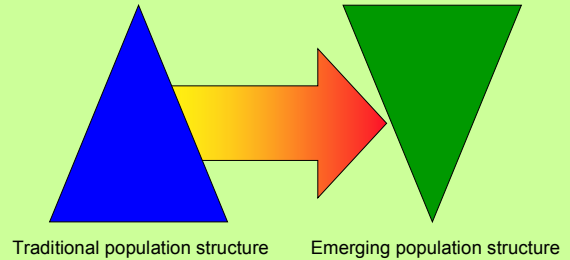


Global Competition for Immigrant Health Professionals

Think Tank on Integrating Immigrant Health Practitioners into the New Zealand Workforce:

Lesleyanne Hawthorne
Faculty of Medicine, Dentistry and Health Sciences
University of Melbourne
Auckland, 27 May 2008

Impact of Demographic Transformation in Western and Select Asian Nations



Case Study: Practitioner Age of Australian Surgeons (42% = 55+)

Main Specialty	Number	% by age group				Total	
		32-34	35-44	45-54	55-64		
General Surgery	1,119	4	23	26	32	15	100
Cardiothoracic	110	1	28	37	25	8	100
Neurosurgery	126	3	35	29	23	10	100
Orthopaedic	756	2	34	30	22	13	100
Otolaryngology	279	5	28	24	33	10	100
Paediatric	84	1	24	26	36	13	100
Plastic & Reconstructive	239	2	33	25	31	10	100
Urology	218	3	33	28	27	9	100
Vascular	72	0	21	18	54	7	100
Other	13	0	0	8	62	31	100
Australia Total	3,016	3	28	27	29	13	100

Source: 'The Outlook for Surgical Services in Australasia', B Birrell, L Hawthorne and V Rapson, Royal Australasian College of Surgeons, May 2003

Australian Patient Age - Number and Type of Surgical Procedures Performed (2001 versus 1991)

Age Group	Rate of Surgical Procedures Per Thousand Persons by Age Group, Victoria, 1993-94 Compared to 2000-01	
	1993-94	2000-01
00-04	51	54
05-09	36	35
10-14	27	26
15-19	43	41
20-24	54	46
25-29	63	57
30-34	70	70
35-39	72	79
40-44	75	80
45-49	80	86
50-54	87	99
55-59	94	113
60-64	114	133
65-69	132	166
70-74	149	208
75-79	178	254
80-84	175	263
85+	157	222
Total	75	87

Source: 'The Outlook for Surgical Services in Australasia', B Birrell, L Hawthorne and V Rapson, Royal Australasian College of Surgeons, May 2003

Degree of Australian Reliance on OTDs Compared to the US, UK and Canada (2005)

No.	Sending Countries to United States	Sending Countries to United Kingdom	Sending Countries to Australia	Sending Countries to Canada
1.	India: 40,838 (4.9%)	India: 15,093 (10.9%)	UK: 2,735 (4.0%)	UK: 4,664 (8.6%)
2.	USA-trained IMGs: 25,380 (3.0%)	Ireland: 2,845 (2.1%)	South Africa: 1,754 (2.6%)	India: 2,143 (4.0%)
3.	Philippines: 17,873 (2.1%)	Pakistan: 2,693 (1.9%)	India: 1,443 (2.1%)	New Zealand: 1,742 (3.2%)
4.	Pakistan: 9,667 (1.2%)	South Africa: 1,980 (1.4%)	Ireland: 1,164 (1.7%)	South Africa: 1,253 (2.3%)
5.	Canada: 8,990 (1.1%)	Egypt: 1,592 (1.1%)	Saudi Arabia (a): 658 (1.0%)	Sri Lanka: 627 (1.2%)
6.	China: 6,687 (0.8%)	Nigeria: 1,529 (1.1%)	Egypt: 558 (0.8%)	Egypt: 545 (1.0%)
7.	USSR: 5,060 (0.6%)	Germany: 1,525 (1.1%)	USA: 519 (0.8%)	Singapore: 438 (0.8%)

Source: Adapted by L. Hawthorne from data provided in 'IMGs at Home and Abroad: A Challenge to USA Medical Educators', F Mullan, 2005

Competition for Medical Migrants: US, UK, Canada and Australia (2005)

US:

- India (40,838), Philippines (17,873), Pakistan (9,667), Canada (8,990), China (6,687)

UK:

- India (15,093), Ireland (2,845), Pakistan (2,693), South Africa (1,980), Egypt (1,592)

Canada:

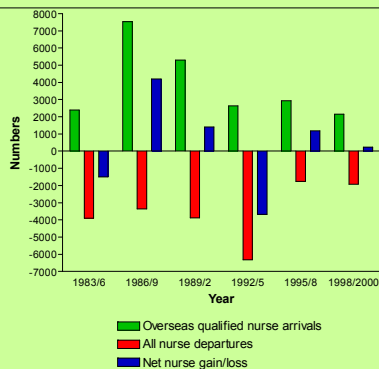
- UK (4,664), India (2,143), New Zealand (1,742), South Africa (1,253), Sri Lanka (627)

Australia:

- UK (2,735), South Africa (1,724), India (1,449), Ireland (1,164), Saudi Arabia (658 – most from South Asia)

Source: Adapted from data provided in 'IMGs at Home and Abroad: a Challenge to USA Medical Education', F Mullan, American Medical Council Annual Meeting (2005)

Competition for Migrant Nurses: Net Labour Gains/Losses in Australia's Nursing Workforce (1983-2000) + 2007=5,500



Other Health Workforce Destinations in the OECD for Doctors and Nurses (WHO 2006)

Table 5.1 Doctors and nurses trained abroad working in OECD countries

OECD country	Doctors trained abroad		Nurses trained abroad	
	Number	Percentage of total	Number	Percentage of total
Australia	11 122	21	NA	NA
Canada	13 620	23	19 061	6
Finland	1 003	9	140	0
France	11 269	6	NA	NA
Germany	17 318	6	26 284	3
Ireland	NA	NA	8 758	14
New Zealand	2 832	34	10 616	21
Portugal	1 258	4	NA	NA
United Kingdom	69 813	33	65 000	10
United States	213 331	27	99 456	5

NA, not applicable.

Issue 1: Individual Agency for Global Health Workers

Motivations:

- Rural → urban
- Public → private
- Poor → rich
- Unsafe → secure (disease, law and order)
- Employment conditions → remuneration, quality of practice, training, workload, facilities, promotion, health service quality etc
- Living conditions
- Family choice → children's education, spouse career (etc)

Source: Working Together for Health – The World Health Report 2006, WHO, France

Issue 2: The 'Hypermobility' of Health Workers

Patterns:

- Skill workers: lifestyle (not career) = primary motivation
- Migration patterns x 3 decades = health workforce migration
- South to north, east to west

Case study 1: International medical graduates in Victoria:

- 27 regional sites (2003 fieldwork)
- 66% - 5+ major geographical moves to date
- India → Gulf States → South Africa → New Zealand → rural Queensland → regional Victoria....?

Case study 2: Zimbabwean nurses:

- Public hospitals (HIV-AIDS dominated) → private sector hospitals → South Africa → UK, Australia or New Zealand
- South African Minister views

Source: International Migration Outlook – Annual Report 2007 Edition, OECD, Paris 2007
The Migration of Overseas Trained Doctors in General Practice in Regional Victoria, L Hawthorne, B Street & D Young, Rural Workforce Agency of Victoria (2005)

Issue 3: Human Resource Wastage

Ranking of top 500 world universities (Shanghai Jiao Tong 2006):

- 206 in Europe (overwhelmingly located in North West Europe), including 43 in the UK, and 40 in Germany;
- 197 in the Americas (167 in the US, 22 in Canada, and just 7 in all Central or South America [including 1 in the top 150]);
- 92 in the Asia-Pacific (32 in Japan, 16 in Australia, 14 in China (none ranked in the top 150, and with 2 of the top 4 ranked institutions in Hong Kong), 9 in South Korea, 7 in Israel, 5 in New Zealand, 4 in Taiwan, 2 in Singapore, and just 2 in India (neither ranked in the top 300); and
- 5 in the Africas (4 in South Africa, 1 in Egypt, with no other African or Middle Eastern country listed) (Jiao Tong University 2006).

Source: Jiao Tong University (2006), 'Academic Ranking of World Universities 2005', Institute of Higher Education Jiao Tong University, Shanghai, August

Medical Employment Outcomes for 1996-2001 IMG Arrivals in Canada and Australia (2001 Census)

- South Africa: 81% employed in Canada (81% in Australia) ✓
- UK/Ireland: 48% employed in Canada (83% in Australia)
- India: 19% employed in Canada (66% in Australia)
- HK, Malaysia, Singapore: 31% employed in Canada (59% in Australia)
- Eastern Europe: 8% employed in Canada (24% employed in Australia)
- China: 4% employed in Canada (5% in Australia)

Source: Labour Market Outcomes for Migrant Professionals – Canada and Australia Compared, L Hawthorne, Citizenship and Immigration Canada, Ottawa (2007); Foreign Credential Recognition - Canadian Issues, Spring, Toronto, 2007

Case Study: Employment Outcomes for IMGs in Canada by 2001 (1996-2001 Arrivals)

Arrival 1996-2001	Birth Country	Employed						Number
		Own Prof	Other Prof/ Manag	Other work	S/Total	Unemp	Not in Labor-force	
	Canada	65.7	13.1	9.9	88.7	2.2	2.2	134,659
	UK/Ireland	47.5	26.3	0.0	73.8	-	-	272
	USA	45.6	24.8	0.0	70.5	-	-	330
	South Africa	80.6	0.0	0.0	80.6	-	-	388
	Australia/New Zealand	60.4	0.0	0.0	60.4	-	-	49
	South Eastern Europe	10.3	11.6	21.7	43.5	16.6	32.4	419
	Eastern Europe	8.0	14.5	31.5	54.0	23.0	23.0	2,137
	North West Europe	35.8	23.5	14.2	73.6	6.3	13.0	477
	India	18.9	9.1	31.5	59.5	13.0	22.6	1,604
	Other South/Central Asia	12.4	12.7	25.9	51.0	17.0	32.0	3,052
	HK/Malaysia/Singapore	30.7	13.5	12.0	56.2	-	-	271
	China (exc. Taiwan)	4.3	25.5	26.8	56.6	12.6	30.7	3,587
	Taiwan	11.2	27.7	16.8	55.8	9.7	31.7	500
	Philippines	3.0	7.3	67.2	77.4	6.9	15.7	1,612
	Iraq	10.9	0.0	0.0	10.9	25.6	50.2	232
	Other Middle East/N Africa	15.0	13.9	15.4	44.3	18.0	36.1	1,635
	Central & South Americas	12.2	15.0	19.6	46.8	16.5	29.6	717
	Other	14.3	11.7	38.7	64.7	13.2	30.5	4,516.2
	TOTAL MIGRANTS							21,798

Source: Labour Market Outcomes for Migrant Professionals – Canada and Australia Compared, L. Hawthorne, Citizenship and Immigration Canada, Ottawa (2007)

Employment Outcomes for 1996-2001 Internationally Educated Nurse Arrivals in Canada and Australia (2001 Census)

North West Europe: 32% employed in Canada (**45%** in Australia)
Philippines: 22% employed in Canada (**35%** in Australia)
India: 22% employed in Canada (**66%** in Australia)
Other South/Central Asia: 14% employed in Canada (**49%** in Australia)
Eastern Europe: 9% employed in Canada (**33%** in Australia)

South Africa: Only 26 migrants (**63%** employed in Australia)
HK, Malaysia, Singapore: Only 30 migrants (**66%** employed in Australia)
China: Only 126 migrants (**52%** employed in Australia)

2007+ Strategy: \$C75 million on bridging programs (1000 IMGs and 800 nurses)

Source: Labour Market Outcomes for Migrant Professionals – Canada and Australia Compared, L. Hawthorne, Citizenship and Immigration Canada, Ottawa (2007)

Issue 4: Feasibility of Constraining Individual Agency?

Bar select occupations from:

1. Exiting public sector work?
2. Leaving (eg Africa)?
3. Entering western nations (eg the UK)?
4. Accessing advertised vacancies overseas (eg the NHS)?

Likely impacts?

1. Attraction to the profession
2. Human rights/ equal opportunity issues (source and receiving countries)
3. Legal defensibility?

Issue 5: Capacity to Exert Ethical Control?

UK Case Study:

- Department of Health code of practice for NHS employers (2001, updated 2004)
- Focus = international recruitment of health workers
- Guiding principles to promote high standards
- Prevent targeted recruitment from developing countries with healthcare shortages
- Code of practice for recruitment agencies (temporary and permanent workers)
- NHS use of only 'ethical' agencies; encouragement of private sector to sign up

But - independent review outcomes

- UK: 'Relatively skeptical about the efficiency' of ethical codes of practice
- Canada ethical attempts = 'Many practical difficulties'

Source: International Migration Outlook – Annual Report, 2007 Edition, OECD, Paris (2007)

Issue 6: Competing Source Country Priorities - Filipino Case Study

- **Remittance generation:** Estimates from 10-25% GDP
- **State** = key facilitator
- **'Over-production'** (hence local unemployment)
- **Recruitment industry** taps into motivation (better pay, better future, better working conditions, permanent migration options)
- **Monthly salaries:** \$US200 in the Philippines versus \$US3,000-4,000 in the US
- **Diversification of destinations:** 1960s (US) compared to 2007 (US, Australia, Europe, Canada, Gulf States, South East Asia etc)
- **1992-2003:** 87,852 nurses officially deployed ('under-count')
- **Additional Filipino health worker exports:** Doctors, dentists, medical technologists, physical therapists, midwives etc

An attractive model to other nations (eg Indonesia)

Sources: International Migration Outlook – Annual Report, 2007 Edition, OECD, Paris (2007); 'Health Worker Migration: The Case of the Philippines', M. Asis, XVII General Meeting of the Pacific Economic Cooperation Council, Sydney, Scalabrini Migration Center (2007); 'The Globalisation of the Nursing Workforce: Barriers Confronting Overseas-Qualified Nurses in Australia', L. Hawthorne, Nursing Inquiry, Vol 8 (4): 213-229, Blackwell Science

Distortion of Nursing as a Profession in the Philippines

1. **Calibre of domestic training:**
 - Proliferation of domestic schools/ programs; quality ↓
 - 40 nursing schools (1970s) versus 441 nursing colleges (2005)
2. **Oversupply, under-employment:**
 - 332,206 nurses but demand for only 193,223
 - Local/national employment = 29,467 (15.25%)
 - International employment = 163,756 (84.75%)
3. **Health market distortion:**
 - Shortages of 'skilled, specialized and experienced nurses'
4. **Skills loss:**
 - Doctors convert to nurses (3,500 'nurse medics' migrate 2000-05)
 - Decline in medical school enrolment (4,000 doctors enrol in nursing programs)
 - Growing MD shortages

Source: 'Health Worker Migration: The Case of the Philippines', M. Asis, XVII General Meeting of the Pacific Economic Cooperation Council, Sydney, Scalabrini Migration Center (2007)

The Pathway to Practice Challenge: Migrant Nurses and Credential Recognition in Australia

Former Yugoslavia - 0% (total n = 19)
 Poland - 3% (total n = 39)
 Fiji - 4% (total n = 113)
 West Germany - 10% (total n = 39)
 India - 10% (total n = 173)
 Philippines - 15% (total n = 531)
 Malaysia - 25% (total n = 157)
 Singapore - 31% (total n = 98)
 Denmark - 40% (total n = 50)
 Hong Kong - 53% (total n = 963)

Cf
UK/Ireland = 97% recognition

Credential Barriers for Nurses in Australia (1990s)

Paper-based qualifications assessment:

- 97% of ESB country qualifications immediately recognised cf 29% from NESB source countries
- Recognition levels **worsening** rather than improving in the 1990s
- Extensive documentation required
- 'Safety to practise' concern given past nursing training
- Issue of perceived course 'equivalence' (eg East European or Filipino nurses)
- Limits to national and state regulators' knowledge
- 'Quite often we can't recommend eligibility because we don't have the knowledge we need.' (Australian Nursing Council Incorporated, CEO)

Supporting Transition to Practice in Australia: Migrant Nurses

1. Pre-migration screening for skilled migrants
2. English training (1-6 courses)
3. English for Nurses (1-2 courses)
4. Occupational English Test (59% pass)
5. Nursing bridging programs (competency-based assessment) x 3 months
6. Core vs clinical training

The Impact of Mandatory English Language Testing 1989-1995 (Hawthorne & Toth 1996)

Migrant nurses:

- 67% fail overseas
- 41% fail in Australia

Migrant doctors:

- c40% of candidates fail or significantly delayed in proceeding to pre-registration assessments

Latest data?

The Impact of Occupational English Testing on Medical and Nursing Registration by Select Origin & Location: 1989-1995 Data (Hawthorne & Toth 1996)

	Candidates in Australia (%)	Pass Rate (All %)	Total No.
Doctors			
India	79	91	200
China	99	59	191
Former USSR	96	77	133
Egypt	82	84	126
Philippines	66	78	93
Nurses			
Philippines	32	41	413
Hong Kong	38	50	96
India	57	55	51
Former Yugos.	96	35	51
Fiji	40	70	37

Australia and Medical Migration

- By 2001 46% of Australia's medical workforce was overseas-born (cf 40% in 1991 and 44% in 1996)
- **Permanent migration:** By 2001 22,191 overseas-born doctors, with medical migration continuing unabated (1,263 new permanent resident arrivals in 2001-02)
- 'Area of need' arrivals: By 2005/06 c5,500 temporary entrant overseas-trained doctors per year (including specialists), cf c500 mid-90s
- **Occupational Trainees:** Eg in surgery, 457 arrivals in 18 months (January 2002-June 2003); 1,200 in NSW alone 2005-06
- **Within select specialties:** Growing dependence on overseas trained doctors (eg psychiatry, emergency medicine, surgery)
- **Surgical case study:** 'Non-accredited surgical registrars', eg NSW
- **2007 demand:** 6,500 FMGs and 5,500 internationally educated nurses per year

Pathways into Medical Practice for Foreign Medical Graduates in Australia

1. Temporary versus permanent resident requirements
2. The place of English language testing
3. Conditional registration:
 - 'Area of need' appointments
 - Occupational trainees
 - Specialist areas (eg psychiatry, surgery)
4. Examinations (Australian Medical Council vs. RACGP pathways)
5. Bridging pathways: Pre MCQ and Pre-Clinical

Variations in State Reliance on Temporary Medical Migration (Visa 422 'Area of Need' Category)

State	2000-01	2001-02	2002-03
WA	456	472	597
Victoria	406	508	581
NSW	58	89	176
Tasmania	94	82	89
SA	60	68	133
ACT	7	12	50
NT	84	98	97
Queensland	899	716	1,016
Total	2,062	2,045	2,739

Source: DIMIA, unpublished 2004

Recent Growth in Temporary Entry Medical Visas to Australia

Visa subclass 422 ('Area of need'):

(Birrell & Schwartz 2005)

- 1,419 in 1999-2000
- 2,496 in 2003-03
- 2,428 in 2003-04
- **3,074** in June 2005 (up from 1,636 in June 2003 and 1,237 as of June 2001)

Visa subclass 442 ('Occupational Trainee'):

- **12,437** in June 2005 (cf 1,237 in June 2001), primarily to Queensland (1,016 by 2002/3), WA (597) and Victoria (581)
- **Recent increase in NSW:** June 2004 = 1,202 (Most as HMOs)

Former international student flows:

- 1500+ enrolled in any one year

Major Source Countries of 'Area of Need' Temporary Doctors

Over 27 countries (growing diversity):

By-pass 'mandatory' credential examination requirements

UK/Ireland (1226)
 India (423)
 Malaysia (230)
 Sri Lanka (191)
 China (94)
 Germany (83)
 USA (56)
 Philippines (55)
 South Africa (45)
 Canada (35)
 Etc!

Competition for Global Health Workers: Australia's Migration Occupations in Demand List (2007)

Skill migration:

- Raised from 33,000 (mid 1990s) → **102,500** 2007-08 → **300,000+** 2008-09
- MODL = 20 bonus points
- Medical and nursing migration: Temporary as well as permanent options

Health science fields on the list =

General Practitioner, Anaesthetist, Dermatologist, O&G, Ophthalmologist, Emergency, Paediatrician, Pathologist, Psychiatrist, Specialist Physician, Radiologist, Surgeon, Registered Nurse, Midwife, Mental Health Nurse, Dentist, Dental Specialist, Hospital Pharmacist, Retail Pharmacist, Occupational Therapist, Physiotherapist, Speech Therapist, Podiatrist, Radiographer, radiation Therapist, Nuclear Medicine Technologist, Sonographer

Source: Evaluation of the General Skilled Migration Categories, B Birrell, L Hawthorne & S Richardson (2006), Commonwealth of Australia, Canberra

Growth in RACGP Examination Candidates 1999-2004 (Alternative Pathway)

Year	Alternative Pathways Program	Prac Eligible (Aus)	Prac Eligible (OTD)	Training (Aus)	Training (OTD)	Overall
1999	0	80	86	305	77	548
2000	0	56	145	313	64	578
2001	0	70	226	333	90	719
2002	4	69	279	351	92	795
2003	33	59	386	339	114	931
2004	36	50	334	325	150	895
Total	73	384	1456	1966	587	4466

Source: The Registration and Training Status of Overseas Trained Doctors in Australia, L Hawthorne, G Hawthorne & B Crotty, Department of Health and Ageing, released February 2007, pp 157

Declining RACGP Examination Outcomes for IMGs 1999-2004

Year	Other	Prac Eligible (Aus)	Prac Eligible (OTD)	Training (Aus)	Training (OTD)	Overall
1999		79%	61%	96%	72%	85%
2000		86%	64%	98%	83%	87%
2001		74%	39%	95%	71%	72%
2002	25%	87%	55%	96%	87%	79%
2003	73%	78%	47%	96%	80%	72%
2004	58%	78%	40%	90%	63%	65%

Source: The Registration and Training Status of Overseas Trained Doctors in Australia, L Hawthorne, G Hawthorne & B Crotty, Department of Health and Ageing, released February 2007, pp 157

Foreign Medical Graduate Study: AMC MCQ Outcomes 1978-2005

Source: The Registration and Training Status of Overseas Trained Doctors in Australia, L Hawthorne, G Hawthorne & B Crotty (Department of Health and Ageing 2007, 157pp)

Candidates: 139 source countries

Top 10 sources: India (14%), Sri Lanka (8%), Egypt (7%), Bangladesh (5%), China (5%), UK (5%), Iraq (4%), South Africa (4%), Philippines (4%), Pakistan (3%)

Highest % of first time presenters: S Asia, N Africa/M East, SE Asia and E Europe

Pass rates: 51% on 1st attempt, 47% on 2nd attempt, 81% overall

Highest pass rates: UK/Ireland (95%), South Africa (86%), North America (86%)

Lowest pass rates: Other Americas (67%), SE Asia non-Commonwealth (70%), East Europe (70%)

Age, English and recency of training highly significant: Harder to pass for older candidates

FMG Study: AMC Clinical Outcomes 1978-2005 (Hawthorne, Hawthorne & Crotty 2007)

Overall pass rate: 86% of attempters (but just 53% of all MCQ attempters go on to pass)

Highest pass rates: South Africa (66%), UK/Ireland (64%)

Lowest pass rates: Other Americas (41%), SE Asia non-Commonwealth (38%), South East Europe (49%), Central Asia (49%)

Middle East/ North Africa: Just as likely to pass as OTDs from English speaking backgrounds (OTDs from Eastern Europe and non-Commonwealth countries the most disadvantaged)

Age: Highly significant (candidates requiring 3+ attempts older!)

But: FMGs' Access to Medical Employment in Australia (2007)

Only 26-33% of IMGs encounter the AMC in their first 5 years:

- Growing use of RACGP and specialist pathways
- Minimal impact on employment outcomes (high demand)

FMG survey (3,000):

- Proportion securing full accreditation within first 5 years: 41%
- Proportion employed in medicine: 78%
- ESB doctors (95%) compared to North Africa/ M East (82%), Asia-Commonwealth (74%), and 'Other' doctors (68%)

When compared with English Speaking Background doctors, respondents from:

- Europe and ME/ N Africa = 3 times less likely to have obtained work in medicine
- Asia-Commonwealth = 4.7 times less likely
- Other backgrounds = 7.6 times less likely

Source: The Registration and Training Status of Overseas Trained Doctors in Australia, L Hawthorne, G Hawthorne & B Crotty (Department of Health and Ageing 2007, 157pp)

Type of Medical Registration by FMG Origin in Australia (FMG Survey first 5 years of migration)

	N	Type of medical registration		
		General	Conditional / Specific	Not registered
English-speaking background	171	51%	36%	14%
Europe	153	33%	41%	25%
North Africa/Middle East	154	38%	39%	23%
Asia-Commonwealth	386	28%	39%	33%
All other	255	24%	35%	41%
Total	1119	33%	38%	29%

Statistics: $\chi^2 = 60.14$, df = 8, p < 0.01

Source: The Registration and Training Status of Overseas Trained Doctors in Australia, L Hawthorne, G Hawthorne & B Crotty (Department of Health and Ageing 2007, 157pp)

Canada's Foreign Credential Recognition Initiative (Current)

Skilled migrants:

- 'New face of the chronically poor' in Canada

Health Canada:

- \$C75 million
- Bridge 1000 physicians and 800 nurses

Bridging courses:

- Variations by province
- Language requirements and training
- Exploration of bridging and re-training options

Impacts of Migration on Health Workforce Shortages (WHO 2006)

Table 1.3 Estimated critical shortages of doctors, nurses and midwives, by WHO region

WHO region	Number of countries		In countries with shortages		
	Total	With shortages	Total stock	Estimated shortage	Percentage increase required
Africa	46	36	590 198	817 992	139
Americas	35	5	93 603	37 886	40
South-East Asia	11	6	2 332 054	1 164 001	50
Europe	52	0	NA	NA	NA
Eastern Mediterranean	21	7	312 613	306 031	98
Western Pacific	27	3	27 260	32 560	119
World	192	57	3 355 728	2 358 470	70

NA, not applicable.
Data source: (9)

The Challenge of Global Mobility to Health Workforce Training Capacity (WHO 2006)

Table 3.2 Health professional training institutions, by WHO region

WHO region	Medical	Nursing and midwifery	Dental	Public health	Pharmacy
Africa	66	288	34	50	57
Americas	441	947	252	112	272
South-East Asia	295	1145	133	12	118
Europe	412	1338	247	81	219
Eastern Mediterranean	137	225	35	8	46
Western Pacific	340	1549	72	112	202
Total	1691	5492	773	375	914

Source: Mercer H, Dal Poz MR. *Global health professional training capacity* (background paper for *The world health report 2006*; <http://www.who.int/hrh/documents/en/>).

Future Demand for Healthworker Migration in the Context of Declining OECD Fertility Rates

Republic of Korea: 1.1
 Japan, Czech Republic, Germany, Italy, Spain: 1.3
 Singapore, Switzerland: 1.4
 Canada: 1.5
 UK, China, Netherlands: 1.7
 China: 1.7 (0.9 in Shanghai)
 Australia, UK, Norway: 1.8
 France: 1.9
 New Zealand, US: 2.1
 Mexico: 2.2
 Indonesia: 2.4
 Malaysia: 2.9
 Philippines: 3.5

Source: *Health at a Glance 2007 – OECD Indicators* (2008), OECD, Paris