
**Human resources and
(health care worker) migration**

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Importance of migration for HR

“There is competition among the industrialised countries for the best minds. That is why we have to direct our immigration law more strongly towards our own economic interests.”

Otto Schily, German interior minister 2001

Importance of migration for HR

“At a cost of \$60,000 to train a medical doctor in the South and \$12,000 for a paramedical, it may be said that the developing countries are ‘subsidising’ the OECD countries to the tune of some \$500 million per year.”

Deputy Director-General of the International
Organization for Migration, 2002

Importance of migration for HR

“Anxiety evoked by migration ha[s] reached a peak in both major donor and recipient countries.”

Alfonso Mejia, WHO Chief Medical Officer of Health Manpower Systems, 1978

Background

- Migration is neither new nor unique to health
 - Workers migrate (*usually* from poorer to richer countries) to better their socio-economic situation and/or career
- Economic literature shows that there are global welfare gains from migration, but:
 - Driven by manufacturing (not services), unskilled (not skilled) and temporary (not permanent) migration
 - Ignores distribution – developed world may benefit ~\$4,000, but developing world lose ~£1-3,000, per-migrant
- However, health is a *skilled service* sector
 - Debate especially concerned with permanent versus temporary migration ('brain drain' versus 'brain gain')
- Lecture explores patterns and causes of health care worker migration, consequences for source and destination countries and a range of policy issues

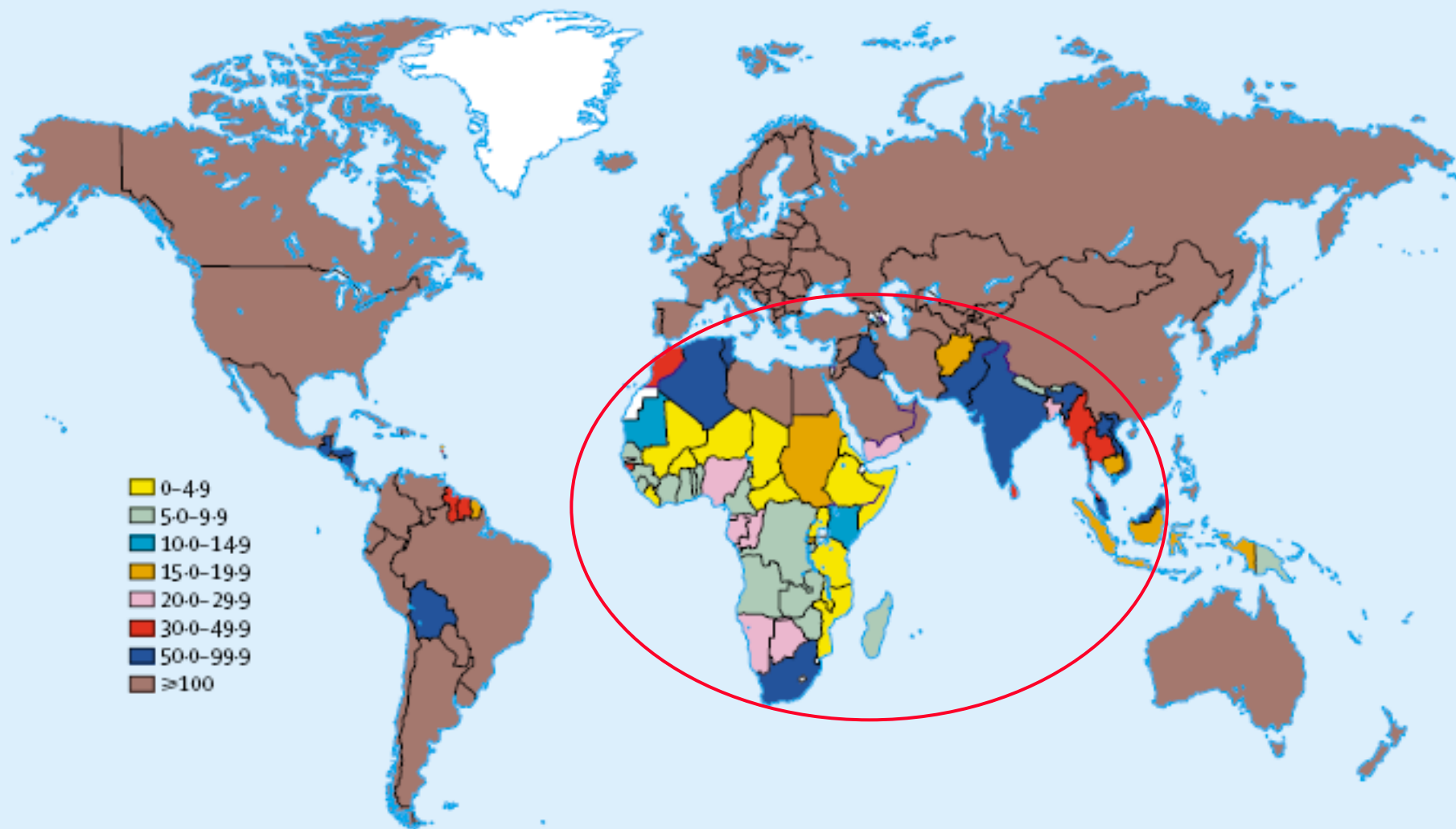
Overview of lecture

1. Patterns of international migration of health care workers (HCW)
2. Factors influencing migration of HCW
3. Consequences of HCW migration
4. Policy agenda: brain drain to brain gain
5. International context
6. Conclusions on evidence and policy

1. Patterns of HCW migration

- Weak and patchy data on migration flows
 - General problems of definitions and comparability, and then specific problems abstracting out HCW
 - Focus on physicians (doctors) and nurses:
 - For which migration statistics are most reliable and available
 - Which are fundamental to the delivery of health services
- Migration mostly developing to developed countries:
 - UNCTAD suggest 56% of migrating doctors flow from developing to developed countries and only 11% the reverse
 - Exporters subdivided into countries which voluntarily send HCW abroad (eg Cuba, India, Egypt and the Philippines) and countries where migration is involuntarily (eg Africa and Caribbean)
- Migration flows has been characterized as a ‘carousel’ or a ‘conveyer belt’

Global distribution of doctors per 100,000 population in 2004



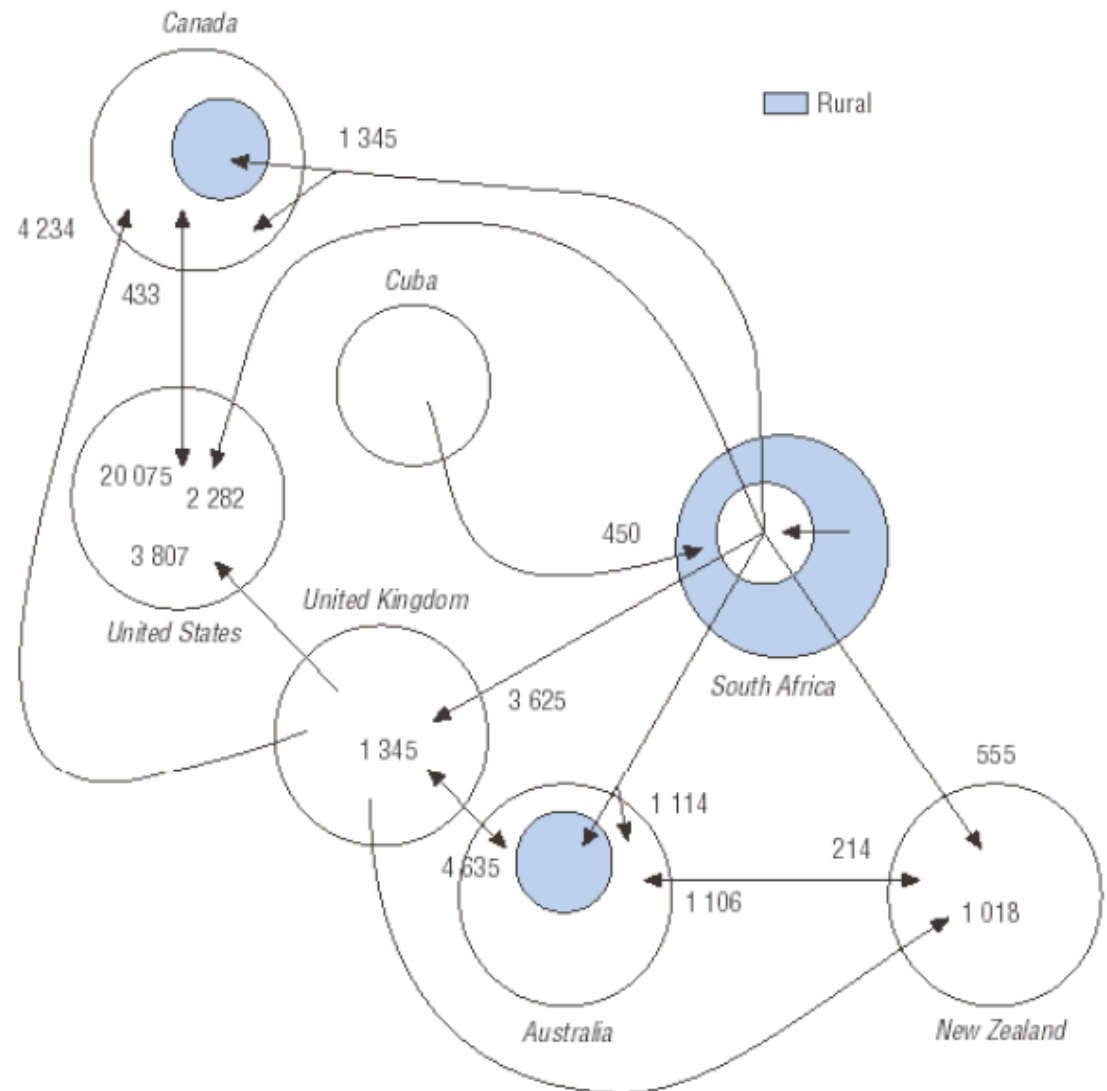
'Carousel' migration

■ HCW from
Cuba → SA →
UK → Canada
→ USA

- Source *and* destination!

■ Cuba is loser:
carousel does
not turn full
circle

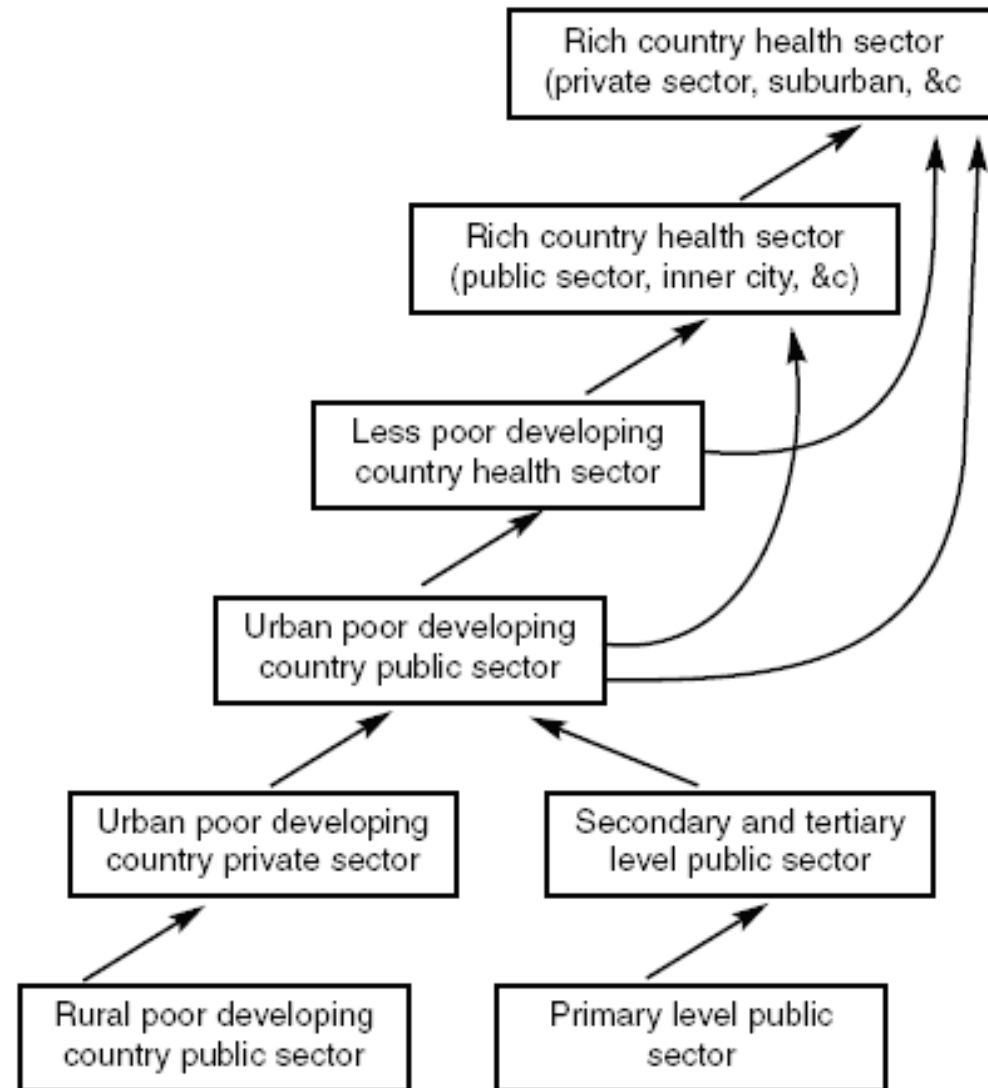
■ Fig = Alkire &
Chen (2004)



'Conveyer belt' migration

- Flow bottom to top
- Also captures:
 - Rural HCW move to urban to fill gap
 - Public HCW move to private to fill gap

- Fig = Schrecker & Labonte (2004)



Migration flows of physicians

- Mullan (NEJM, 2005; 35: 1810-8) – international composition of physicians in USA, UK, Canada, Australia and computed ‘emigration factor’ to indicate relative measure of physician brain drain
- Findings:
 - 23-28% physicians in these countries are international medical graduates: 40-75% from developing countries
 - Major source countries: India, Philippines, Pakistan
 - But – emigration factor shows that drain relatively higher for sub-Saharan Africa (SSA) and Caribbean
- Indicative of wider literature – these four recipient countries account for bulk of migrants from developing countries

International Medical Graduates (IMG): USA, UK, Canada, Australia

Country	No. of Physicians per 100,000 Population	Total No. of IMGs	% of IMGs in Workforce	% of IMGs from Lower-Income Countries	% of IMGs from the Three Other Developed Countries
United States	293	208,733	25.0	60.2	6.5
United Kingdom	231	39,266	28.3	75.2	2.5
Canada	220	15,701	23.1	43.4	22.3
Australia	271	14,346	26.5	40.0	33.5

Top 5 source countries of IMGs in USA, UK, Canada, Australia

United States

Source Country	No. of IMGs from Source Country (% of Workforce)
India	40,838 (4.9)
United States (U.S. IMGs)*	25,380 (3.0)
Philippines	17,873 (2.1)
Pakistan	9,667 (1.2)
Canada	8,990 (1.1)

United Kingdom

Source Country	No. of IMGs from Source Country (% of Workforce)
India	15,093 (10.9)
Ireland	2,845 (2.1)
Pakistan	2,693 (1.9)
South Africa	1,980 (1.4)
Egypt	1,592 (1.1)

Canada

Source Country	No. of IMGs from Source Country (% of Workforce)
United Kingdom	2,735 (4.0)
South Africa	1,754 (2.6)
India	1,449 (2.1)
Ireland	1,164 (1.7)
Saudi Arabia	658 (1.0)

Australia

Source Country	No. of IMGs from Source Country (% of Workforce)
United Kingdom	4,664 (8.6)
India	2,143 (4.0)
New Zealand	1,742 (3.2)
South Africa	1,253 (2.3)
Sri Lanka	627 (1.2)

Emigration factors by region

Region	Location of Physician's Practice		Emigration Factor*
	Recipient Countries†	Source Countries	
	<i>no. of physicians</i>		
Sub-Saharan Africa	13,272	82,100	13.9
Indian Subcontinent	78,680	656,876	10.7
Caribbean	8,010	87,443	8.4
Middle East and North Africa	27,010	489,464	5.2
Central and South America	12,103	707,416	1.7
Europe and Central Asia	44,988	2,741,717	1.6
East Asia and Pacific	39,910	2,808,400	1.4
North America	14,519	1,076,398	1.3

* The emigration factor for a region is computed as $[A \div (A + B)] \times 100$, where A is the number of physicians from countries in the region who have emigrated to work in one of the four recipient countries (either in their own or in another region), and B is the total number of physicians practicing in countries of the region.

† The recipient countries are the United States, the United Kingdom, Canada, and Australia.

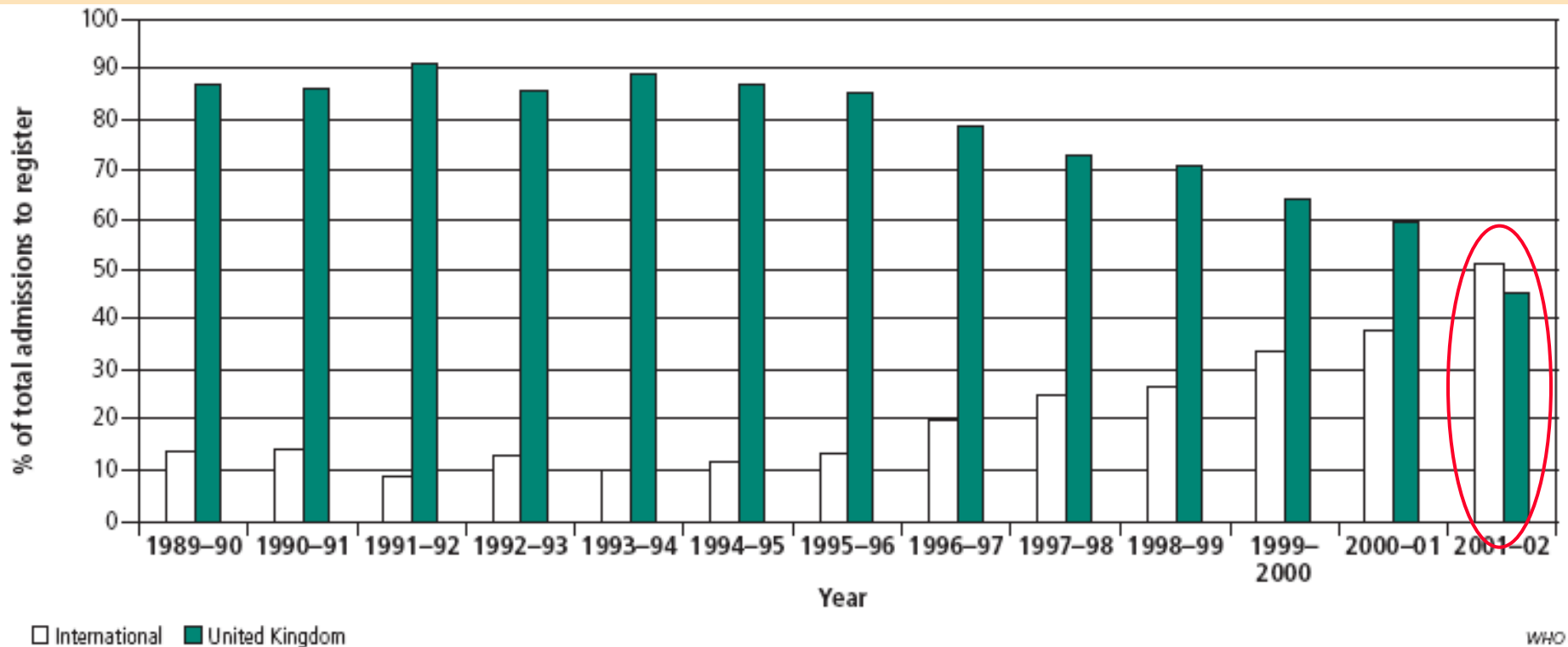
Some caveats to Mullen

- Excludes other recipient countries, although does include some data on other OECD countries. For instance:
 - New Zealand (35%), Switzerland (18%), Norway (13%), France (3%) and Japan (1%)
- Study does not consider trends over time
- Does not differentiate foreign-trained physicians who migrate to attend post-graduate training

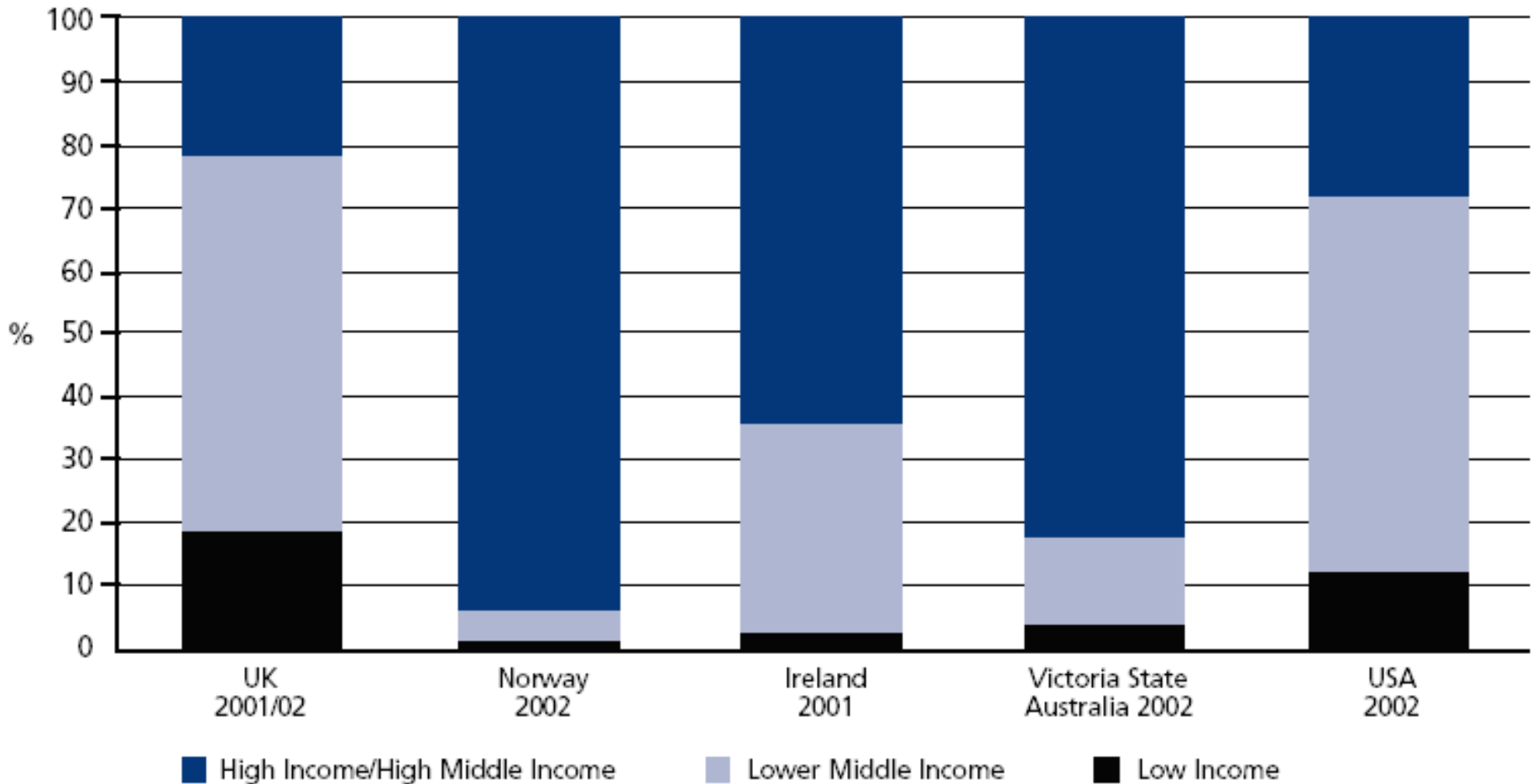
Migration flows of nurses

- Several papers (eg Buchan & Sochalski, WHO Bulletin, 2004; 82: 587-594) use same study
 - supported by WHO, International Council of Nurses and UK Royal College of Nursing
 - compiled registration data from 5 destination countries: Australia, Ireland, Norway, UK and USA
- Nursing shortages in developed countries caused upward trend in migration
 - Main source countries for UK/Ireland: Australia, India, Philippines, SA
 - Main source countries for USA: Philippines, Canada, Nigeria, SA
- UK and USA rely most on developing countries

Sources of nurses in UK as % admissions, 1989-2002



Composition of inflow of nurses by type of source country



Migration: source country perspective

- No comprehensive survey of nurse migration from source country perspective
- A few studies (eg Buchan et al, 2003/2005 reports from International Council of Nurses) report some data that suggests English speaking SSA countries and Caribbean countries experience significant losses of domestically trained nurses
- Corroborated by data on nurses/midwives working in 7 OECD recipient countries reported in 2006 World Health Report

Nurses and midwives trained in SSA working in 7 OECD countries

Source country	Total nurses and midwives working in home country	Nurses and midwives working in seven OECD recipient countries ^a	
		Number	Percentage of home country workforce
Angola	13 627	105	0
Botswana	7 747	572	7
Cameroon	26 032	84	0
Ethiopia	20 763	195	0
Ghana	17 322	2 267	13
Guinea-Bissau	3 203	30	0
Kenya	37 113	1 213	3
Lesotho	1 123	200	18
Malawi	11 022	453	4
Mauritius	4 438	781	18
Mozambique	6 183	34	0
Namibia	6 145	54	0
Nigeria	210 306	5 375	3
South Africa	184 459	13 496	7
Swaziland	4 590	299	7
Uganda	17 472	21	0
United Republic of Tanzania	13 292	37	0
Zambia	22 010	1 198	5
Zimbabwe	9 357	3 183	34
Total	616 204	29 597	Average 5

^a Recipient countries: Canada, Denmark, Finland, Ireland, Portugal, United Kingdom, United States of America.

Note: Data compiled by WHO from various sources.

Comparing physician and nurse migration

- Overall, evidence suggests:
 - In absolute terms, loss of nurses is more severe compared to the loss of physicians due to comparative volume of nurses (e.g. more than 150,000 Filipino nurses and 18,000 Zimbabwean nurses work abroad)
 - In proportionate terms, the reverse is true (eg 23% of physicians trained in SSA work in OECD countries compared to 5% of nurses and midwives)
- But figures vary widely from country to country, so extent of any brain drain (or brain gain) requires assessment on case-by-case basis

Trends and expectations

- Mobility of, and competition for HCW, has increased rapidly with globalisation
- HCW migration likely to remain important given:
 - increased demand for HR (from rich countries) due to ageing population, chronic diseases, retirements etc
 - weak prospects for improvements in the economies and health systems of poor countries
- Whether current trend will continue depends on the degree to which countries 'manage' HCW migration, unilaterally or via bilateral or multilateral agreements

1999/2000 saw rapid increase

Numbers of nurses from overseas who applied for registration in UK

Country	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
Philippines	52	1052	3396	7235	5593	4338
India	30	96	289	994	1830	3073
South Africa	599	1460	1086	2114	1368	1689
Australia	1335	1209	1046	1342	920	1326
Nigeria	179	208	347	432	509	511
Zimbabwe	52	221	382	473	485	391
Ghana	40	74	140	195	251	354
New Zealand	527	461	393	443	282	348
Zambia	15	40	88	183	133	169

2. Factors influencing migration

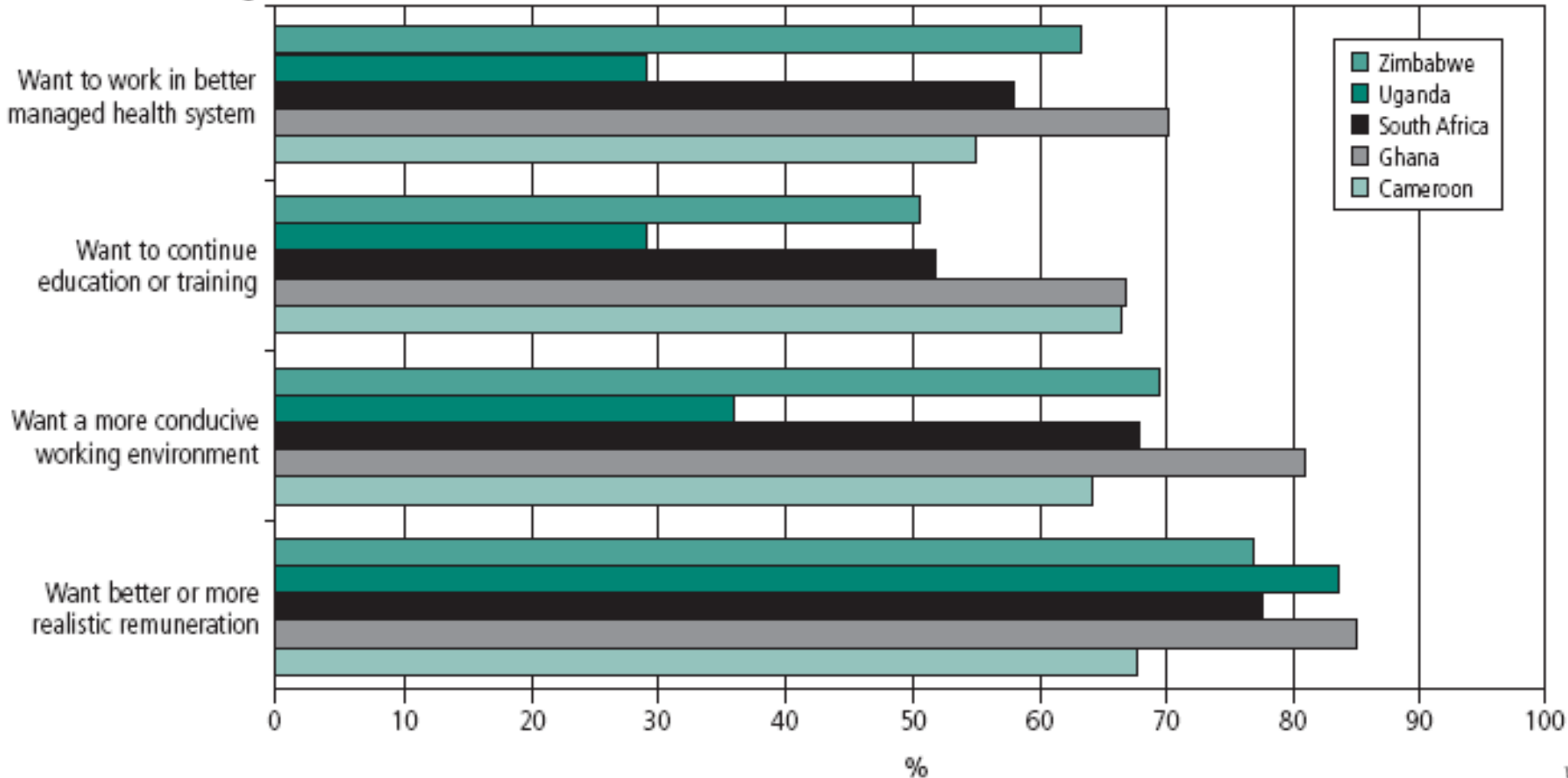
- Reasons for migration are well documented:
 - “push factors” (unsatisfactory conditions in source country)
 - “pull factors” (attractive conditions in destination country)
 - tend to dominate as can migrate only if vacancy at destination!
- Other contextual factors play role in decision. Eg:
 - Similarity of language/culture between source and destination
 - Eg cyclical pattern between Australia, Canada, Ireland, UK & USA
 - Historic (colonial) ties also important
 - Eg India to UK, North Africa to France, Mozambique to Portugal
- Globalization means such contextual factors becoming less important and regional/global agreements on labour markets, professional recognition etc more important (eg EU, ASEAN etc)

Push factors

- Lack of opportunities for postgraduate training
- Underfunding health service/research facilities:
 - lack of basic medical supplies and equipment
 - insecure and unsafe work environment
- Absence of established posts/career progress
- Poor remuneration and conditions of service, including retirement provision
- Governance and health-service management shortcomings (inefficient and unfair)
- Civil unrest and personal security:
 - human rights violations, ethnic, religious and political tensions, wars, economic collapse

Factors affecting HCW decision to migrate from 5 African nations

Reasons for leaving



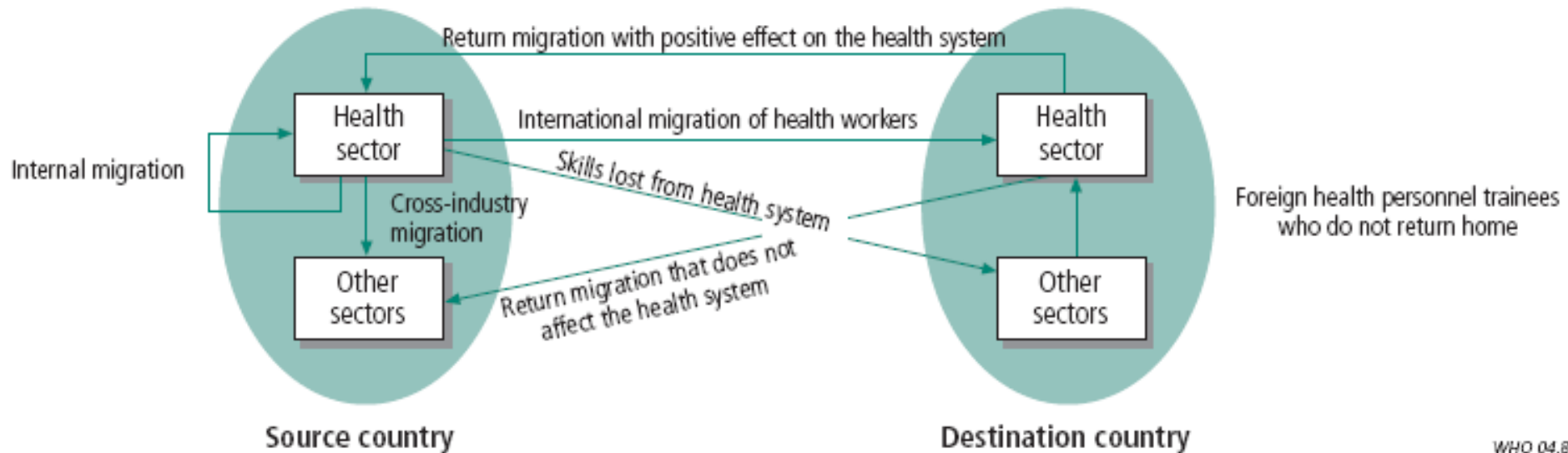
Pull factors

- Greater financial and non-financial rewards:
 - compare \$3,000–\$4,000 per month for *nurse* in USA versus \$300–800 per month for *doctor* in Philippines
 - improved working conditions (safety, security etc)
 - opportunities for training and career advancement
 - opportunities for remittances
- Presence of medical and educational ‘centres of excellence’
- Availability of posts (migration is ‘demand led’)
 - often combined with active recruitment drives
- Political and economic stability etc

3. Consequences of HCW migration

- Consequences can be subdivided into costs and benefits for source and destination countries
- Debate polarised:
 - critics accuse developed countries of “silent theft” and “poaching” labour, stressing negative effects
 - proponents stress the right of individuals to enhance career, benefits from remittances and skills transfer
- Lack of evidence on overall global welfare, as (effects of) migration is complex, and overall impact depends on interaction of several factors:
 - change in human capital stock in source/destination
 - impact on internal labour markets
 - degree of ‘brain waste’ (HCW ‘lost’ to health system)

Complexity of HCW migration



Costs and benefits to destination countries

- Benefits for destination countries are primarily:
 - short term relief of labour shortages (usually takes a minimum 3 years to train nurse and 5 to train doctor)
 - savings in educational costs. For example, in UK
 - approximately £220,000 per doctor and £12,500 per nurse is spent on education and training (migrants are approx zero)
 - importing HCWs from Ghana has, since 1998, saved UK £65 million in training doctors and £38 million in training nurses
- Evidence does not substantiate negative effects of migration on unemployment or wage rates in destination countries
- Migrants contribute more in taxes than receive in social security, thus contributing to fiscal system and economic growth in general

Benefits to source countries

- Long term professional networks
- Improved training and skills of migrant workers (only benefit where migration is temporary)
- Rise in real wages for those staying behind
- Diaspora investment in health facilities
- 'Safety valve' to reduce government pressure to provide employment opportunities and benefits
- Financial remittances (repatriated income) from expatriates

Evidence on remittances

- Mixed/patchy evidence on remittance flows as large proportions (~50%) transferred informally
- World Bank estimates 2005:
 - total global remittances ~US\$250 billion
 - developing countries received US\$167 billion
 - larger (and more stable) than capital market flows and official development assistance
- Unclear how much attributable to HCW
 - often from high income households in less need
 - permanent migrants (doctors) remit less
 - differs across source:
 - China, India, Philippines, Egypt, Cuba highest, SSA lowest
- Spent on private consumption, not health system

20 developing countries with highest remittances – US\$m, 1999

Rank	Country	Amount of remittances (millions of US\$)	% of GDP ^a	Funds for research and development as % GDP 1998 ^b
1	India	11.097	2.6	NA ^c
2	Philippines	7.016	8.9	NA
3	Mexico	6.649	1.7	0.34
4	Turkey	4.529	2.3	NA
5	Egypt	3.196	4.0	NA
6	Morocco	1.918	5.5	NA
7	Bangladesh	1.803	4.1	NA
8	Pakistan ^d	1.707	2.7	NA
9	Dominican Republic	1.613	11.0	NA
10	Thailand	1.460	1.1	NA
11	Jordan	1.460	21.2	NA
12	El Salvador	1.379	12.3	0.08
13	Nigeria	1.292	3.5	NA
14	Yemen ^e	1.202	24.5	NA
15	Brazil	1.192	0.2	0.91
16	Indonesia	1.109	0.8	NA
17	Ecuador	1.084	5.8	0.08
18	Sri Lanka	1.056	6.9	NA
19	Tunisia	761	4	NA
20	Peru	712	1.2	0.06

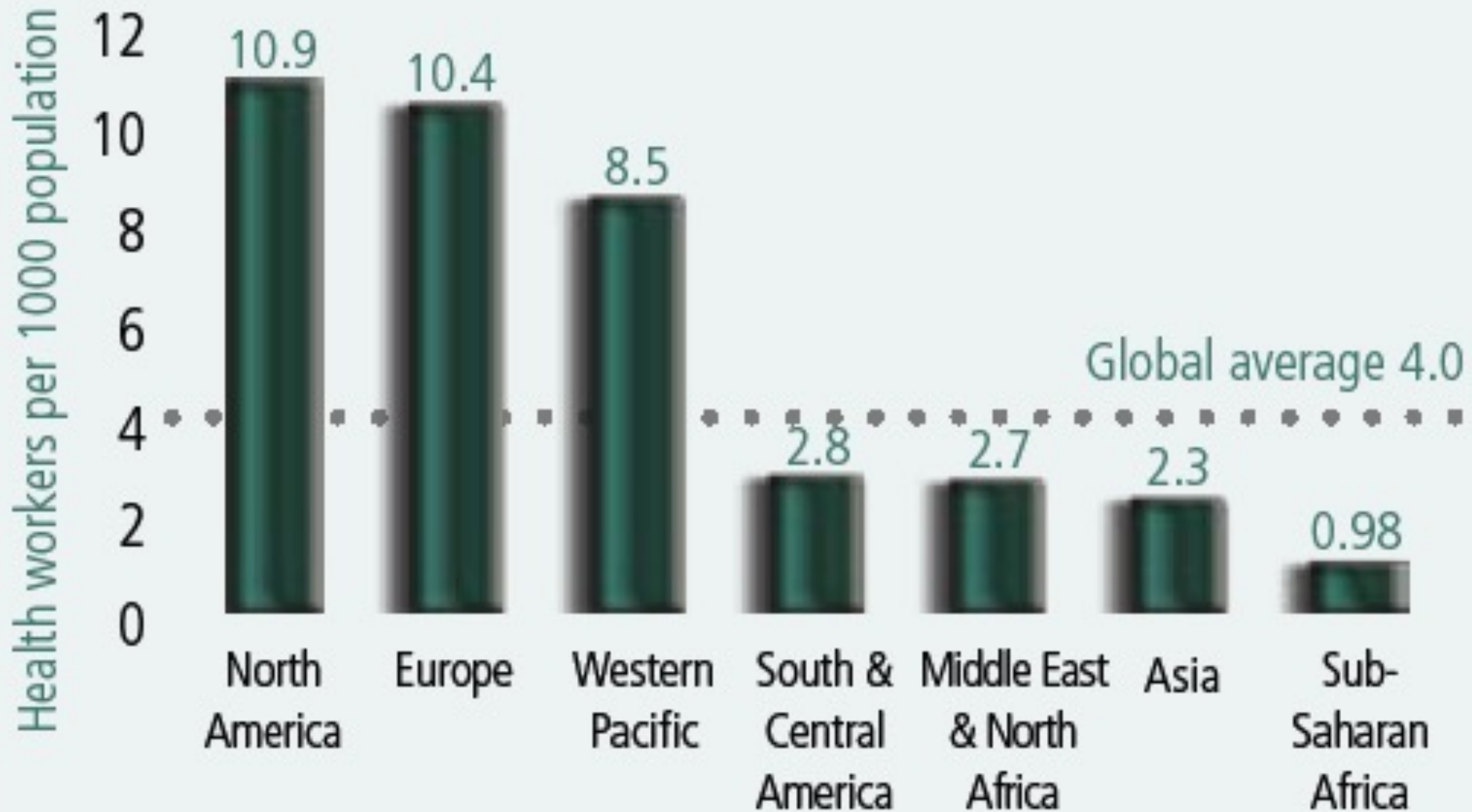
Costs to source countries

- Major cost for source countries is human capital loss of educated/experienced HCW:
 - Lost of investment in education and training
 - UNCTAD estimates each migrating HCW represents a loss of US\$184,000 in education investment to Africa
 - overall loss to Africa of education investment approx \$1billion pa, equivalent 1/3 of official development aid received (spends \$4billion pa on foreign experts)
 - Associated reduction in quality/quantity of health service provision and health status:
 - reduced health outcomes
 - reduced ability to achieve MDGs (SSA needs 1m *more* HCW)
 - reduced productivity, tax revenues and economic growth

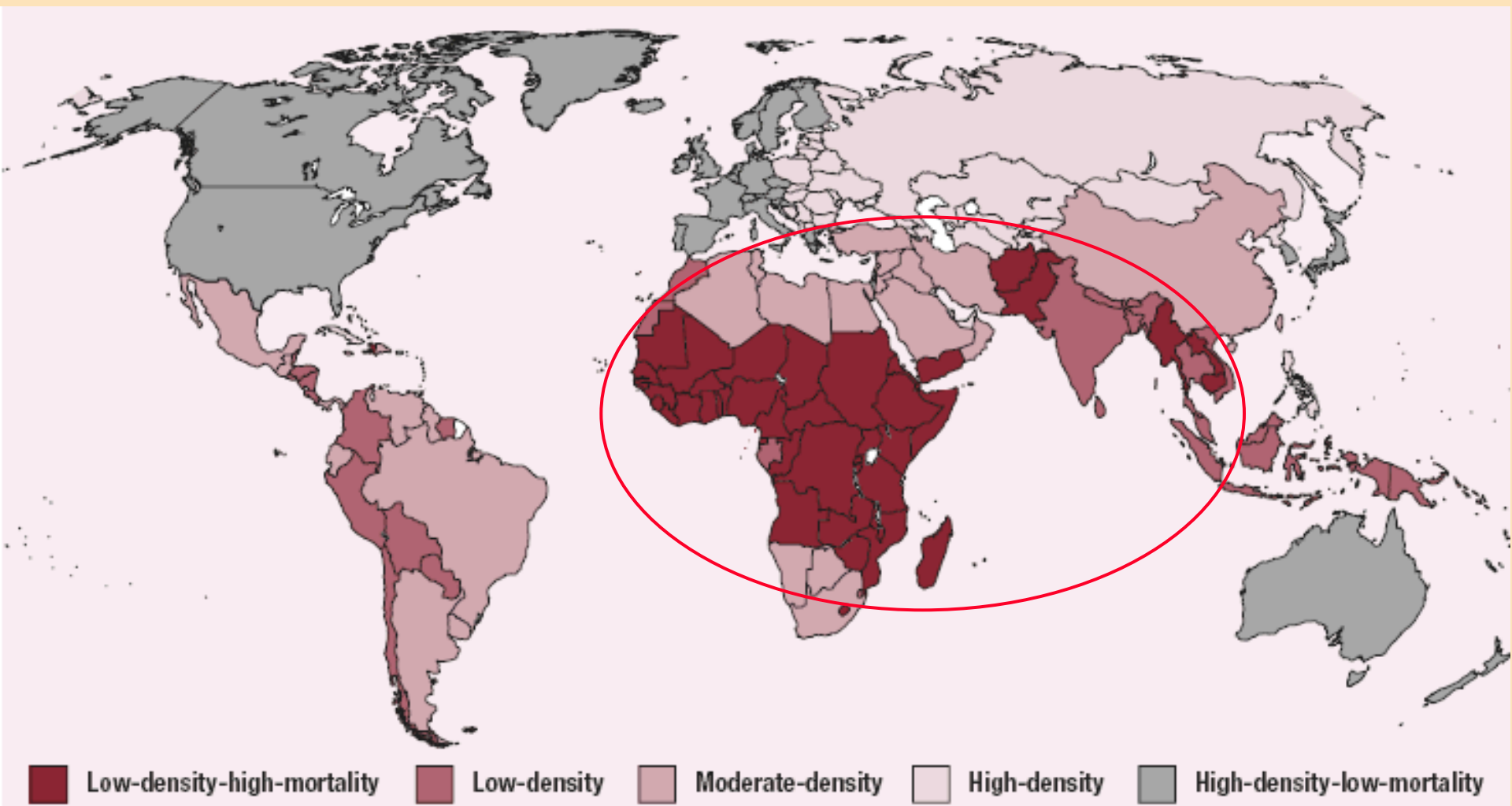
Impact on health service provision and health status

- HR often cited as biggest constraint to HS growth (in source and destination countries)
- Migration of HCW poses challenges for HR management and HS provision in all countries
- HCW lost from source countries generally greater than the production of HCW
 - most acute in SSA and Caribbean
- “Inverse care law” – countries most in need of health care resources are getting the least
 - concern since HCW crucial for development:
 - HCW density positively associated with immunization, primary care provision, infant, child and maternal survival

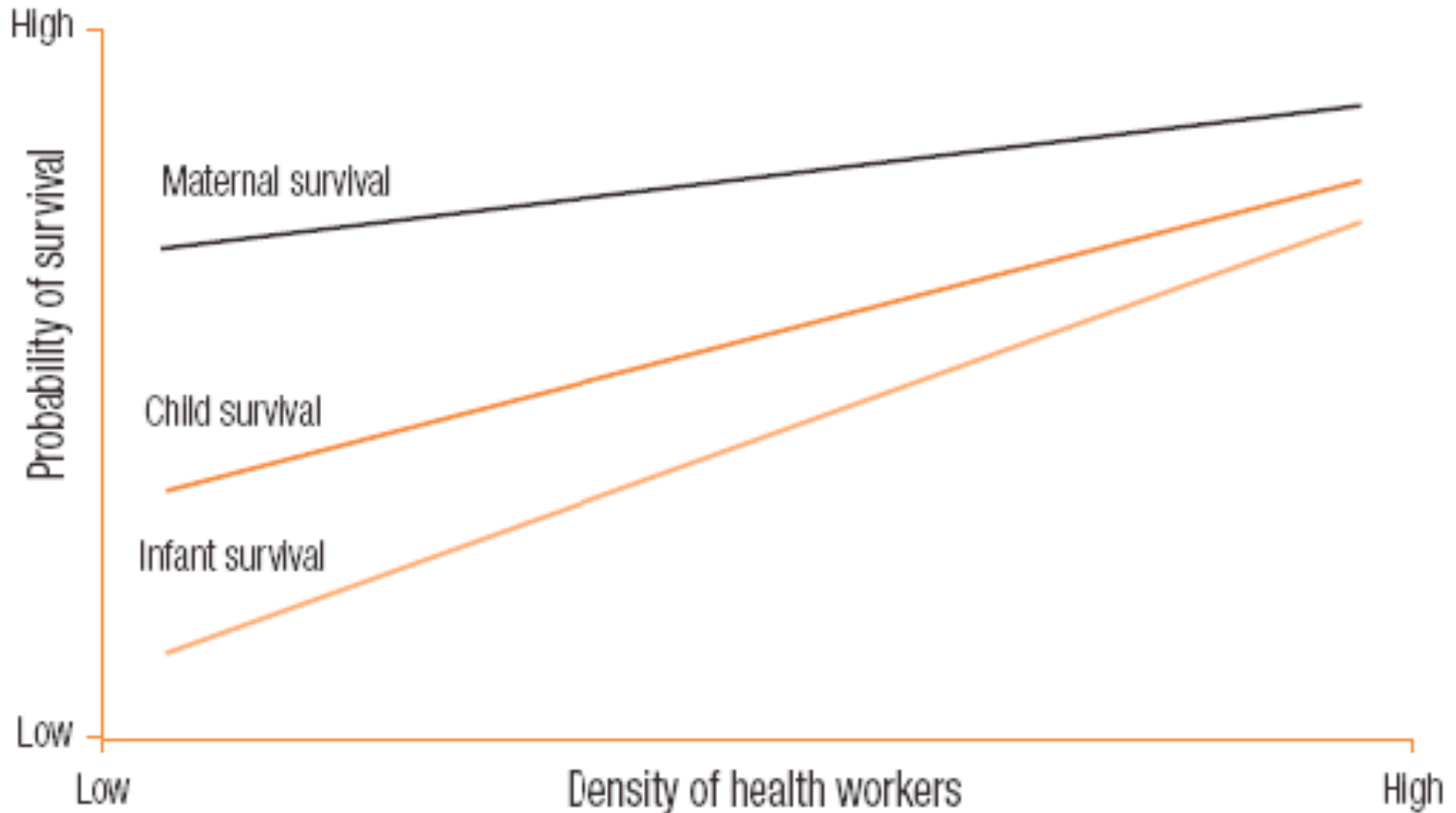
HCW density by region



Global variation in density of HCW and mortality rates



Association between HCW density and survival rates



Impact on health service provision and health status

- For many, health-related MDGs unobtainable:
 - WHO estimate 57 countries critical HCW shortages
 - deficit for these countries estimated at 2.4 million doctors, nurses and midwives, compared to global shortage of 4.3 million HCW
 - burden falls most in SSA
- With falling HS provision in source countries due to migration a ‘vicious circle’ results:
 - HCW migration increases the gap between working and living conditions between source and destination countries thereby encouraging further migration

4. Policy agenda: brain drain to brain gain

- Flow of HCW depends not only on national push and pull factors, but also on national and international migration policies
- Argued that countries should actively 'manage' migration to benefit source and destination via:
 - Actions at the country level
 - Education and training of HCW
 - Financial compensation (for loss of human capital)
 - Increasing (quantity and impact of) remittances
 - Improving retention and return
 - Codes of ethical recruitment

Actions at the country level

- As push and pull factors involved, action from both source and destination countries required
- Policies typically aim at increasing training, retention and return of migrants
- Negative measures such as taxing migrants or setting limits to number allowed to migrate are considered unfeasible and ineffective as:
 - migrant income is taxed in destination country
 - such measures are unethical as restrict right to search for better living and/or working conditions
 - offer no long-term solution as unlikely to address underlying causes and may induce illegal migration

Education and training of HCW

- Educating and training required to:
 - reduce destination country vacancies to stem 'pull'
 - increase supply in source countries and stem 'push'
- Only long term viable solution to HR 'crisis'
- Argument that destination countries benefit from implicit education subsidy from source and should have funding role (see later)
- Type of education/training matters
 - current medical curricula focus on needs of rich countries, indirectly contributing to migration
 - some propose 'two-tier' system in which some HCW trained to international standards for export, and many more trained to levels to suit local needs

Financial compensation

- Direct financial compensation (restitution)
 - does not address the underlying push/pull factors
 - does not help replace doctor (at 5+ years to train)
 - difficult to determine who should be paid how much
 - appropriate level of compensation would have to cover cost of education and loss of health services, adjusted for increase in skills and remittances, and length of migration
- These may be overcome by compensation taking form of bilateral *aid* – amount determined by aid budgets – to countries with good governance
 - WHO recommends a 50:50 guideline – 50% of all development assistance is devoted to HS, with 50% of this for strengthening the national health workforce

Increasing remittances

- Remittances provide some compensation for the loss of human capital, but often used for private consumption and not invested in health system
- Amount of remittances varies by:
 - skill type and duration of migration (higher skilled tend to migrate permanently and remit less)
 - migrant's country of origin – SSA remittances are low, partly due to underdeveloped financial markets
- Decision to remit is individual, but government has role in developing financial markets, reducing remittance costs and improving investment climate

Improving retention and return

- Efforts to improve retention and encourage return are relevant to rich and poor countries
- Retention and return policies typically focus on:
 - financial (wages, pensions)
 - increasing wages alone is ineffective, although other measures (below) reach beyond the health sector and address broader issues of creating stable political and macroeconomic environment conducive to economic growth
 - nonfinancial measures
 - adequate housing, means of transport, schooling, adequate equipment and medical supplies, safe work environments and opportunities for further education and training
 - bilateral agreements which encourage temporary migration for a fixed period (eg via “bonding” or visa limit) and staff exchanges (eg ‘twinning’ hospitals)

Codes of ethical recruitment

- UK 2001 Code of Practice for International Recruitment:
 - limits recruitment to two countries which signed HCW migration agreement (India and Philippines)
 - allows for controlled migration of HCW
 - no other countries targeted for recruitment
 - 2004 revised to cover private sector
- Impact of such codes unclear
 - Continued immigration of nurses from elsewhere ('proscribed' list), but some signs this is slowing
 - HCW developments over longer term will signify whether this is one-off event or a sustained effect resulting from a more ethical recruitment process

5. International context

- Number of international institutions active in area:
 - World Bank – “health services are another area in which developing countries could become major exporters.”
 - World Trade Organization (WTO), International Labor Organization (ILO), World Health Organization (WHO), International Organization for Migration (IOM) Global Commission on International Migration (GCIM)
 - acknowledge role of migration *in general* for economic growth, but express concern about impact of HCW migration undermining HS performance (and MDG achievement)
- Three important international developments:
 - GATS, ethical codes, global framework for management

GATS and HCW migration

- Countries who accede to WTO agree to liberalize trade in services under the GATS
- GATS important for migration not just directly (Mode 4), but indirectly through other modes:
 - Mode 2 extends (private or public) HS coverage to persons treated abroad ('health tourism')
 - Mode 3 involves establishment of commercial presence
- Could both initiate or magnify the (internal and external) brain drain in health services, within countries or regions, by drawing health care providers to private systems for tourists or for a wealthy minority of the domestic population

GATS Mode 4: temporary movement of natural persons

- HCW migration expected to gain momentum via WTO GATS Mode 4 negotiations. Two key issues:
 - Temporary is defined negatively (excludes permanent) but no consensus on timing, which could benefit source countries (eg define in very short-term)
 - Temporary workers often become permanent
 - GATS allows countries to impose regulations (eg qualification, licences), but these have to be 'least trade restrictive' as barrier to entry
- Momentum towards enlargement of regional trade blocks so issues go beyond GATS, hence interest in codes of conduct

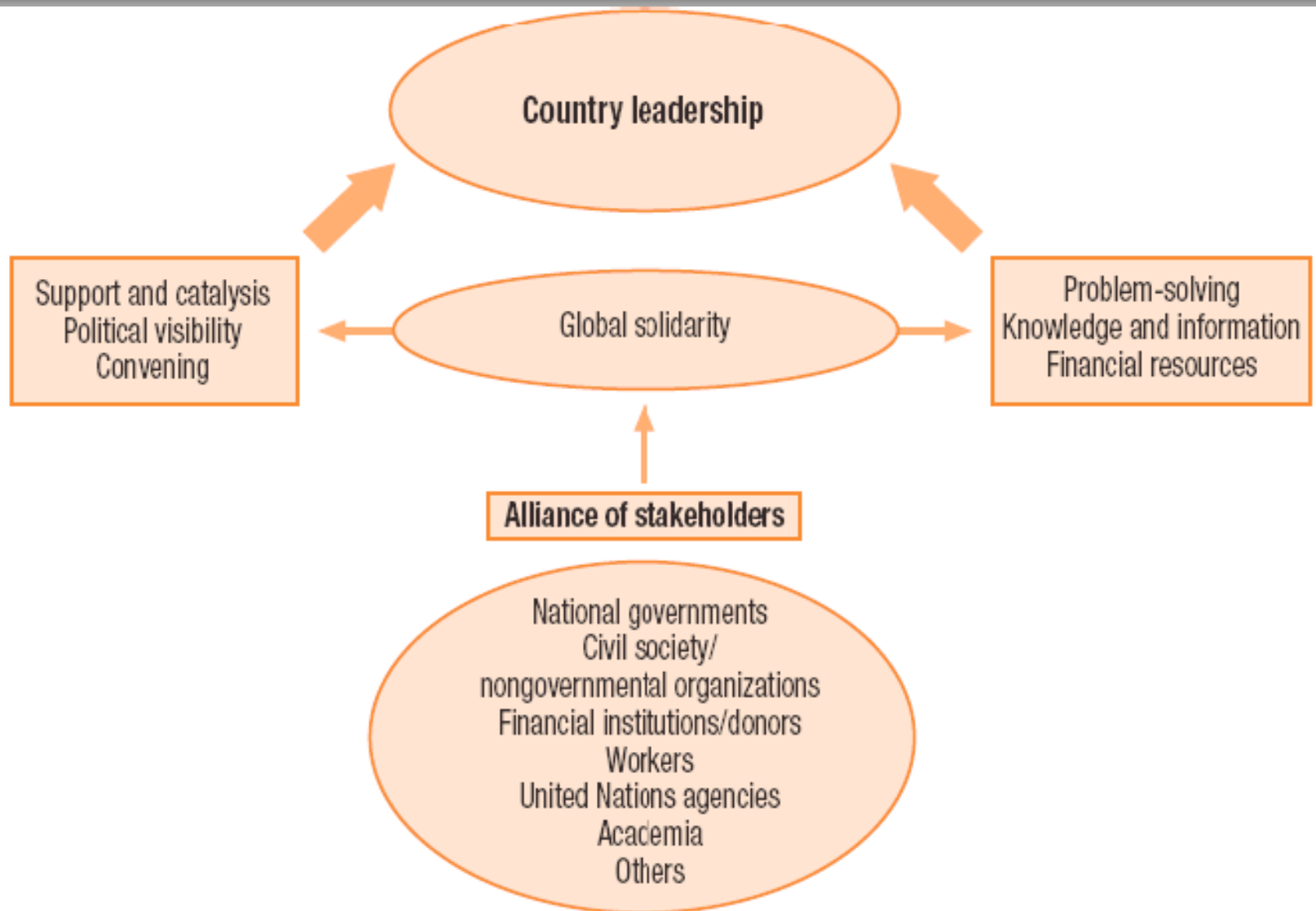
International codes of conduct for ethical recruitment

- International organisations attempt to establish codes of practice
 - But, ratification by members infrequent as priorities of destination and source countries incompatible
 - E.g Commonwealth Code of Practice (2003) – Canada, Australia and UK did not sign (problems with clauses on compensation)
- Such codes allow government to display ethical recruitment, but are weak as no legal standing (cf GATS commitments under WTO)
- But, seen as starting point for development of wider international framework for migration

Global framework for managing migration: the way forward?

- Increased collaboration between international agencies (IOM, WHO, ILO, OECD, WB, UN etc), private initiatives and national governments
- 2006 WHA – Global Health Workforce Alliance, to support strengthening of health workforce via:
 - formulation of a strategic national workforce plan
 - substantial increases in education and training of HCW
 - improvement of workforce strategies
- Long-term solution proposed is creation of international framework consisting of all relevant stakeholders responsible for all migration policies

An international framework for managing medical migration



6. Conclusion - evidence

- Global welfare gains from migration, with developing countries gaining especially from temporary migration of unskilled labour
- Skilled (HCW) migration impact less clear
 - more likely to be permanent loss (brain drain)
 - adverse HS provision and health consequences for source countries (positive for destination)
- Need more, better and consistent data collection
- Current (limited) evidence suggests that:
 - english-speaking countries in SSA & Caribbean suffer most severe 'brain drain', mostly to UK & USA
 - global welfare gains from HCW migration may well be less than losses

6. Conclusion – policy

- Given individual rights and range of push and pull factors, policy approach is management:
 - mix of financial and non-financial rewards (and policies beyond health sector), including for example:
 - increase education/training of medical personnel
 - improve the retention & return of HCW
 - increase (impact of) remittances
 - enter into bilateral agreements on temporary migration
- Such management requires collective action which accords to a commonly agreed international framework to manage migration so that the ‘brain drain’ becomes a ‘brain gain’ for all countries