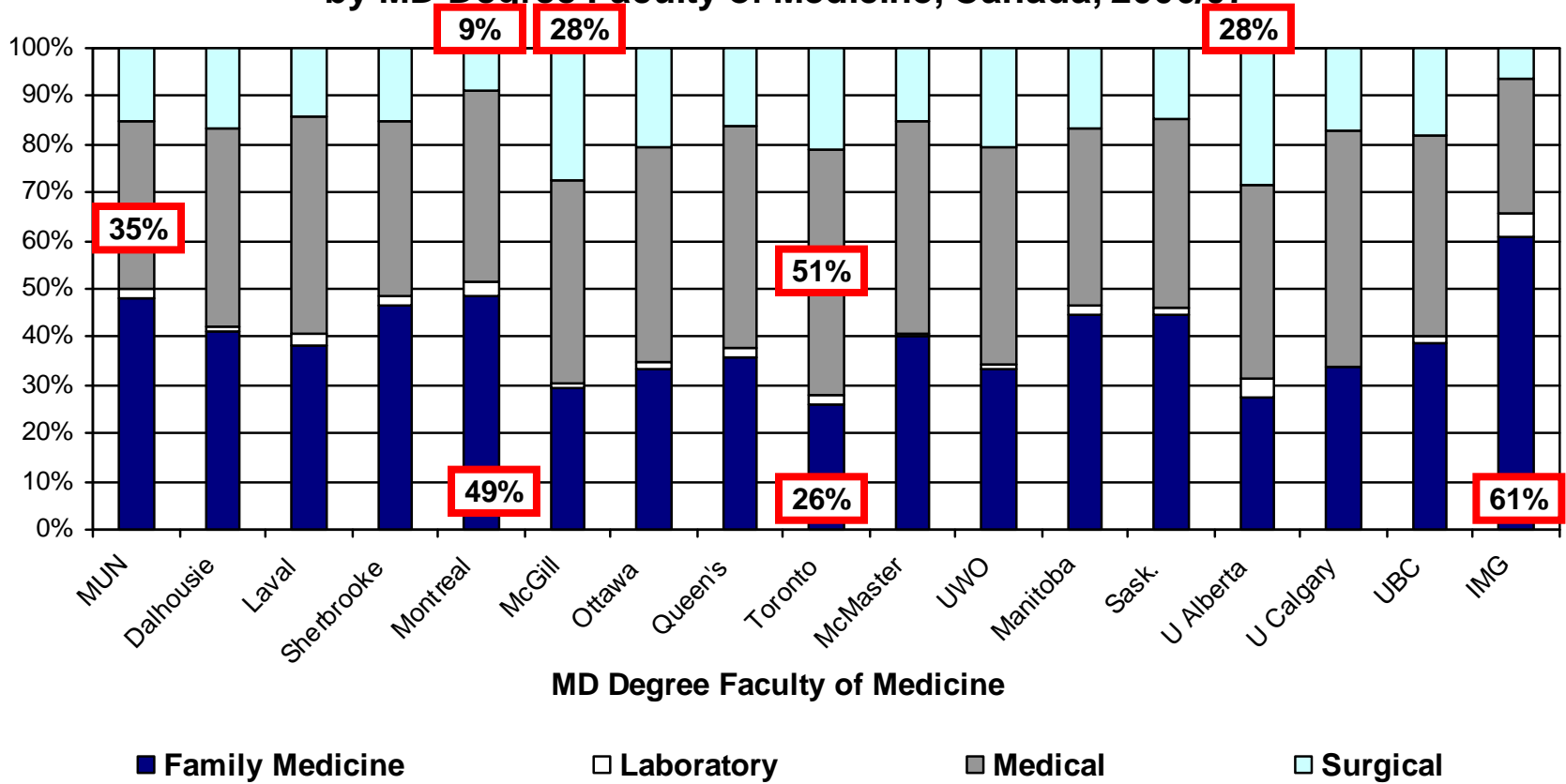
Note: Change = Current Year PGY1s / 1998 PGY1s.



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Post-MD Program Enrolment

Distribution of First Year Post-MD Trainees Across Broad Specialties
by MD Degree Faculty of Medicine, Canada, 2006/07



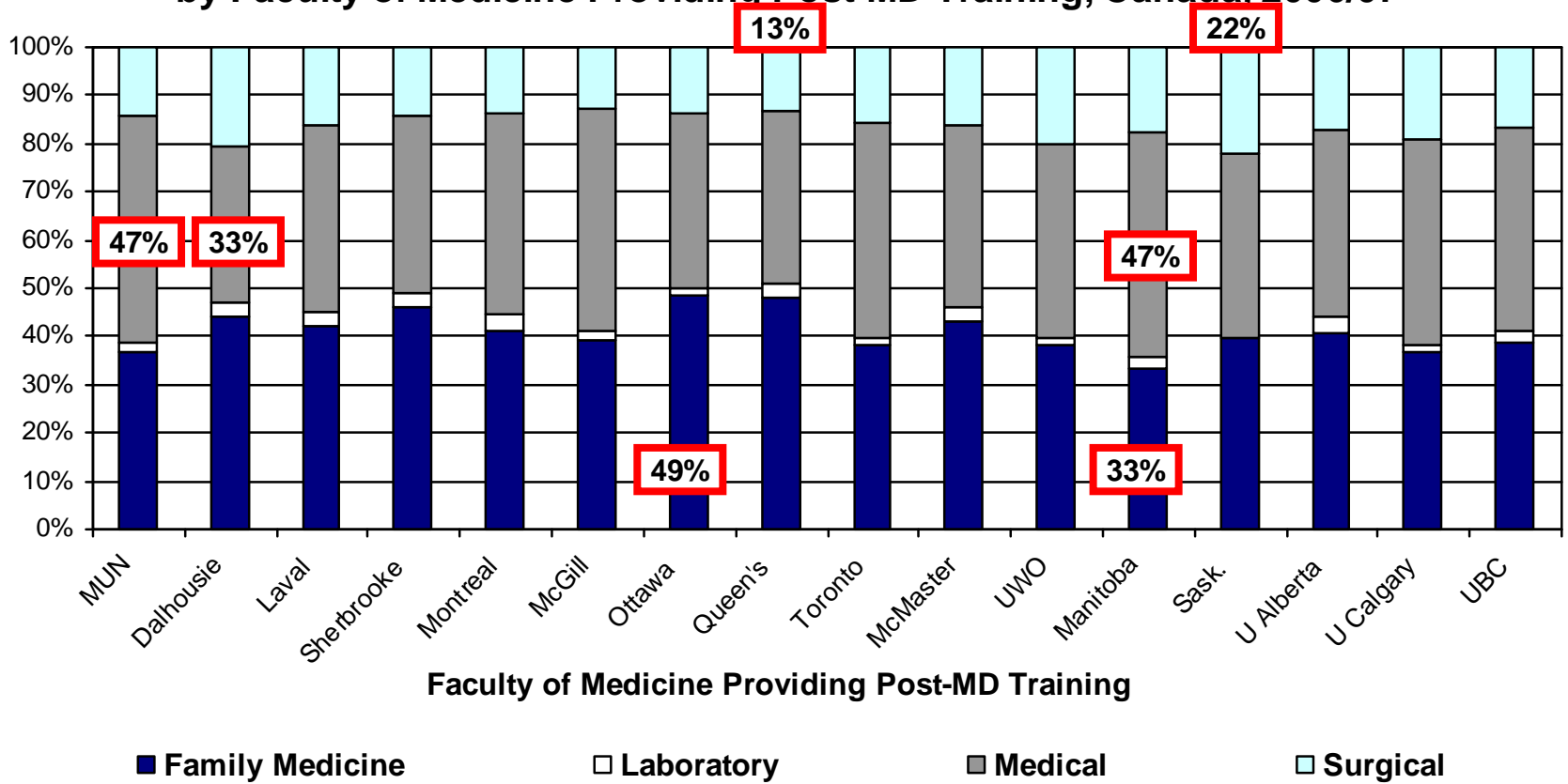
Source: AFMC CAPER, 2007; Note: Visa trainees not included.



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Post-MD Program Enrolment

Distribution of First Year Post-MD Trainees Across Broad Specialties by Faculty of Medicine Providing Post-MD Training, Canada, 2006/07



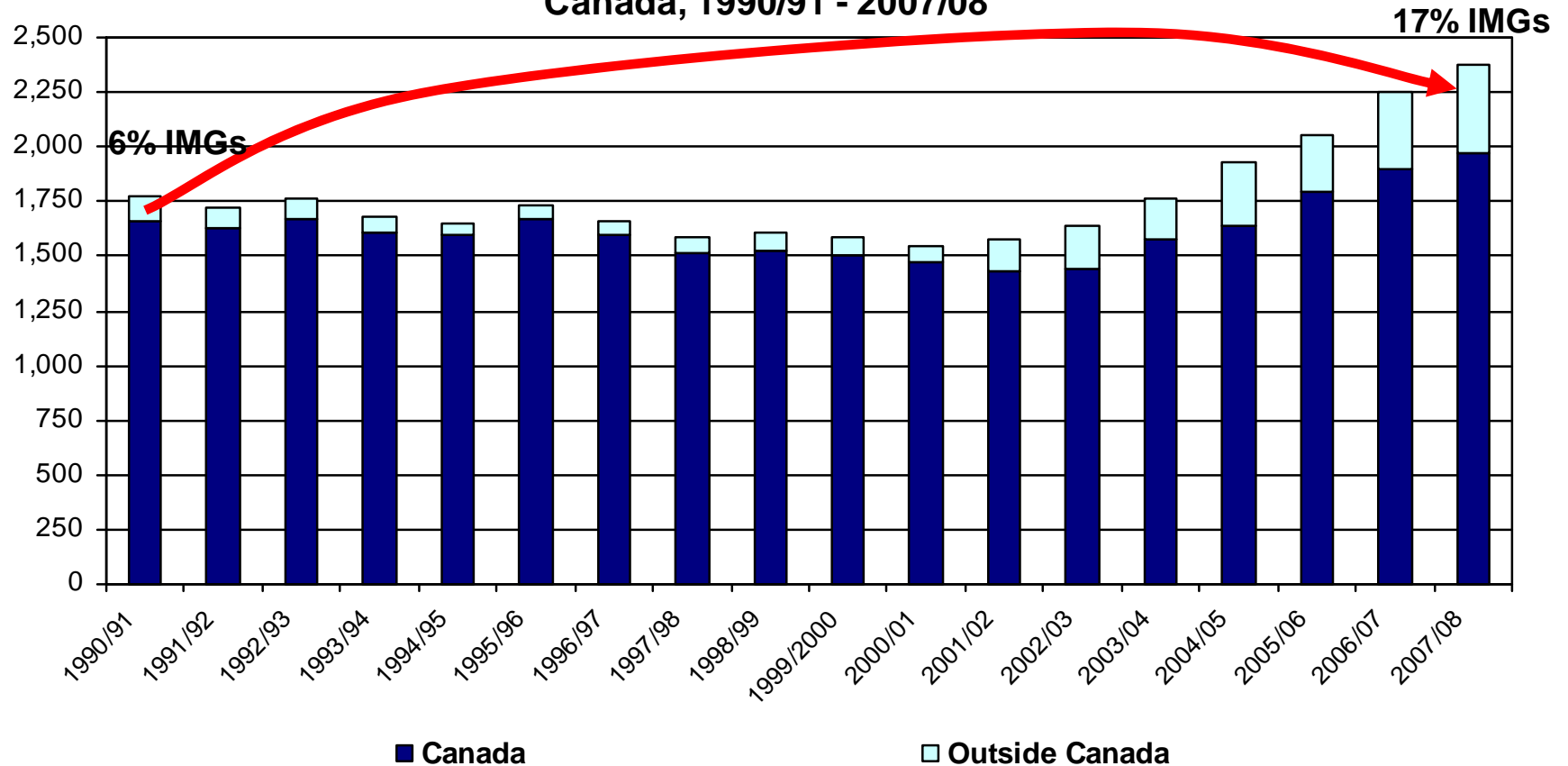
Source: AFMC CAPER, 2007; Note: Visa trainees not included.



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IMG Post-MD Enrolment

First Year Post-MD Trainees by Place of MD Graduation,
Canada, 1990/91 - 2007/08



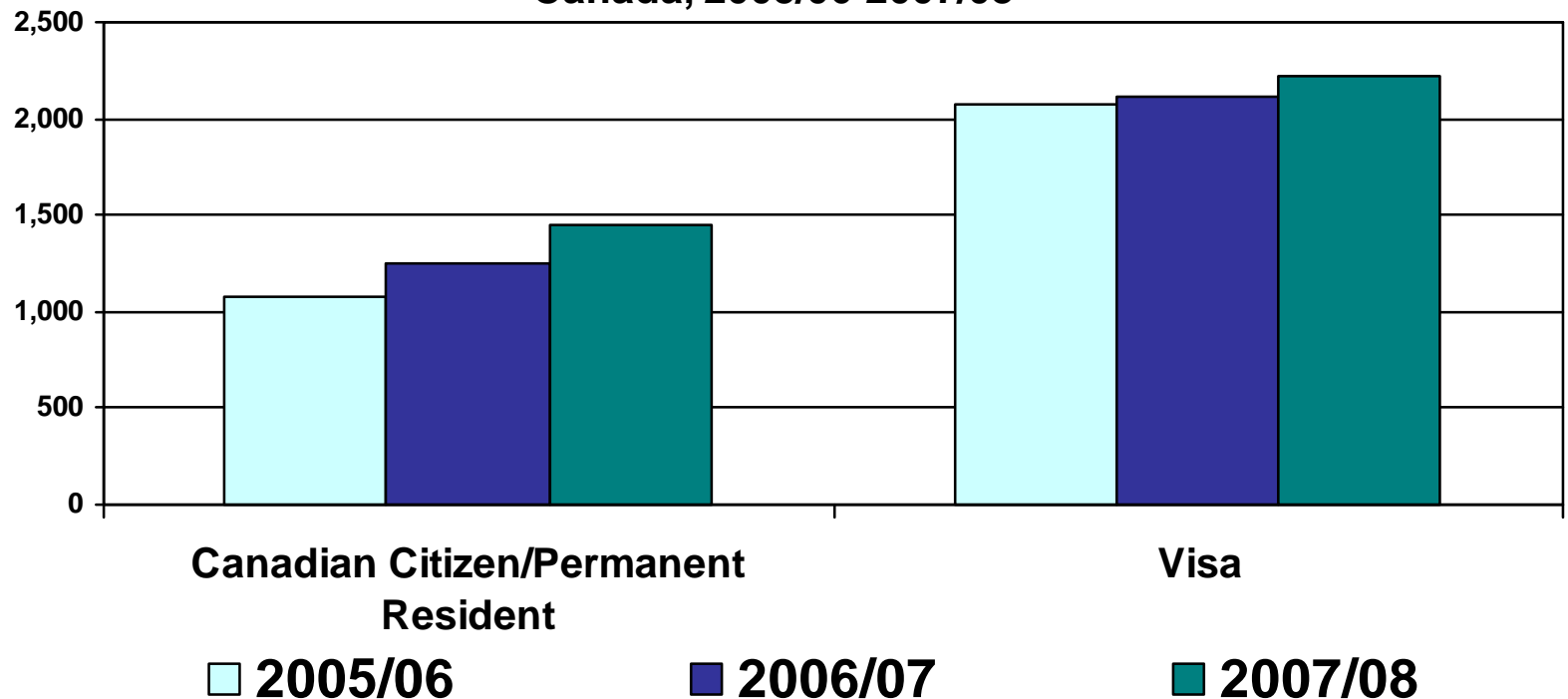
Source: CAPER, AFMC, 2008



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IMG Post-MD Enrolment

**Legal Status of Post-MD IMG Trainees,
Canada, 2005/06-2007/08**



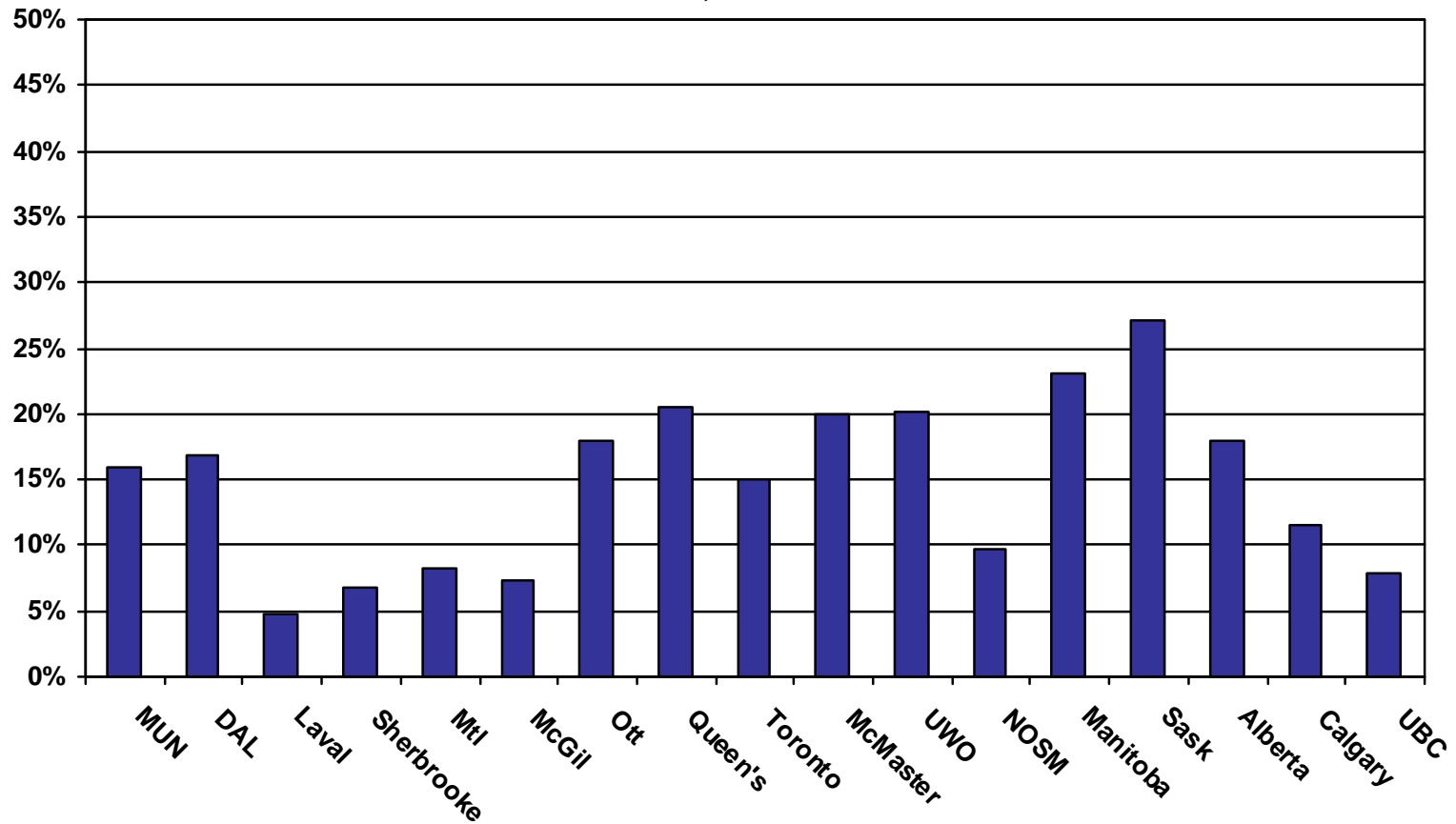
Source: National IMG Database, AFMC, 2008



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IMG Post-MD Enrolment

Percent of Post-MD Trainees Who Are IMGs, by Faculty of Medicine, Canada, 2007/08



Source: National IMG Database, AFMC, 2008

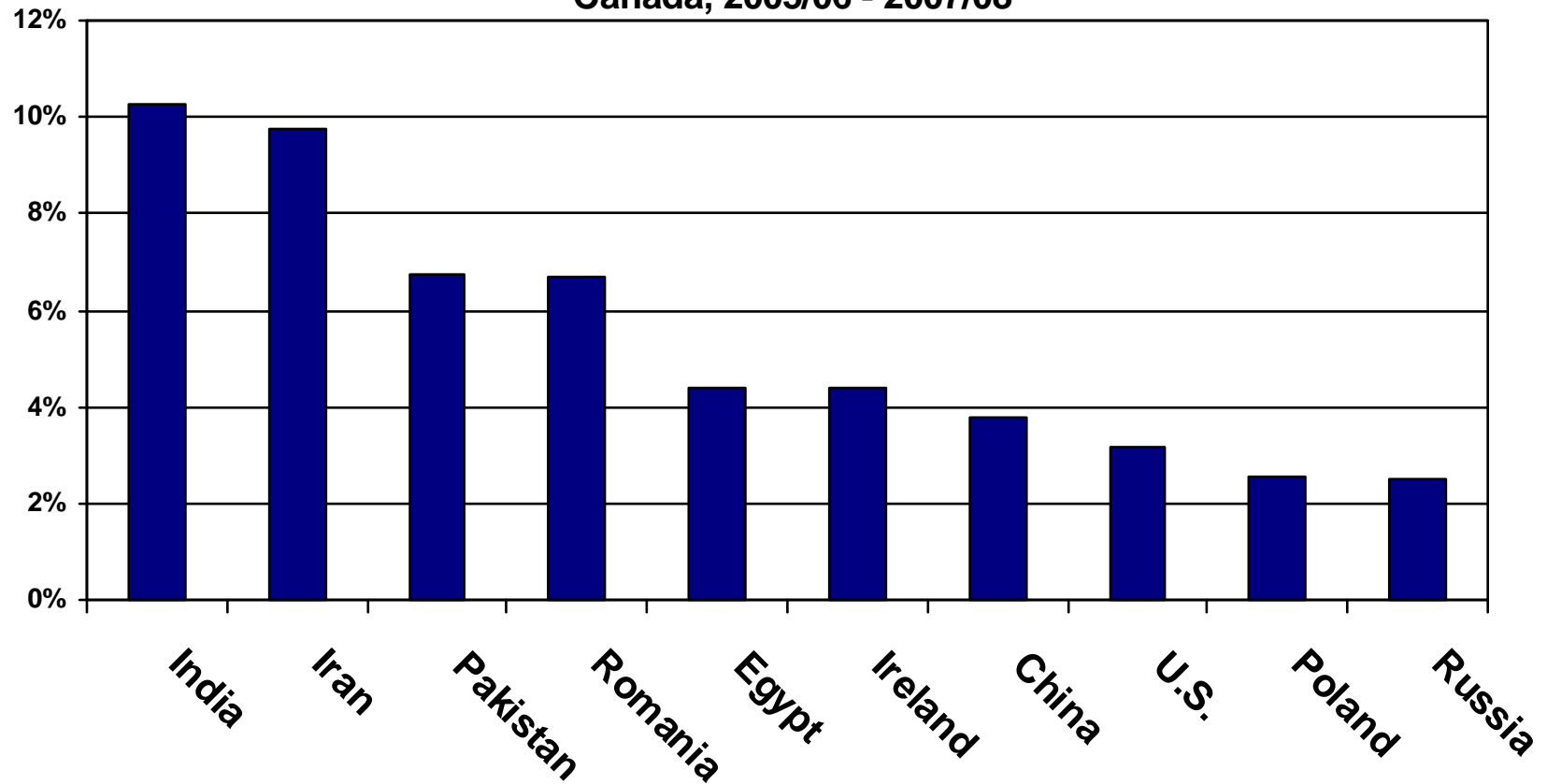
Note: Excludes Fellows & Visa Trainees



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IMG Post-MD Enrolment

MD Country Top 10 for IMG Post-M.D. Trainees,
Canada, 2005/06 - 2007/08



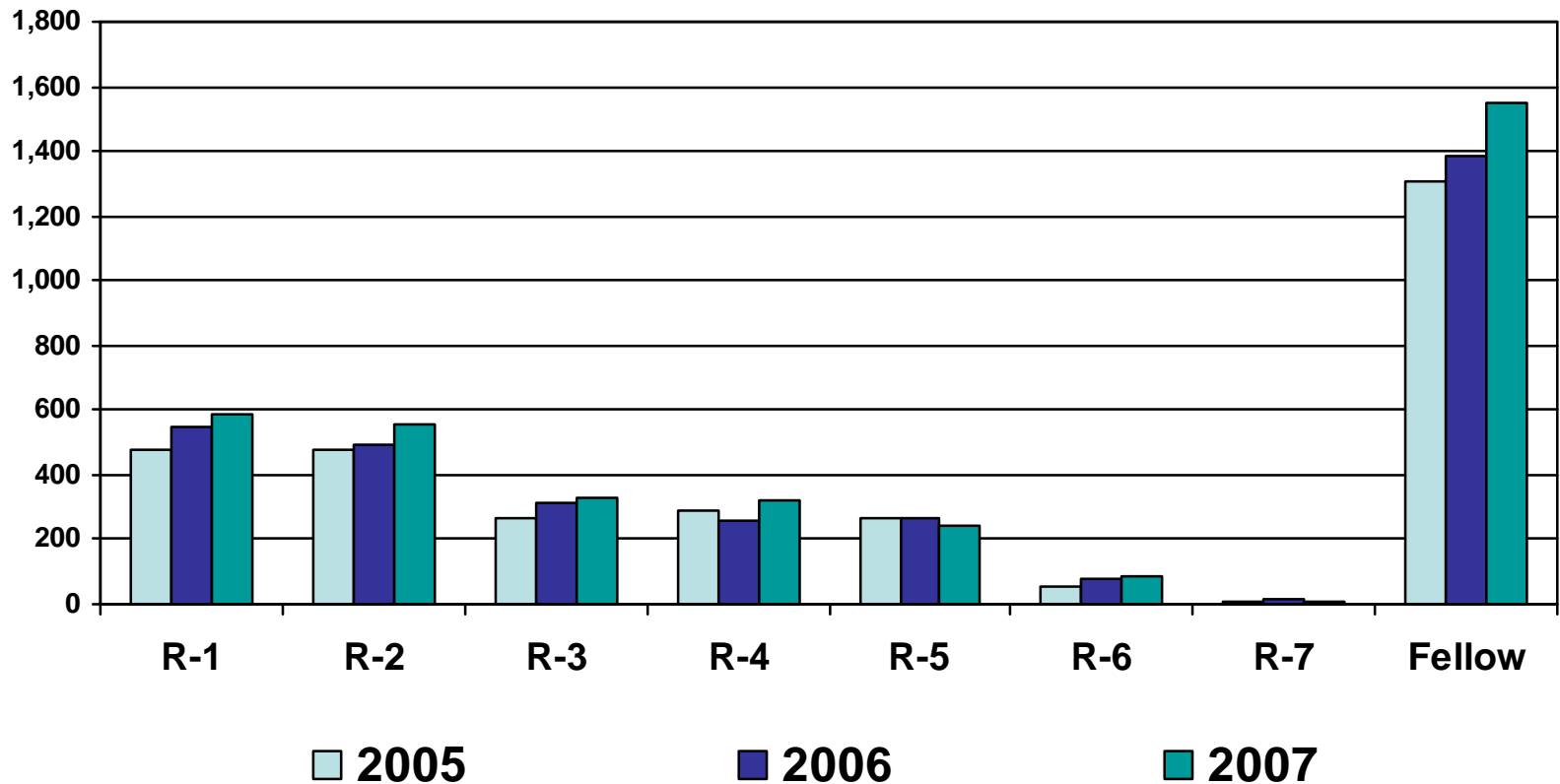
Source: National IMG Database, AFMC, 2008. Note: Excludes fellow s and visa trainees.



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IMG Post-MD Enrolment

IMG Training Rank Distribution - Visa Trainees Included,
Canada, 2005/06 - 2007/08



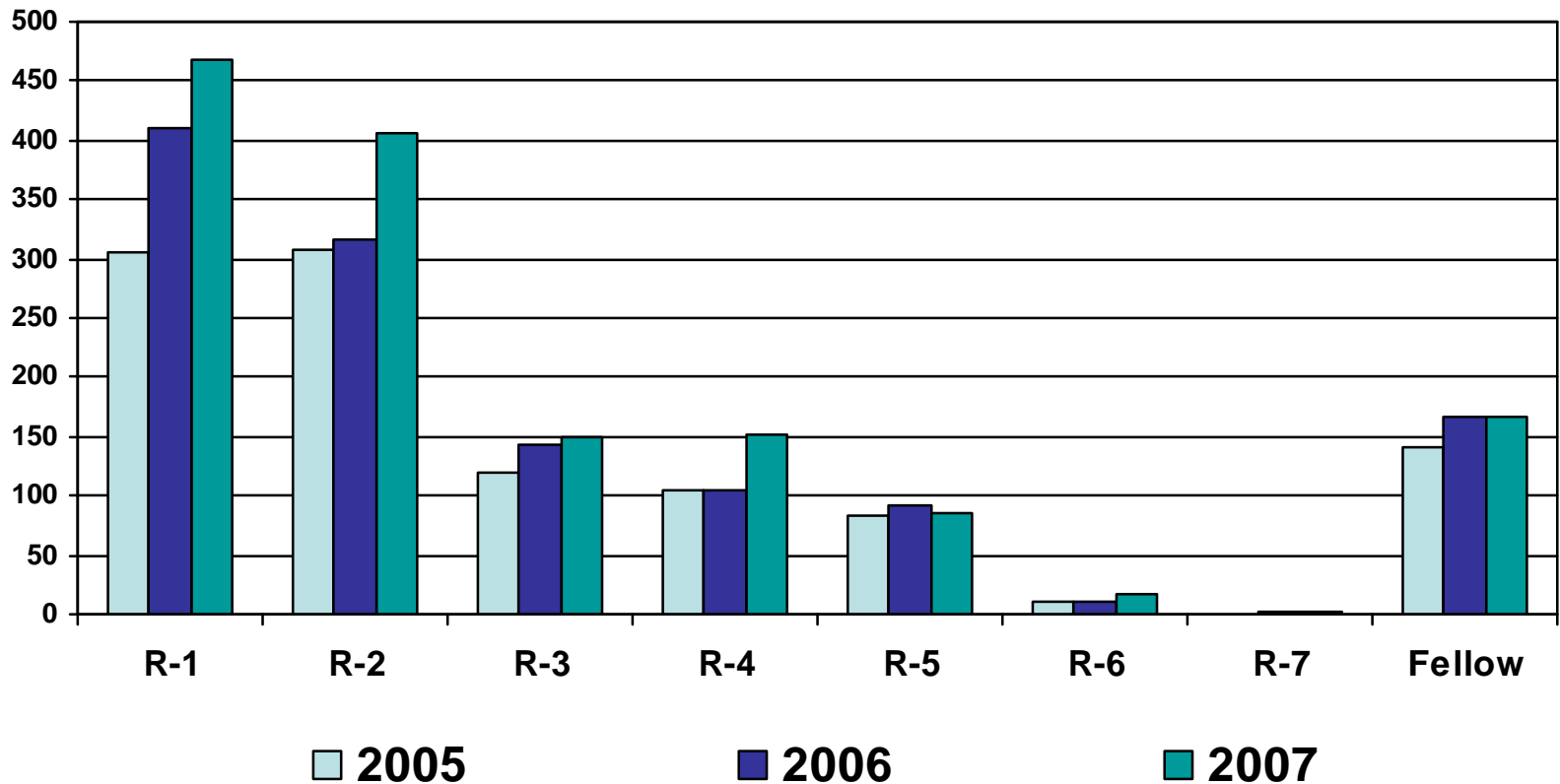
Source: National IMG Database, AFMC, 2008.



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IMG Post-MD Enrolment

IMG Training Rank Distribution - Visa Trainees Excluded,
Canada, 2005/06 - 2007/08



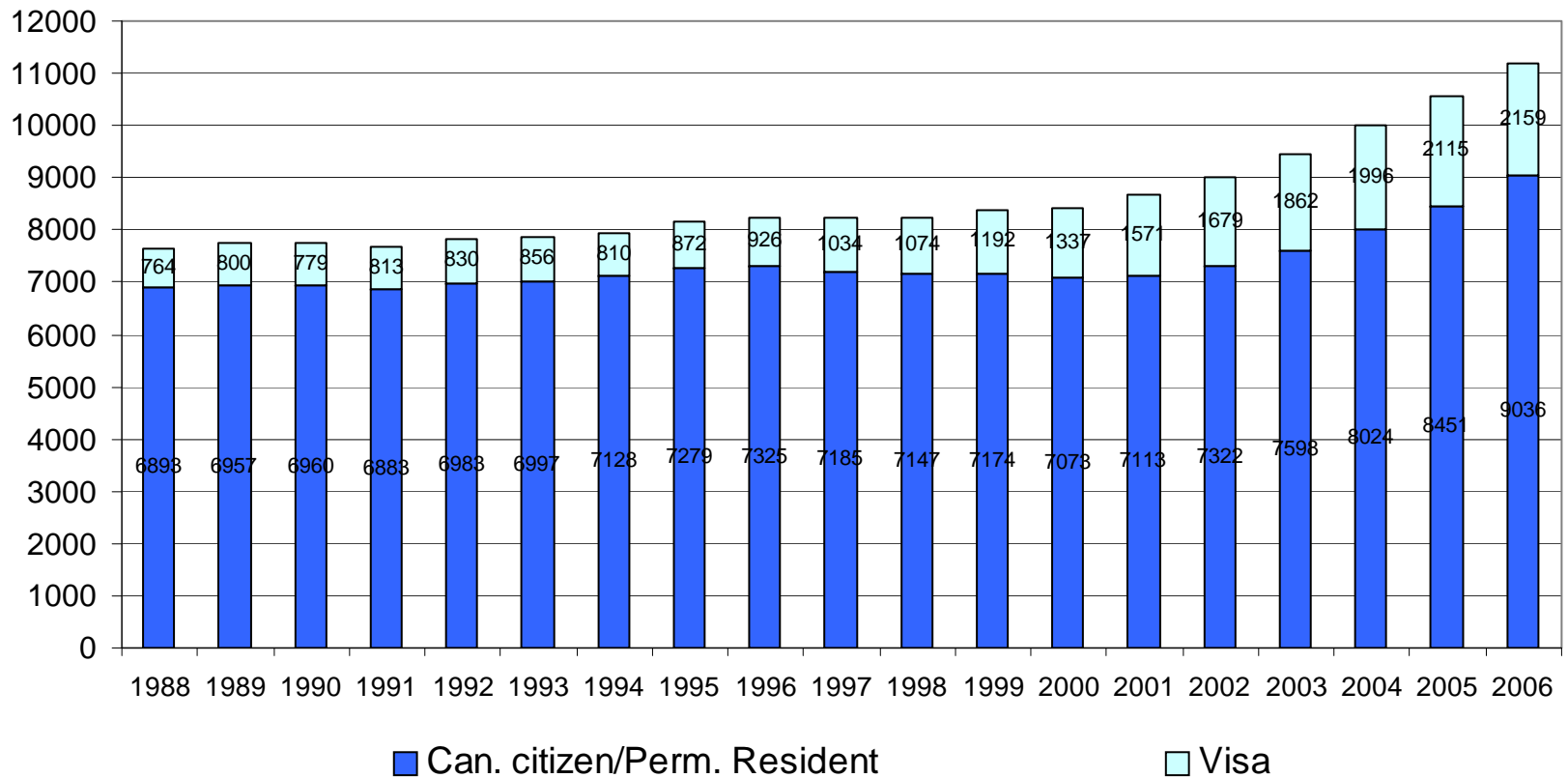
Source: National IMG Database, AFMC, 2008.



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Post-MD Visa Trainees

Post-M.D. Trainees by Legal Status, 1988-2006



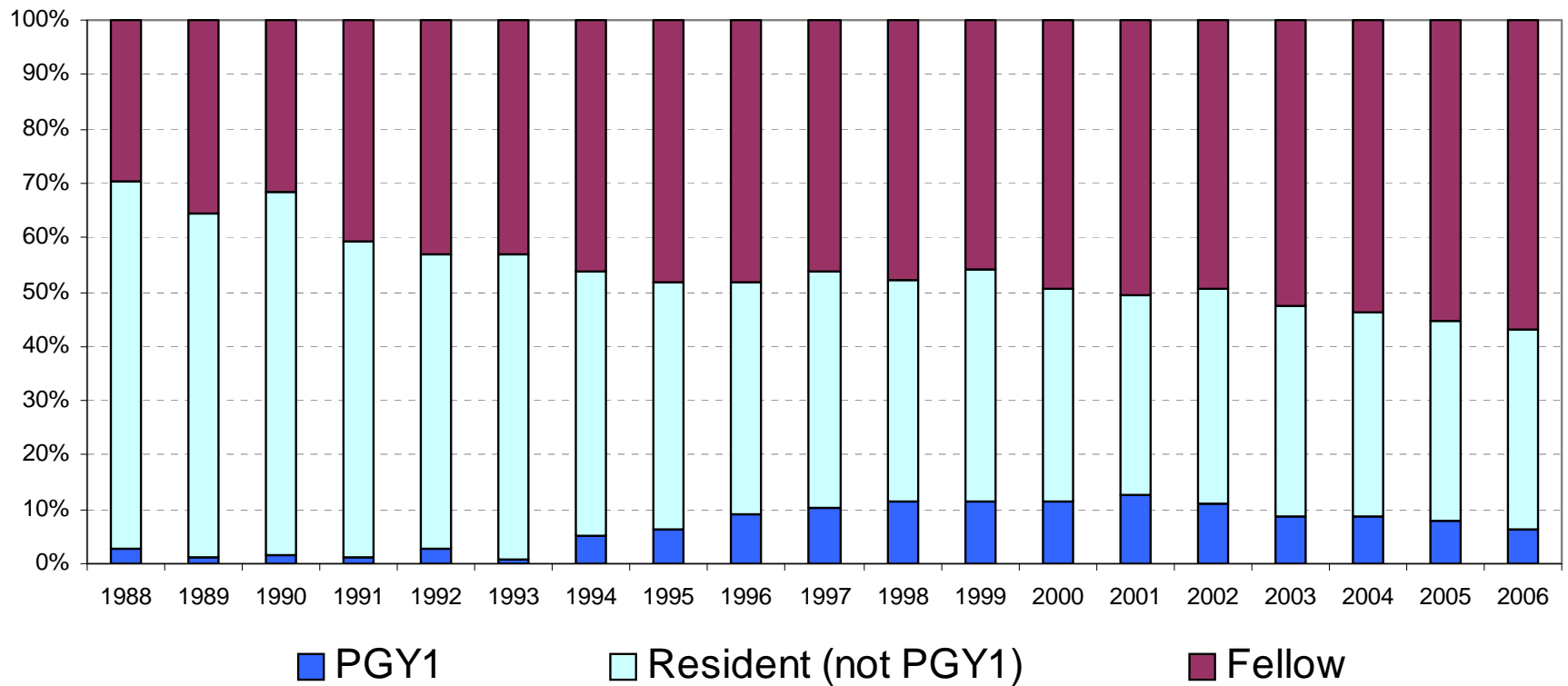
Source: Canadian Post-M.D. Education Registry (CAPER)



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Post-MD Visa Trainees

Percent Distribution of Visa Trainees by Post-M.D. Training Level, 1988 - 2006



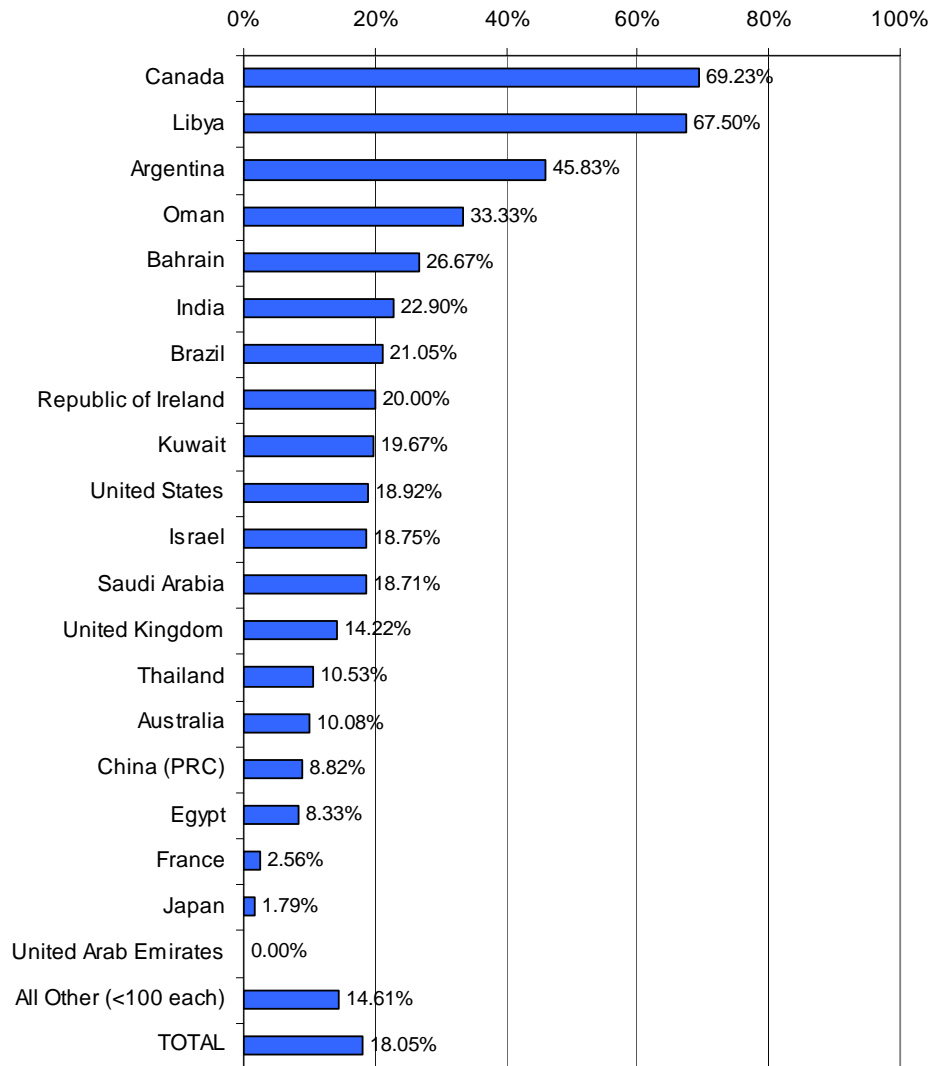
Source: Canadian Post-M.D. Education Registry (CAPER)



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After Post-MD Training

Percent of Visa Trainees Who Are In Canada Two Years After Completion of Post-M.D. Training, by Country of MD Graduation. Based on Post-M.D. Trainees Exiting in 2002, 2003 and 2004 .



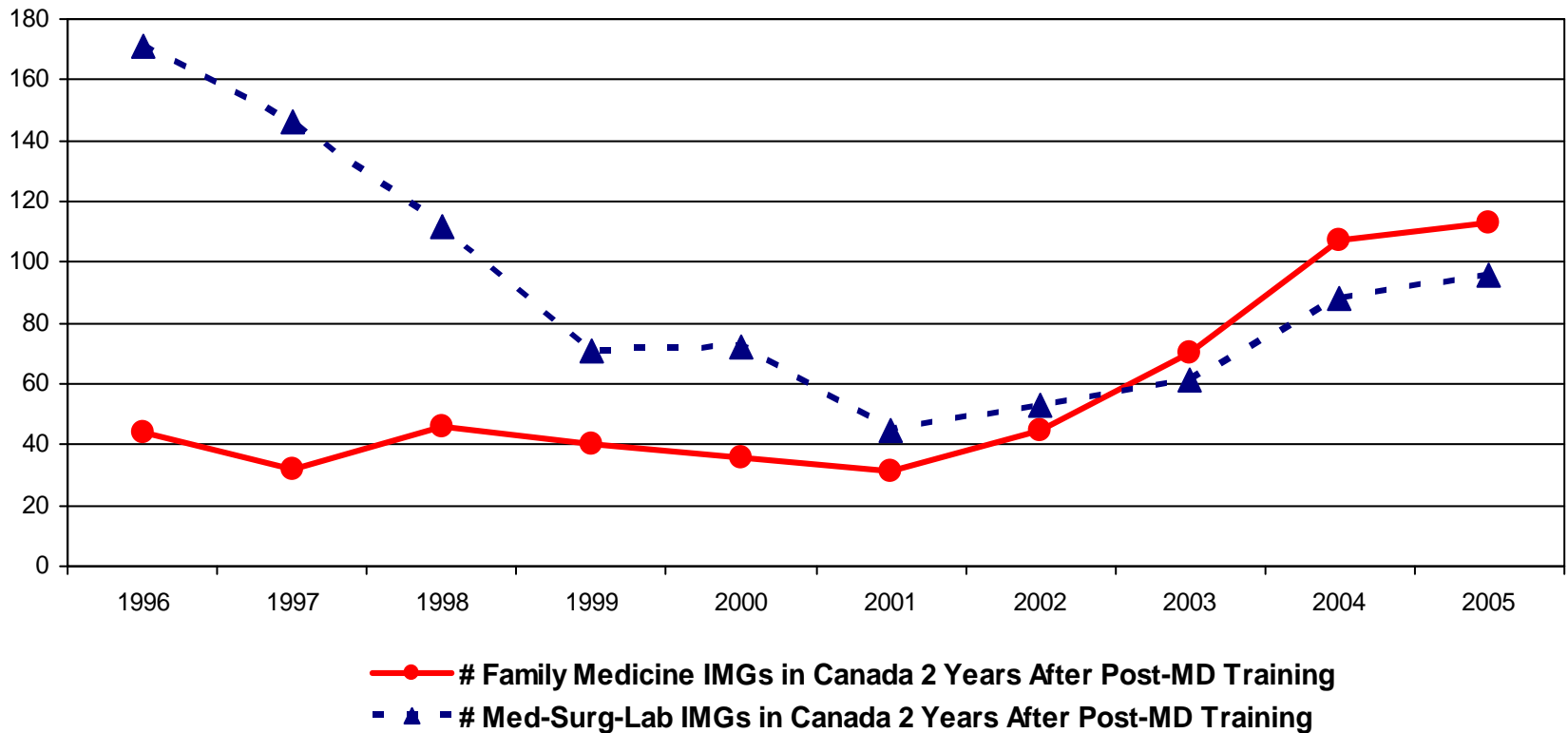
Source: Canadian Post-M.D. Education Registry (CAPER)



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After Post-MD Training

Number of IMGs in Canada Two Years After Completion of Post-MD Training in Canada,
1996/97 - 2005/06 Practice Entry Cohorts



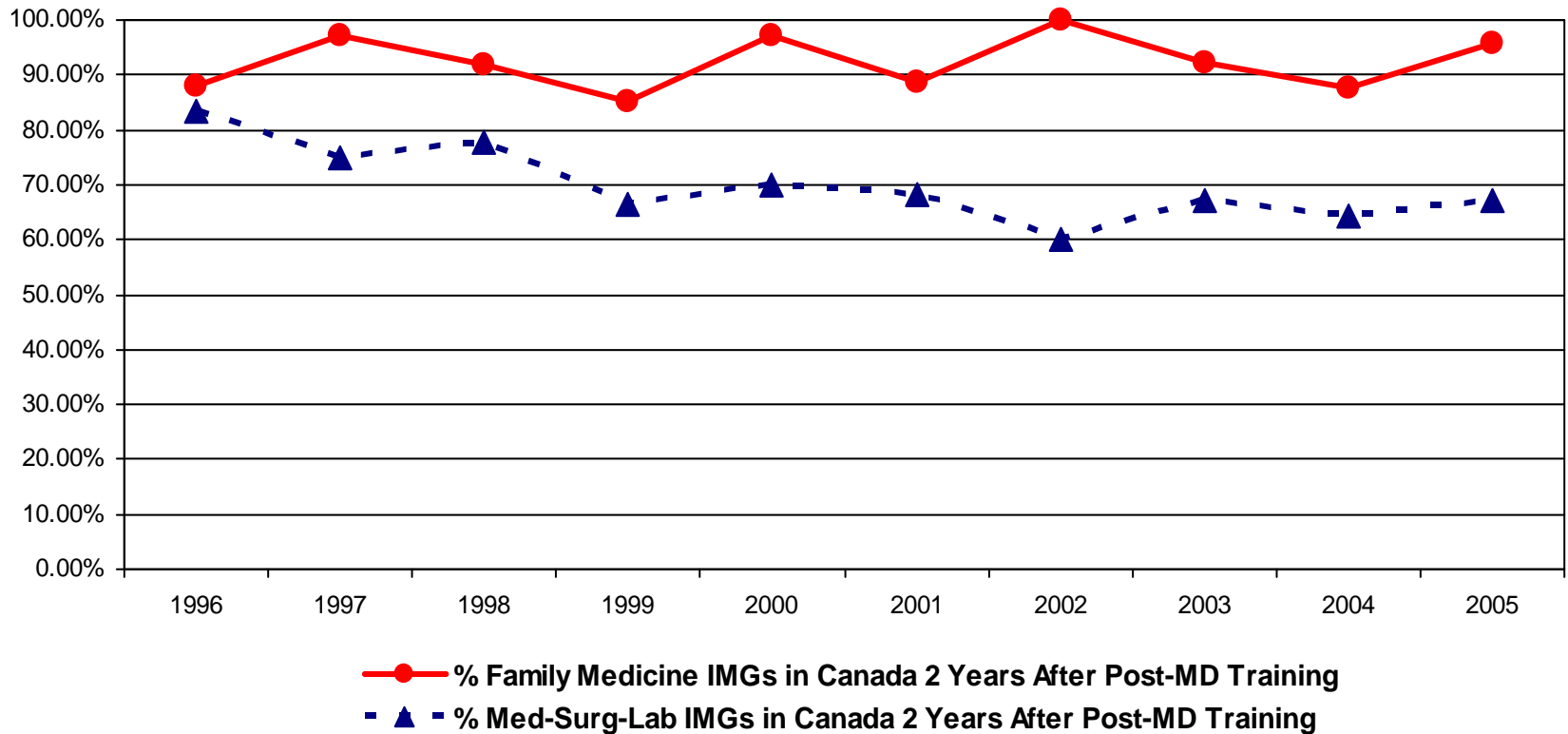
Source: CAPER, AFMC, 2007.



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After Post-MD Training

Percent of IMGs in Canada Two Years After Completion of Post-MD Training in Canada, 1996-2005 Practice Entry Cohorts



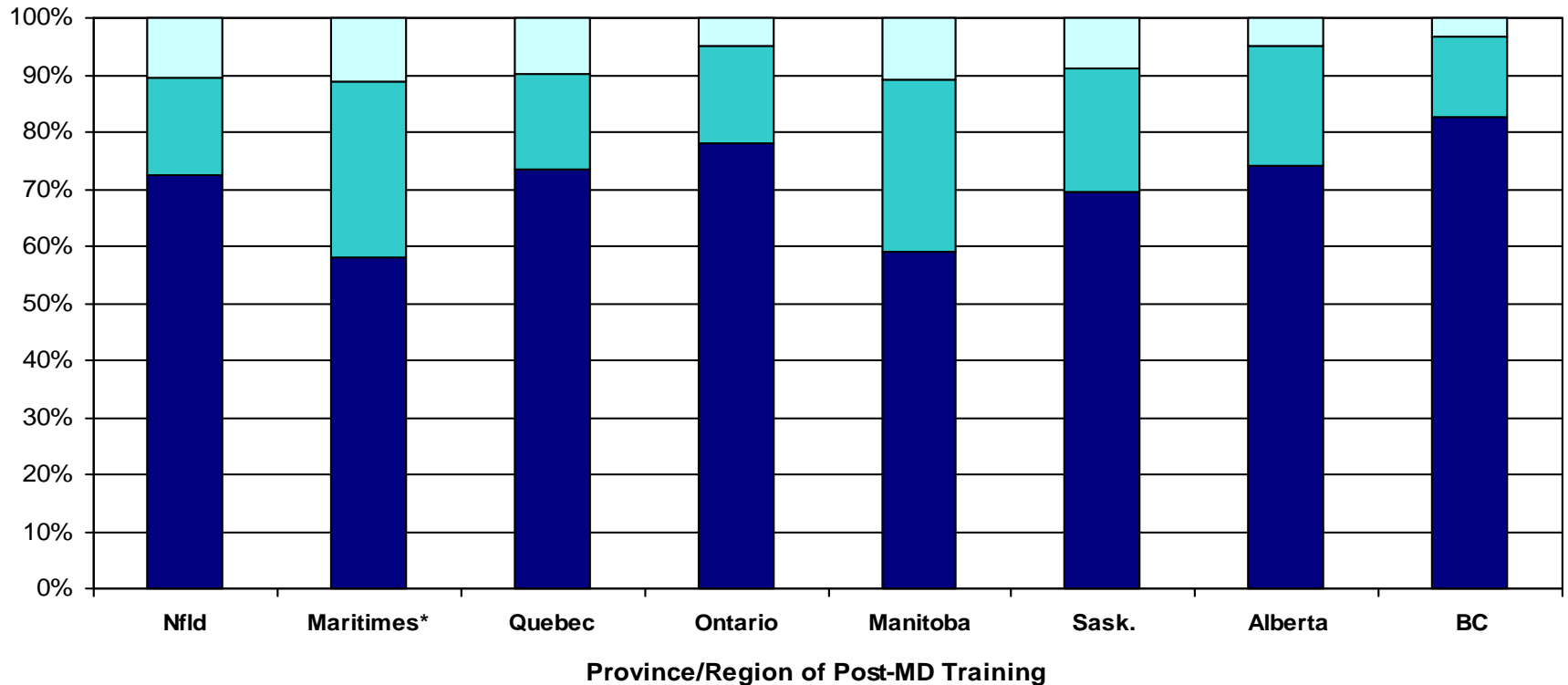
Source: CAPER, AFMC, 2007.



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After Post-MD Training

2007 Practice Location of Post-MD Trainees Who Exited Training in 2005
(2 Year Practice Location)



■ Within Prov/Region of Post-MD Exit

■ Inside Canada, Outside Prov/Region of Post-MD Exit

□ Outside Canada or Not Located

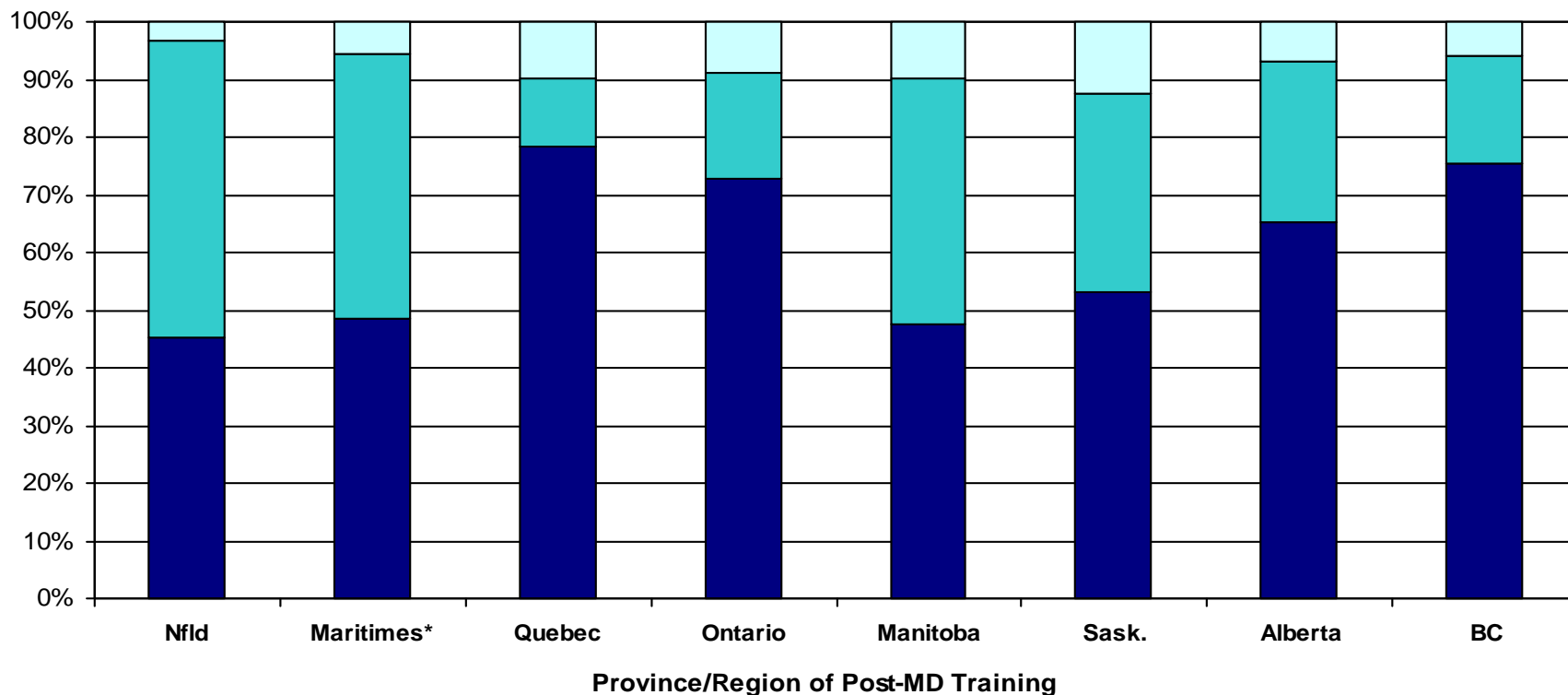
*Includes Dalhousie post-MD graduates practising in PEI, Nova Scotia and New Brunswick; Source: CAPER, AFMC, 2008.



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After Post-MD Training

2007 Practice Location of Post-MD Trainees Who Exited Training in 2002
(5 Year Practice Location)



■ Within Prov/Region of Post-MD Exit

■ Inside Canada, Outside Prov/Region of Post-MD Exit

□ Outside Canada or Not Located

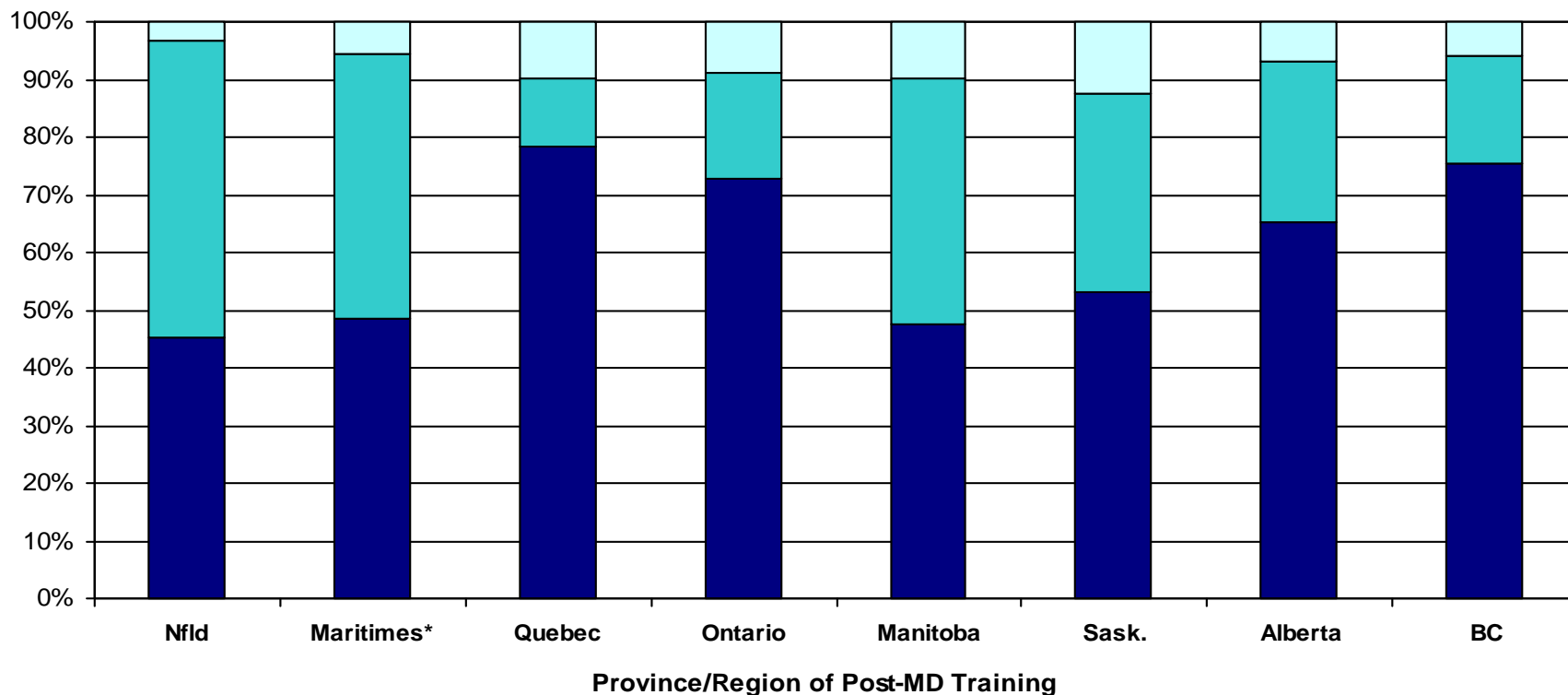
*Includes Dalhousie post-MD graduates practising in PEI, Nova Scotia and New Brunswick; Source: CAPER, AFMC, 2008.



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After Post-MD Training

2007 Practice Location of Post-MD Trainees Who Exited Training in 2002
(5 Year Practice Location)



■ Within Prov/Region of Post-MD Exit

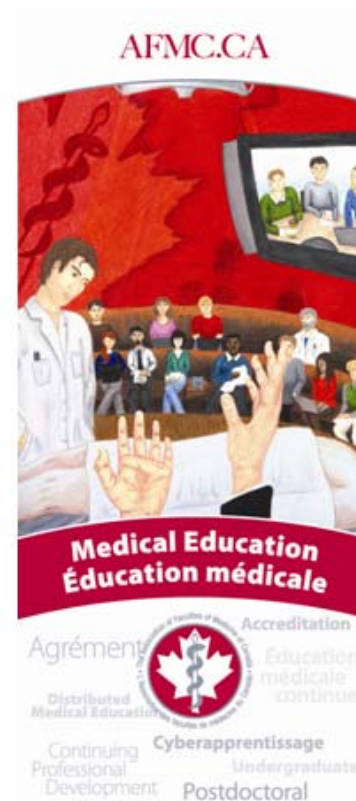
■ Inside Canada, Outside Prov/Region of Post-MD Exit

□ Outside Canada or Not Located

*Includes Dalhousie post-MD graduates practising in PEI, Nova Scotia and New Brunswick; Source: CAPER, AFMC, 2008.

Thank You

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web www.afmc.ca and www.caper.ca



Where does the data fit in?

Lynda Buske
Director, Workforce Research
Canadian Medical Association



CAPER Forum

Using CAPER data at the Canadian Medical Association

May 3, 2008

Montreal

Lynda Buske



Key Considerations in Physician Resource Planning

- **What do you have now?**
- **What are they doing?**
- **Where are they located?**
- **What will you have in the future?**
- **What do you need now?**
- **What will you need in the future?**

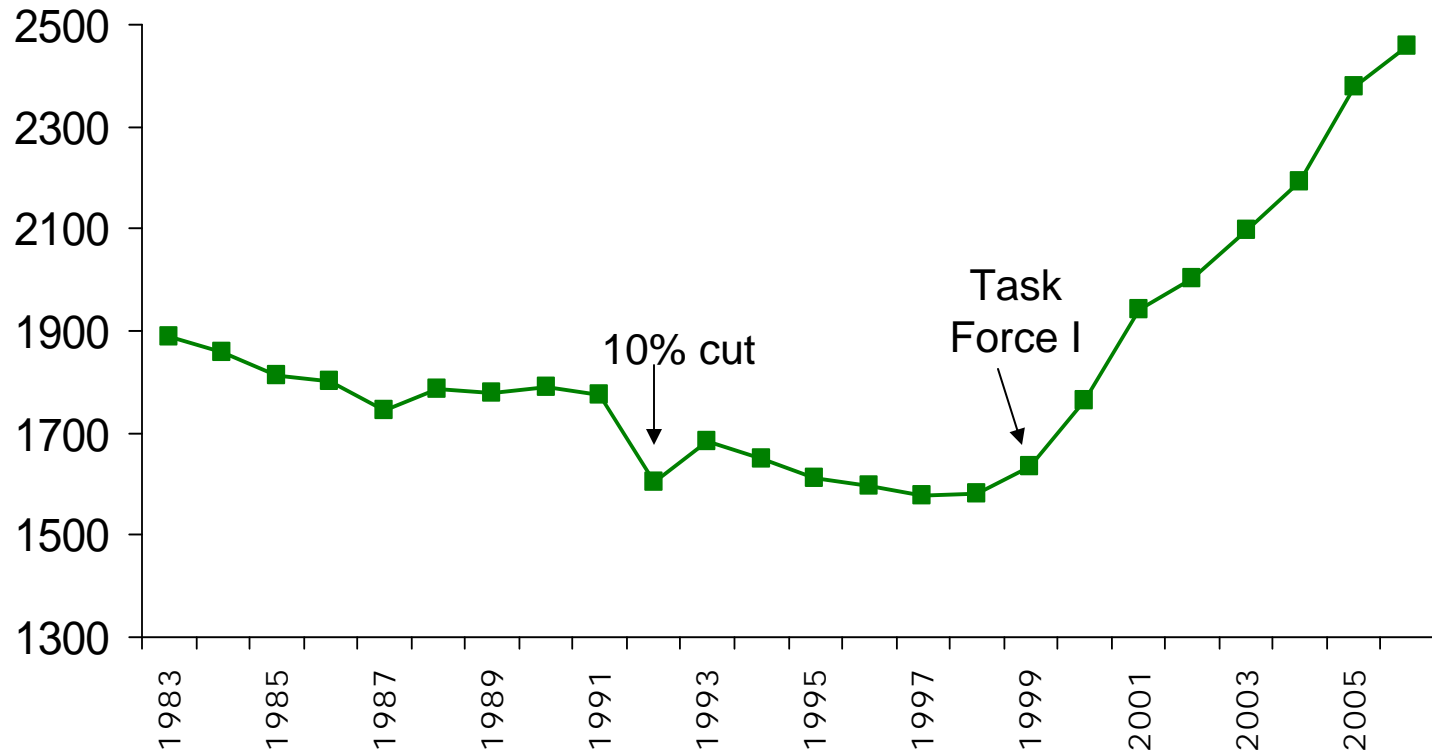


Topic areas that are addressed with CAPER/ORIS data

- **Potential supply of physicians**
- **Tracking undergraduate enrolment & tuition**
- **Profile of current residents**
- **Longitudinal information on residents**
- **Average length of training for Cdns vs IMGs**
- **Tracking into practice 2, 5,10 years later**



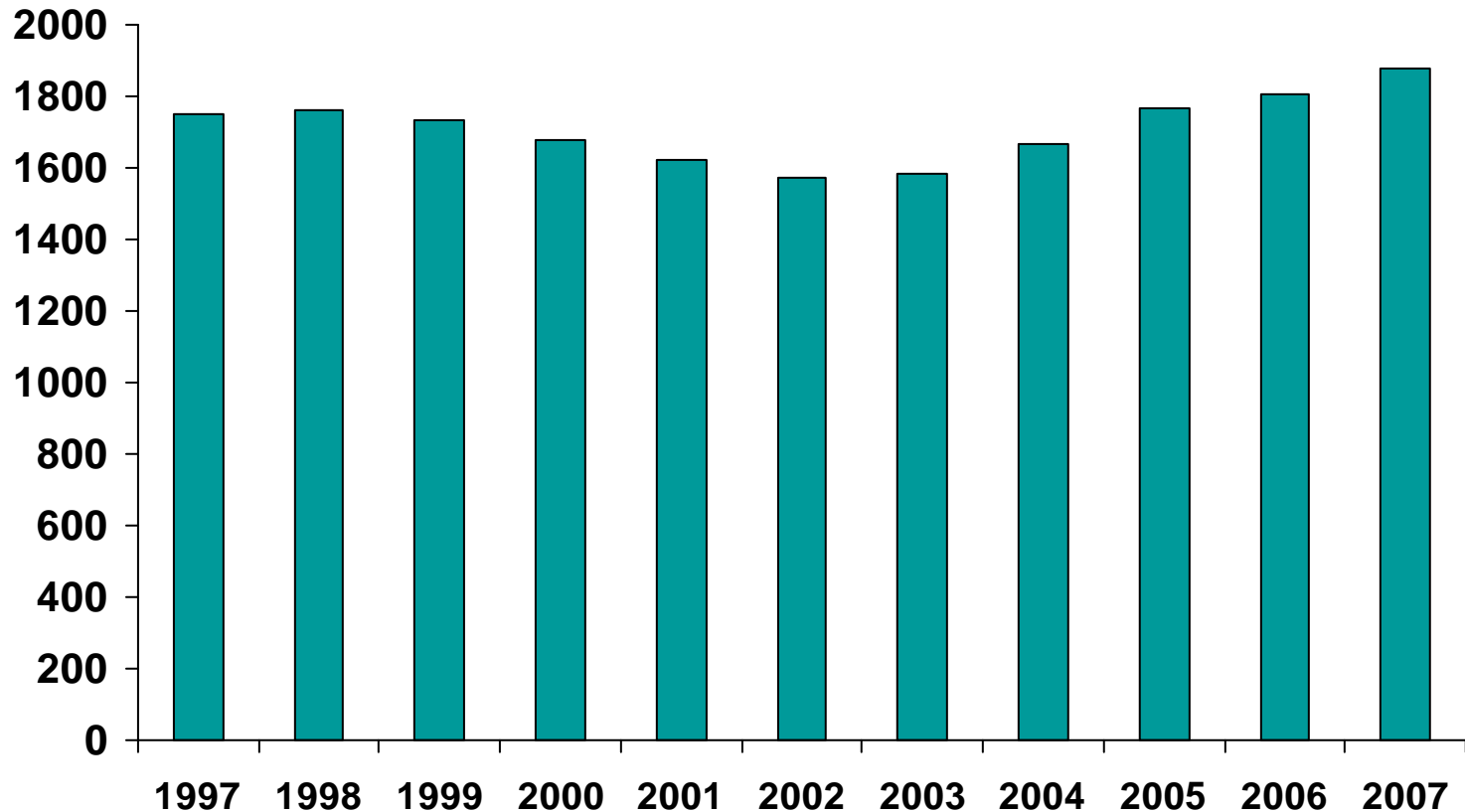
First Year Enrolment in Medical Schools (including 40-50 Visa students)



Source: Medical Education Statistics, AFMC



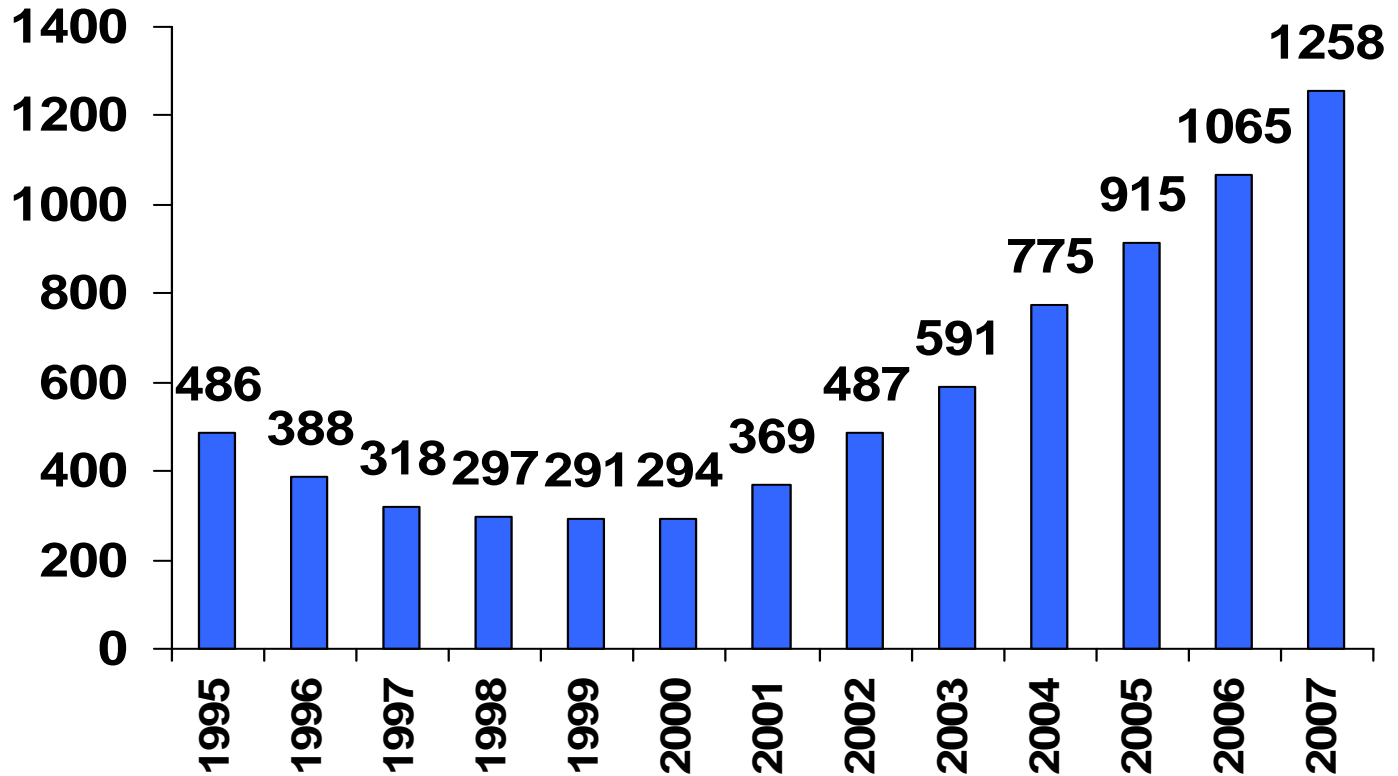
Practice Entry Cohorts 1997 to 2007 (excludes visa trainees)



Cdn grads who proceeded directly through training and
IMGs who were Cdn citizens or permanent residents



IMGs in Ministry funded positions across all rank levels (excludes visa trainees)



Source: 2007 Canadian Post-MD Education Registry



Average length of postgraduate training, 2006 practice entry cohort

Specialty	Years in Cdn postgrad	
	Cdn Grad	IMG
Family Med	2.2	2.1
Additional FM	3.1	2.5
Med/Lab	5.6	3.2
Surgical	5.9	3.4

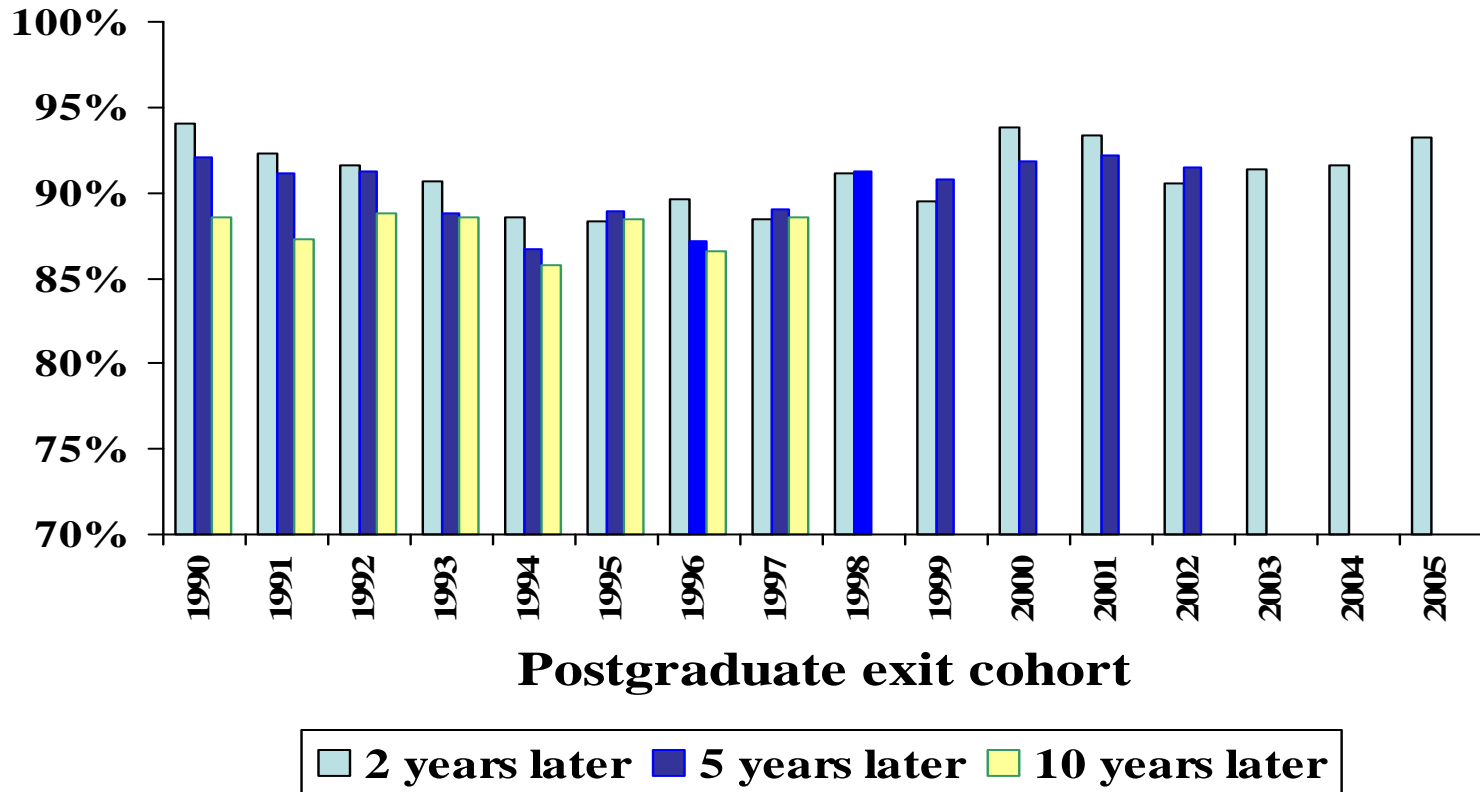


Numbers of visa trainees by country of graduation, 2007

Country of MD Graduation	# of IMG Visa Residents
Saudi Arabia	419
Libya	95
Oman	64
Kuwait	62
Ireland	43
USA	22
Bahrain	21



Percentage of practice entry cohort (CMGs only) located in Canada



Source: CAPER, CMA Masterfile



Physician Resource Evaluation Template (PRET)

- **Practice entry cohort from CAPER largest gain variable in model.**
- **Undergraduate enrolment from ORIS used to estimate future practice entry cohorts**
- **Data supplied by age, sex and specialty.**
- **Location of new physicians crucial for retention calculations for provincial projections.**



Other projects

- **Research papers**
- **Requests from CMA members, researchers, media**
- **Policy updates (phys resource planning; flexibility)**
- **Advocacy activities, speeches**
- **MD Management marketing**
- **Future membership research**