



# Canadian Citizen Graduates of International Medical Schools: Specialty Choice & Rate of GME Entry

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# Purpose

- To examine recent growth in Canadian citizen graduates of international schools pursuing ECFMG Certification and GME in the U.S.
  - Relative to U.S. citizen international medical graduates (IMGs) and other international citizen IMGs
  - Rate of entry into GME once certified by ECFMG
  - Specialty choice, particularly primary care



# Background

- Approximately 25% of physicians in active patient care in the U.S. are graduates of international medical schools (IMGs).
- IMGs are more likely to enter primary care specialties than U.S. graduates.
- Non-U.S. citizen IMGs have contributed to the workforce in underserved areas through visa waiver obligations.

# ECFMG Certification

- Canadian and U.S. citizen graduates of medical schools outside the U.S. and Canada must be certified by ECFMG before:
  - Entering accredited U.S. residency and fellowship programs
  - Applying to take USMLE Step 3
- Eligibility for ECFMG Certification
  - Graduation from an international medical school listed in IMED (non-LCME school, located outside the U.S. or Canada)
    - ❖ Acceptable graduation year
    - ❖ 4 credit (academic) years
  - Examinations: USMLE™ Step 1, Step 2 CK, Step 2 CS
  - Primary source verification of medical education credentials (diploma and transcript)

# Data Sources

- ECFMG Certification data
  - Applicants beginning the ECFMG Certification process (first examination attempt): 1993-2008
  - IMGs certified by ECFMG: 1993-2008\*
- 2008 AMA Physician Masterfile
  - Self-identified specialty
  - Location (state)

\* only those IMGs who were certified through the end of 2004 were identified in the 2008 AMA Physician Masterfile



# Analyses

IMGs by citizenship:

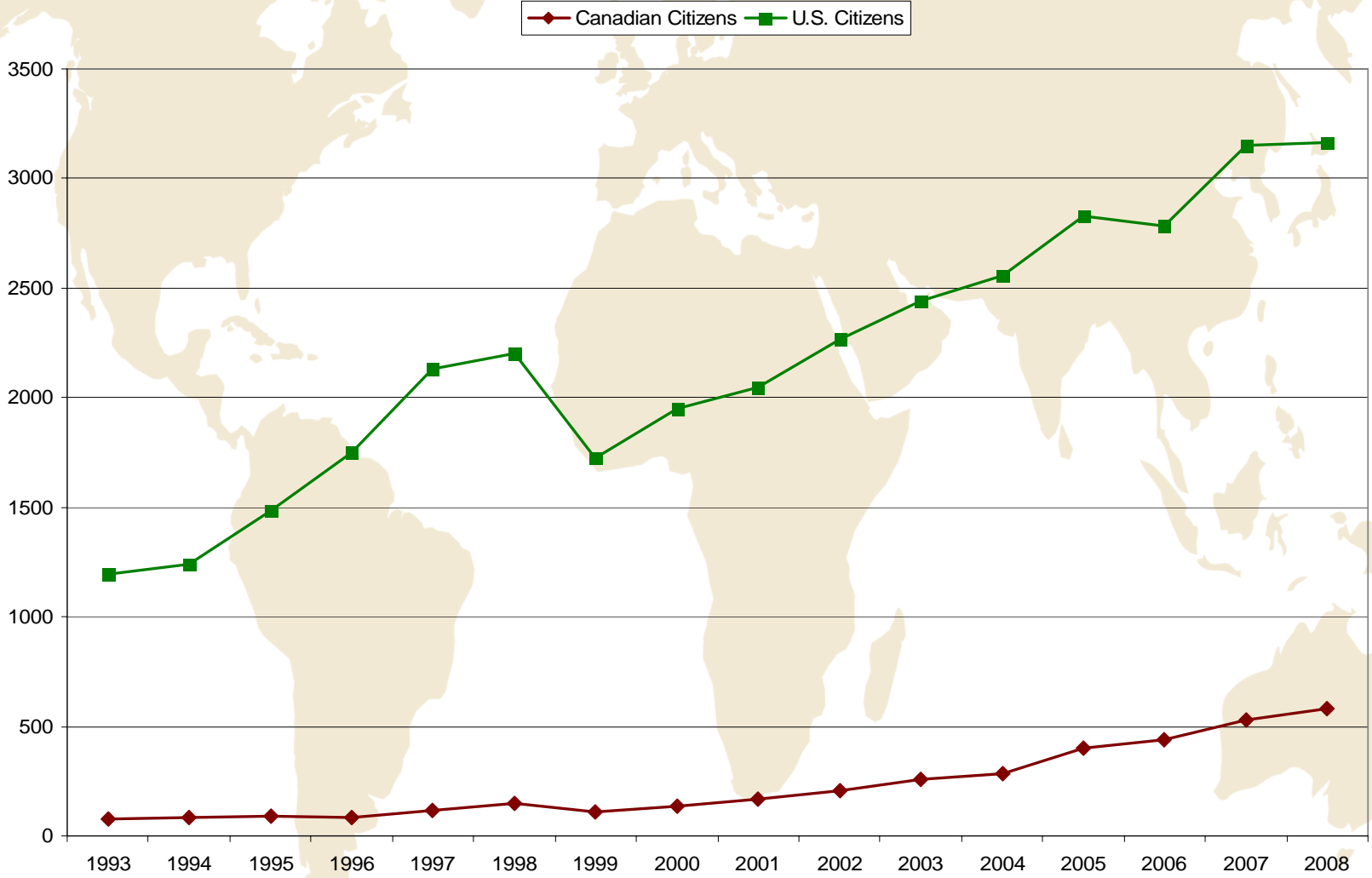
Canadian, U.S., or International

- Applicant Cohort, 1993-2008
- Certificant Cohort, 1993-2008
  - ❖ Number and demographic characteristics
  - ❖ Location of medical school (country and geographic region)
- Certificant Cohort, 1993-2004
  - ❖ Rate of entry into U.S. GME
  - ❖ Specialty choice and location

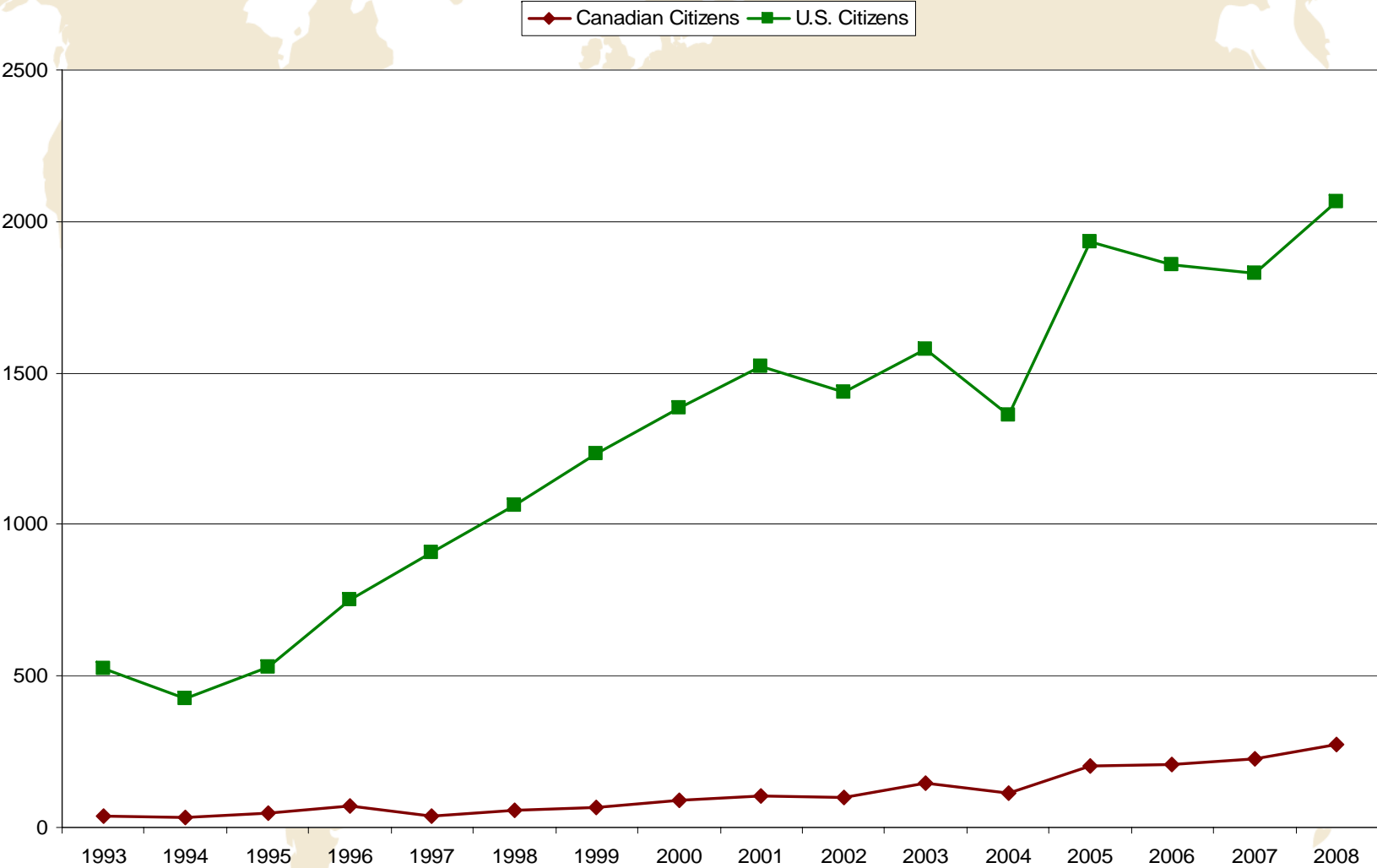


# Results

# Number of Applicants to ECFMG: Canadian and U.S. Citizen IMG Growth, 1993 – 2008



# Number Certified by ECFMG: Canadian and U.S. Citizen IMG Growth, 1993 – 2008



# Characteristics: IMGs Certified 1993 – 2008

## Demographics

- English as Native Language
  - Canadian Citizens: 74.2%
  - U.S. Citizens: 74.4%
  - International: 9.3%
- Gender
  - Canadian Citizens: 38.7% female
  - U.S. Citizens: 36.8% female
  - International: 40.3% female

# Characteristics: IMGs Certified 1993 – 2008

## Location of Medical School

### ■ Canadian Citizens

- Top Region: Caribbean (56.6%)
- Top Countries: 🇳🇱 Netherlands Antilles (18.2%), Grenada (14.1%), Dominica (10.7%), Ireland (7.6%)

### ■ U.S. Citizens

- Top Region: Caribbean (66.3%)
- Top Countries: 🇬🇩 Grenada (21.0%), Dominica (20.9%), Netherlands Antilles (14.8%), Israel (5.9%)

### ■ International Citizens

- Top Region: South-Central Asia (38.3%)
- Top Countries: 🇮🇳 India (26.5%), Pakistan (7.5%), Philippines (4.9%), China (4.9%)



## Characteristics: IMGs Certified 1993 – 2004 Entry into U.S. GME

- Percent of IMGs certified 1993-2004 appearing in AMA's 2008 Physician Masterfile
  - Canadian Citizens: 87.4%
  - U.S. Citizens: 96.8%
  - International: 75.6%

# Characteristics: IMGs Certified 1993 – 2004

## Specialty Choice



- Canadian Citizens
  - Family Medicine (20.6%)
  - Internal Medicine (19.8%)
  - Anesthesiology (6.2%)
  - Pediatrics (5.3%)
- U.S. Citizens
  - Internal Medicine (21.7%)
  - Family Medicine (19.7%)
  - Pediatrics (6.6%)
  - Anesthesiology (5.6%)
- International Citizens
  - Internal Medicine (26.9%)
  - Family Medicine (8.9%)
  - Pediatrics (6.3%)
  - Psychiatry (5.1%)

# Characteristics: IMGs Certified 1993 – 2004

## Location (Top 5 States)

<b>Canadian Citizen</b>	<b>U.S. Citizen</b>	<b>International</b>
New York (14.1%)	New York (15.8%)	New York (13.5%)
Michigan (8.9%)	California (11.5%)	California (9.3%)
Pennsylvania (6.6%)	Florida (8.3%)	Texas (6.2%)
Florida (6.0%)	New Jersey (6.8%)	Florida (6.1%)
Illinois (5.9%)	Illinois (4.5%)	Illinois (5.4%)



# Summary

- Canadian Citizen IMGs' similarity with U.S. Citizen IMGs
  - High percentage native English speakers
  - Familiarity with American medical culture
  - Likelihood of entering primary care, particularly Family Medicine
- Canadian Citizen IMGs' similarity with International Citizen IMGs
  - Visa issues
  - Could practice elsewhere

# Limitations

- Physician data in Masterfile may be out of date; some physicians may not be in training/practice in the U.S. currently.
- Characteristics of Canadian IMGs in this study are not representative of all Canadian medical graduates, whether or not they attended an international medical school

# Discussion

- Current growth in Canadian citizen IMG applicants will likely yield growth in future Canadian citizen IMGs entering U.S. GME
- Likelihood of entering Family Medicine, potential J-1 visa waiver obligations, and fewer cultural barriers make Canadian citizens well suited to primary care in underserved areas.
- Canadian IMG migration to the U.S. may exacerbate Canadian physician shortages.

# Future Studies

- Are Canadian IMGs' choice to train in U.S. GME affected by difficulties obtaining Canadian residency? What percentage of Canadian citizen IMGs return to Canada after completing U.S. residency?
- Are Canadian citizen IMGs more likely to practice in underserved areas than U.S. citizen IMGs?
- How do Canadian citizens' USMLE™ performance and specialty board certification rates compare with U.S. citizen IMGs?