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Developing evidence-based ethical policies on the migration of health workers: conceptual and practical challenges

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Abstract

It is estimated that in 2000 almost 175 million people, or 2.9% of the world's population, were living outside their country of birth, compared to 100 million, or 1.8% of the total population, in 1995. As the global labour market strengthens, it is increasingly highly skilled professionals who are migrating. Medical practitioners and nurses represent a small proportion of highly skilled workers who migrate, but the loss of health human resources for developing countries can mean that the capacity of the health system to deliver health care equitably is compromised. However, data to support claims on both the extent and the impact of migration in developing countries is patchy and often anecdotal, based on limited databases with highly inconsistent categories of education and skills.

The aim of this paper is to examine some key issues related to the international migration of health workers in order to better understand its impact and to find entry points to developing policy options with which migration can be managed.

The paper is divided into six sections. In the first, the different types of migration are reviewed. Some global trends are depicted in the second section. Scarcity of data on health worker migration is one major challenge and this is addressed in section three, which reviews and discusses different data sources. The consequences of health worker migration and the financial flows associated with it are presented in section four and five, respectively. To illustrate the main issues addressed in the previous sections, a case study based mainly on the United Kingdom is presented in section six. This section includes a discussion on policies and ends by addressing the policy options from a broader perspective.

Introduction

Migration can be analysed and understood from many perspectives. It has been interpreted by sociologists, economists, demographers and particular professional groups

within labour markets. While its complexity means avoiding tempting but simplistic solutions, the rapidly increasing number of highly skilled migrants calls urgently for policies and strategies to manage outflows ethically and attempt to ensure a balance between winners and losers.

The aim of this paper is to examine some key issues related to the international migration of health workers in order to better understand its impact and to find entry points to developing policy options with which migration can be managed.

The migration of highly skilled workers represents a large component of total migration [1,2] and although medical practitioners and nurses make up only a small proportion of professional migrants, the loss of health human resources for developing countries usually results in a loss of capacity of the health system to deliver health care equitably. However, data to support claims on both the extent and the impact of migration in developing countries is patchy and often anecdotal, based on limited databases with highly inconsistent categories of education and skills [3,4].

While it may be possible to say how many workers have left the health system, it may not be possible to know where they went or to trace them. This is confirmed by Martineau et al. [4], who cite some striking examples of losses, but most are anecdotally reported. It is often the dramatic stories of losses to health systems that get the most publicity, but they provide only a partial picture of health labour markets in developing countries, failing to address those issues that often act as "push" factors in migration, such as high unemployment rates, poor working conditions and low salaries. In order to develop realistic policy options for managing migration, evidence of the magnitude of the problem and the labour market contexts is needed.

Types of migration

In this paper we define *international* migration as the movement of people from one country to another to take up employment, to establish residence or to seek refuge from persecution, either temporarily or permanently.

The following typology of international migration is widely accepted [5,6]:

Permanent settlers are legally admitted immigrants who are expected to settle in the country, including persons admitted to reunite families.

Documented labour migrants include both temporary contract workers and temporary professional transients.

• *Temporary migrant workers* are skilled, semiskilled or untrained workers who remain in the receiving country for finite periods as set out in an individual work contract or service contract made with an agency.

• *Temporary professional transients* are professional or skilled workers who move from one country to another, often with international firms.

Undocumented labour migrants are those who do not have a legal status in the receiving country because of illegal entry or overstay.

Asylum seekers are those who appeal for refugee status because they fear persecution in their country of origin.

Recognized refugees are those deemed at risk of persecution if they return to their own country. Decisions on asylum status and refugee status are based on the *1951 United Nations Convention Relating to the Status of Refugees.*

Externally displaced persons are those not recognized as refugees but who have valid reasons for fleeing their country of origin (such as famine or war).

Most countries collect some data on migration in all these categories, although there is little consistency between countries on how these definitions are applied.

But definitions are important, as they are used as a rationale for international cooperation in the regulation and control of migratory flows by visas and work permits. Table 1 shows the variation, across selected countries, of conditions for the recruitment and temporary residence of skilled foreign workers.

Of particular note is the lack of consistency in the definition of "temporary" migration, which can be from 9 months up to 10 years, depending on the country conditions. Lack of consistency may present difficulties in data comparisons and in building a comprehensive picture of the flows of migrants, given the challenges of following the itineraries of individual migrants.

Regulation of cross-border movement of people is closely controlled by individual countries by conditions governing entry and length of stay. In recent years many countries have been changing their immigration legislation to make it easier to attract highly skilled labour, to compensate for skills shortages in domestic labour markets. Such changes may include incentives for overseas workers, such as easing work permit restrictions.

In relation to health care professionals, especially nurses, it is apparent in several countries that there are aggressive

Table 1: Conditions of recruitment and temporary residence in selected countries

Country	Admission conditions	Availability of domestic workers as grounds for refusal	Quotas	Length of stay (possibility for renewal)
Australia	Nominated by employer (exceptional stay of 3 months)	Yes	No	2 years (renewable once)
				4 years (renewable for teachers)
				3 months to 4 years for business specialists
Canada				
Work permit required	Preliminary authorization	Yes	No	Maximum 3 years (renewable)
No work permit required	Bilateral agreements	No	No	Maximum 9 months (renewable)
United States				
H-1B (specialists)	Prevailing wage required BA (4-year degree) + practice in the occupation	No	Yes	Initial admission for 3 years (renewable once)
O (extraordinary ability)	Consultation with peers	No	No	Up to 10 years, depending on activity (must continue to work in field of expertise)
United Kingdom	Employer must apply for work permit	Yes [a]	No	Up to 4 years (renewals possible)
	Restricted to highly skilled persons ('key workers')			
		Adequate command of English		
France	Employer must apply for work permit	Yes [a]	No	9 months (renewable once and in exceptional cases twice)
Netherlands	Employer must apply for work permit	Yes [a]	No	1 year (renewable)
Germany	Employer must apply for work permit	Yes	No	1 year (renewable)

(a) Exceptions for certain activities, or pay-related Sources: OECD, Trends in International Migration, 1998 and 1999 Editions, Paris

and targeted international recruitment initiatives [7–9]. In the United Kingdom, for example, the government has stated that international recruitment is part of the solution to meeting its staffing needs, and actively recruits nursing staff from abroad [10]. This type of active recruitment can have a marked effect on a sending country, especially because it is different from the opportunistic migration patterns of the past and is aimed at getting significant numbers of workers from a country

The future effect on migration of the General Agreement on Trade and Services (GATS), mode 4 (the movement of people), is uncertain. While GATS governs the temporary movement of people, there is no definition of "temporary", and as described here, there is little international consistency of definition. There is also a bias towards liberalizing the movement of highly skilled personnel through GATS, which might increase the flow of health care personnel. Internal migration is of as much concern as international migration in some countries [11,12].

Some commentators maintain that internal and international migration are part of the same process and should be analysed together [13]. Internal migration may be controlled by a variety of pay and non-pay incentives that may similarly act to discourage international migration or encourage returnees.

Trends in migration

It is estimated that in 2000 almost 175 million people, or 2.9% of the world's population, were living outside their country of birth, compared to 100 million, or 1.8% of the total population, in 1995 [6]. Increasingly it is highly skilled professionals who are migrating, as new technologies promote a global labour market. Stalker [14] estimated that there were 1.5 million professionals from developing countries working in industrialized countries, and Mahroum [15] comments that certain sets of skills and competencies are so specialized or in such short supply that they are being sourced on a global basis. At the moment, this global market includes nursing [10].

During the 1980s and 1990s the inflow of migrants increased in the majority of OECD countries, peaking between the late '80s and early '90s. There are now three major groups of developed countries, based on their migration trends. In the first, inflows have held steady or else fallen slightly, such as in France; in the second group inflows have risen in the late '90s following a previous decline – for example, in the USA and Canada; and in the third group, including the UK, there has been a sustained and steep rise in migration [2].

The loss of highly skilled professionals is thought to be costly for developing countries, not only in terms of skill shortages but also in fiscal costs from educational subsidies, when these are available [3,1]. The movement of health professionals has closely followed the upswing in migration of all professionals, and this will be shown in more detail later in the paper.

Data sources and data collection

Despite a prevailing view that data on international and internal migration are scarce, many diverse statistical

sources can potentially provide data on the movement of health workers. The nature of these sources might, however, vary from one country to another. Furthermore, international monitoring of migration is hampered by data quality and comparability issues. In many countries, there are significant information gaps and a considerable proportion of flows is undocumented, making it difficult to compare data between countries.

Compared to some other areas of statistics, such as labour force data, there exists little international standardization of migration statistics [2], particularly related to definitional problems (see section 1). For instance, population registers, a common source of migration statistics, are used for a number of other administrative and statistical purposes. The data available tend to reflect the migration systems and policies of national governments.

In this section the main data sources are reviewed and critically discussed. The principal sources of migration statistics are population registers, migration visas, residence or work permits, censuses and surveys [2,16]. Data sources producing information on international migration can be customarily grouped in the following four types [6].

Administrative registers (population registers, foreign registers, etc.)

In some countries, administrative registers have the potential to provide information on migrants. Population registers are accounts of residents within a country. These registers can provide data on all migrant flows (inflows and outflows of both national and foreigners). However, the identification of migrants is subject to the rules concerning inscription in or de-registration from the registers. Non-compliance with these rules might lead to underestimation of the true extent of migration. In particular, coverage by foreign registers of individuals leaving the country is likely to be lower than for incoming migrants, since individuals leaving the country are often reluctant to register their departure. Facility and providers' associations registers can provide routine information on citizenship and occupation and on health workers and their location in many countries. This data source offers a good opportunity to analyse the attractiveness for migrants of the public or private sector or of some states/regions, depending on public regulations. These registers sometimes cover only the public sector or urban areas.

Migration visas/working permit data/border statistics

Many countries require citizens of certain other countries to have a visa to enter. It is common to issue different types of visas as a function of the established relations between countries, the duration of the intended stay and the stated purpose. This type of information can generate valuable information about specific subsets of migrants. Border statistics can provide a direct measurement of migration. However, coverage by these statistics varies from one country to another. Political factors, economic constraints, geography of the country – all are potential factors that affect the coverage of such statistics. For instance, border controls for migrants might differ according to criteria such as country of origins, occupation or length of stay. Residence and work permit registries represent another major sources of data on migration. Work permit data are a precious data source for migrant labour, particularly labour inflows. Permit data will provide information on new applications, new work permits granted and newly activated permits [16].

However, data collected for administrative purposes do not necessarily capture the full volume of migration, and are thus often incomplete. For instance, the requirements regarding visas and work permits for migrants may vary according to their country of origin. Moreover, the degree of effectiveness with which such administrative procedures are implemented also has an impact on the adequacy of these data as international migration statistics [17]. Migration laws of some countries allow resident workers to obtain citizenship after a certain period. The new citizens are no longer considered migrants by the receiving country, whereas statistics of the country of origin may still consider them migrants. Another limitation of that type of data source is that many health workers from developing countries work outside the health system in many receiving countries. These situations can lead to an underestimation of migration of health workers in many attractive countries.

Censuses/surveys

Census data permit comprehensive analyses on the stock of immigrants and their distribution across regions and states. Census data can also provide detailed information on the migrant profile, such as demographics (age, sex, profession) and socioeconomic characteristics (education, income, sector of activity, etc.), but censuses are unlikely to provide information on migration flows. Other limitations of censuses are that updating data is difficult, since censuses are conducted only every 5 to 10 years in most countries, and census data might fail to capture temporary migration. Failure to use standardized classifications of occupations (such as the International Labour Organization's ISCO-88 or the equivalent) at the appropriate level (at least a 3-digit ISCO classification or the equivalent is needed to be able to distinguish between types of health workers) does not allow researchers to distinguish health workers from other professional workers. Country comparison is difficult, because while some countries classify migrants by country of previous residence, some classify them by country of birth or citizenship. In addition, many countries, including those with

developed market economies, have until recently not distinguished short-term from long-term or permanent health workforce migrants.

As with censuses, many surveys include questions about nationality and place of birth, and thus allow for assessment of the stock of migrants in a country. Surveys suffer many of the same drawbacks as censuses. In addition, detailed assessments are difficult, since surveys normally produce more limited data.

Combining data sources

Migration of health workers has become a cause for concern in many countries because of its impact on the health system. Unfortunately there is no single source of data that can reflect the growing complexity of internal and international migration of health workers, taking into account trajectories/itineraries. Furthermore, some factors affecting the decision to migrate are not easily measurable. To investigate migration requires a variety of sources – both quantitative, which can produce different types of migration statistics, and qualitative, to explore perceptions and motivation of health workers. To ensure accuracy and comparability of migration statistics, efforts should be made to harmonize data collection methodologies and definitions of migration.

As an example of the difficulties of keeping accurate exit data on those leaving a country, the data about emigration from South Africa were compared with corresponding data from countries receiving its immigrants. There was a large disparity in the numbers, as can be seen in Fig. 1. This illustrates that in many sending countries emigration is underestimated.

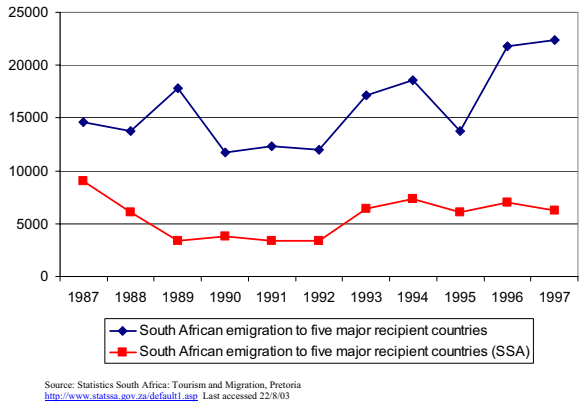


Figure 1
Emigration of professionals from South Africa: data recorded by South Africa and by recipient countries

There also remains a lack of qualitative data on the attributes and behaviours of individual migrants, which would further add to an understanding of the influence of "push and pull" factors, and hence inform policy-making. The pursuit of data from individual migrants might also increase understanding of migrant itineraries.

Effects of migration

The migration of skilled health professionals directly affects the health system, and in consequence also affects population health outcomes and health workers remaining in the country.

Effects on health workers

Those health workers who remain in public health systems with inadequate numbers of health workers experience added stress and greater workloads. Many of the remaining health workers are ill-motivated, not only because of their workload, but also because they are poorly paid, poorly equipped, inadequately supervised and informed and have limited career opportunities [12]. Mutizwa-Mangiza [18] reports that as a result of increased stress, staff were neglecting public sector responsibilities to work in the private sector, and there was a high turnover of staff.

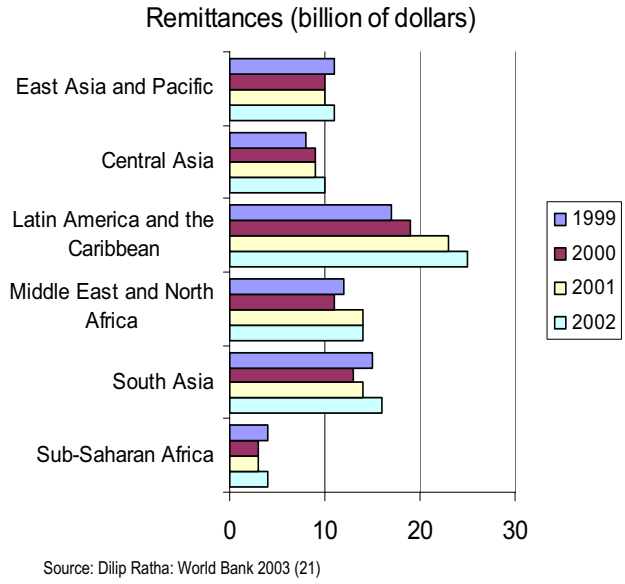
Effects on health systems

Migration threatens the functioning of the health system, if there is a net loss of human capital, and this has become a cause for concern in some developing countries, where emigration exceeds immigration. This may be a general loss if a large proportion of the workforce is leaving the country, or area-specific, if there is migration from the rural to urban areas or from the public to private sector. The health system depends on a balanced mix of professional skills, appropriately deployed, for equitable coverage.

Effective coverage is defined as the ratio of the realized health gain from a set of interventions (weighed by the health risk) over the total population health gain possible if providers performed at their optimal level for a health system

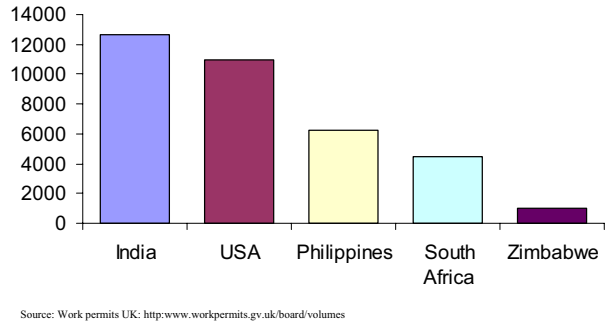
Losing part of the professional mix in the health workforce may result in either an absence of some services or in professionals' having to adapt their roles to deliver services commonly outside their scope of practice. The education cycle of preparation for health workers is long, and response to loss of human capital from the health workforce is not usually fast or flexible.

Dovlo [19], in his 1998 survey of seven African countries, found vacancy levels in the public health sector to range between 7.6% (for doctors in Lesotho) and 72.9% (for specialists in Ghana). Malawi reported a 52.9% vacancy



Source: Dilip Ratha: World Bank 2003 (21)

Figure 2
Remittances received by developing countries, by region 1999–2002 ($ billions)



Source: Work permits UK: http:www.workpermits.gv.uk/board/volumes

Figure 3
UK work permits: selected countries

level for nurses. Such vacancy rates will inevitably lead to inadequate coverage, and some population health needs will remain unmet. For example, in some developing countries the shortage of nurses and physicians is thought to have resulted in rural clinics being staffed by aides who are trained to deal only with uncomplicated conditions. This not only affects coverage and access for communities, but also health outcomes, if conditions are present that are not adequately treated [18].

However, vacancy rates are only one way of demonstrating shortages, and may not give a true reflection of the capacity of the health system to expand, nor of the requirements for health workers to be placed in unpopular areas [20]. Even if all the migrant workers were to return to their home countries, the system may not be able to create jobs for all of them, nor keep them in the places where they are most needed.

Financial flows

Remittances – the portion of international migrant workers' earnings sent back from the country of employment to the country of origin – plan a central role in the economies of many labour-sending countries and have become a focal point in the ongoing debate concerning the costs and benefits of international migration for employment.

Remittance flows are the second-largest source, behind foreign direct investments (FDI), of external funding for developing countries. In 2001, workers' remittance receipts of developing countries stood at $ 72.3 billion – much higher than total official flows and private non-FDI flows – and for the last decade have exceeded the total of global development aid [21].

The main sources of official data on migrants' remittances are the annual balance-of-payments records of countries, which are compiled in *the Balance of payments yearbook* published by the International Monetary Fund (IMF) (see Fig. 2). From information currently available it is impossible to know the magnitude of remittances from health workers alone. In addition, many remittances take place informally and are not be recorded in national statistics.

Although remittances provide some compensation for sending countries, those sent by health workers (even if they can be identified) are not directly reinvested in human capital for the health system. This means that those countries sending more health professionals than they are either receiving or producing will end up with a net loss of human capital in the health system. Even though the capacity of the country may ultimately be strengthened in the long term, the short-term loss of health professionals could have serious implications for coverage of and access to services in developing countries.

Migration: a case study

Although assessing the scope and type of health personnel migration is difficult, it appears that data from recipient countries are likely to be more reliable than those of sending countries. For this reason, this section of the paper will focus on the United Kingdom as an example of a major recipient country, and set out the challenges in quantifying migration, in looking at its impact in developing

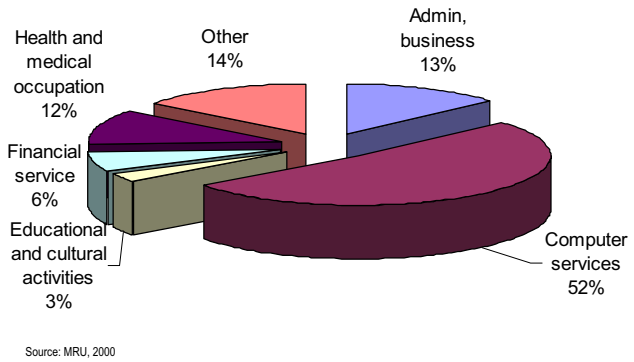


Figure 4
Industrial classification of work permits issued to India, 1999

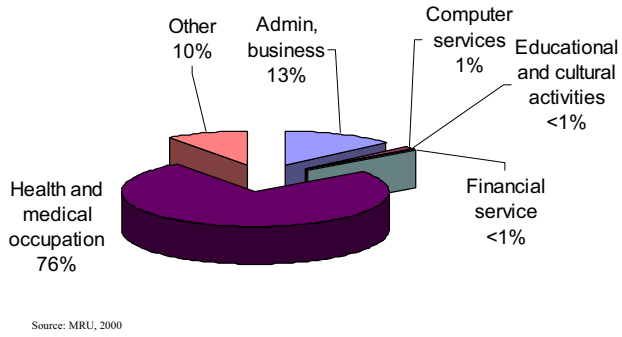


Figure 5
Industrial classification of work permits issued to Philippines, 1999

countries and in developing policy options for managing migration. Impact is explored in three African countries, Ghana, South Africa and Zimbabwe, and we are aware of the limitations of such an approach.

General migration trends in the United Kingdom

Over the last ten years, there has been an upward shift in the number of people migrating to the United Kingdom. Data from the International Passenger Survey shows an increase in the number of migrants to the United Kingdom from 229 000 in 1995 to 332 000 in 1999. The most significant source of growth has been the flow of citizens from countries outside the European Union [22].

General profile of migrant workers to the United Kingdom

Professional and managerial migrant workers currently represent approximately 65% of total migration. This proportion has slightly increased over the last years, rising from 59% in 1992 to 65% in 1999 [23]. In 2000 there was a net gain to the United Kingdom of 53 000 professional and managerial workers, and of these, 57% had employment prior to arrival.

Country of origin of skilled workers

More detailed information about the geographical origin of flows of skilled workers from developing countries to the United Kingdom is provided by the Overseas Labour Services data on work permits. The work permit is arguably the main device by which highly skilled migrants enter the United Kingdom [22].

Work-permit approvals figures for the United Kingdom show that India is the primary source of migrants receiving work permits, followed by the United States and the Philippines. The number of work-permit approvals for October 2000 to March 2001 amounted to 12 600, 10 900 and 6200, respectively. In comparison, these figures are 4400, 1000 and 900 for South Africa, Zimbabwe and Nigeria, respectively. These results suggests that African countries, with the exception of South Africa, do not represent a large share of the total number of work-permit approvals issued for the United Kingdom.

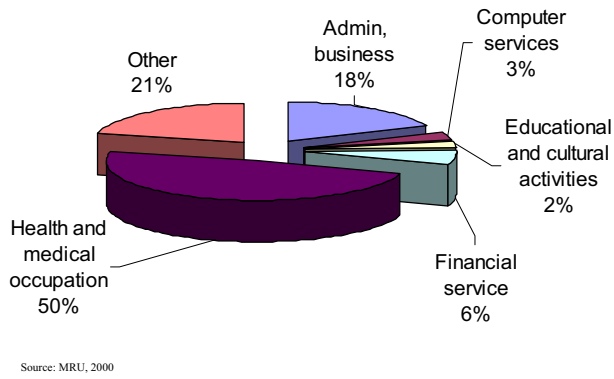
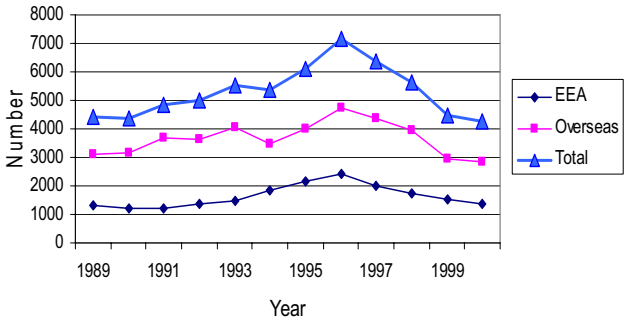


Figure 6
Industrial classification of work permits issued to South Africa, 1999

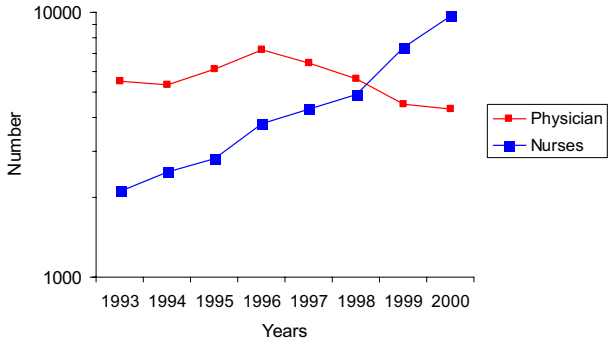
Distribution of industrial sectors among migrants to the United Kingdom

Examining data related to the industrial classification of work permits shows the relative importance of the health and medical occupations with respect to other industrial sectors. Data presented in Figs 4, 5 and 6 show the distribution of work permits issued to India, the Philippines and South Africa by the United Kingdom.



Source: General Medical Council UK, Personal Communication

Figure 7
Physician registration in the United Kingdom



Sources: General Medical Council: United Kingdom Central Council for Nursing, Midwifery and Health Visiting

Figure 8
Physician and nurses registration in the United Kingdom

Figure 4 shows that for India, health and medical services represent only 12% of issued work permits, whereas it is above 50% for computer services. These results show that although India is the primary source country for work permits in the United Kingdom, the health and medical service sector is not important in comparison to other sectors. In contrast, health and medical services account for approximately 75% of work permits issued to the Philippines and 50% for South Africa.

Migration of physicians and nurses to the United Kingdom

Figure 7 shows physician registration for the United Kingdom for 10 years 1989–1999. This peaked in 1996–1997 and has since been falling. Most physician migration is from non-EU countries.

While migration of physicians is currently falling, nursing migration is rising steeply, as illustrated in Fig. 8. Work-permit data on nurses (Table 2) shows that the main sources of applications to work as a nurse in the United Kingdom were the Philippines, India and South Africa, with Zimbabwe significantly represented. It is interesting to note that although only a small percentage of work permits for India are issued for health and medical occupations, the actual number of work permits for Indian nurses is important because India is one of the main source countries for work permits.

Potential impact of migration for developing countries

The lack of data makes it difficult to empirically assess the impact of health worker migration on health systems. Combining different types of information about the stock of health personnel, as well as the yearly number of new graduates in developing countries and the number of yearly foreign registered doctors or nurses in the United Kingdom – all are of interest in evaluating the scope and potential impact of human resources migration from developing countries to the United Kingdom.

Table 3 presents the stock of doctors and nurses in Ghana, South Africa and Zimbabwe, respectively. The stock of health personnel is expressed in absolute numbers and as a percentage of the population. The number of doctors varies from 1220 in Ghana to 22 400 in South Africa, corresponding to doctor-to-population ratios of 6.2 and 56.3 per 100 000 population, respectively. For nurses, figures range from 14 168 in Ghana to 188 249 in South Africa: nurse-to-population ratios of 72 and 472 per 100 000 population, respectively. Comparing these figures with the yearly number of migrant health worker registrations in the United Kingdom can provide some general sense of the impact of migration to the workforce in the source country.

For South Africa, Ghana and Zimbabwe, the proportion of doctors migrating ranges from 0.7% for Zimbabwe to 2% for South Africa. For nurses, it ranges from 0.6% for South Africa to 2.6% for Zimbabwe.

But drawing conclusions from such an approach requires caution. The data are from different sources and their accuracy is doubtful. Counting nurses is difficult, because there are different levels of qualification; also, some work in the private sector and may not be included. Most nurses who migrate are professionally qualified, so the pool of nurses in the sending country is likely to be more severely depleted than these figures would suggest.

Comparing the number of newly graduated doctors and nurses with the number of registered doctors and nurses abroad also provides valuable information on the poten-

Table 2: Total numbers of work permits approved for nurses, Great Britain, 2001, by category and selected country of nationality (% of total in brackets)

Country	Total, all applications	Composition of total applications					
		First permission	In-country change of employment	In-country extension	In-country technical change	Work Permit	Work Permit extension
TOTAL	23063						
Of which:							
Philippines	10050	210	1433	952	26	7422	7
India	2612	105	646	92	9	1759	1
South Africa	2514	149	669	490	33	1163	10
Zimbabwe	1801	851	527	146	13	261	1
Nigeria	1110	217	424	104	11	354	0
Australia	601	149	69	99	4	277	3
Ghana	493	151	148	44	3	147	0
Trinidad and Tobago	357	94	89	130	1	43	0

Source: Work Permits UK; Provisional, up to 17 December 2001 only

Table 3: Stock of doctors and nurses in Ghana, South Africa and Zimbabwe and yearly registration in the United Kingdom

Country	Ghana	South Africa	Zimbabwe
Doctors/pop (000,000)	6.2	56.3	13.9
Doctors stock	1,220	22,464	1,1603
Annual doctor registration in UK	14	454	12
Ratio: annual doctor registration / doctors stock	1.1%	2.0%	0.7%
Nurses / pop (000,000)	72	471.8	128.7
Nurses stock	14,168	188,249	14,838
Annual nurse registration in UK	140	1086	382
Ratio: annual nurses registration / nurses stock	1.0%	0.6%	2.6%

Source: WHO, HRH data base, 1998; (last accessed 26/11/02). *General Medical Council UK; Personal Communication, General Medical Council: United Kingdom Central Council for Nursing, Midwifery and Health Visiting*

tial impact of migration on the renewal of human resources for health. In Zimbabwe, the yearly number of new graduated nurses for the years 1998–2000 is around 340, according to figures supplied by the Ministry of Health, Zimbabwe, whereas the number of annual nurse registrations for Zimbabwean nurses in the United Kingdom amounted to 382 in 2001. Assuming that there is no surplus of nurses in Zimbabwe, these figures show the potential negative impact of migration on the renewal of human resources for health for Zimbabwe.

South Africa is in a special position. It has traditionally been a country that both sent and received migrants, but its rate of export of human capital is now far higher rate than its rate of import. While exports are not only to the UK, Fig. 11 shows the net loss to South Africa of emigrating skilled workers. The major costs to all the countries in this position are in lost production, as well as education, training and experience in human capital [24].

Issues and policy discussions

A recent study examined the migration patterns of nurses in the UK. This is of particular interest because the Department of Health in the UK introduced ethical guidelines for recruitment of nurses from overseas in November 1999 [25].

Table 4 highlights the extent to which the first initiative appears to have had an effect. The UKCC data is presented in annual cycles of 1 April to 31 March, and the guidelines were introduced in November 1999. The first full year of their implementation was therefore from April 2000 to March 2001. The number of new registrants from both South Africa and the West Indies decreased in 2000/2001 from the level in the previous year, by 25% and 39%,

Table 4: Registrants from selected countries, "before" and "after" implementation of the ethical recruitment guidelines in November 1999

Country	1998/99	1999/2000	2000/2001	% change, 1998/99 to 1999/2000	% change, 1999/2000 to 2000/01	% change 2000/01 to 20001/2
South Africa	599	1460	1086	+144	-25	+95
West Indies	221	425	261	+92	-39	-5
Zimbabwe	52	221	382	+325	+73	+24
Ghana	40	74	140	+85	+89	+ 39
India	30	96	289	+220	+201	+ 244
Nigeria	179	208	347	+16	+67	+ 25
Philippines	52	1052	3396	+1923	+223	+ 113
(Total non-EU registrants)	(3621)	(5988)	(8403)	(+65)	(+40)	+ 63

Source: UKCC (now Nursing and Midwifery Council

respectively. The upward trend in registrants from these countries in earlier years suggests that the implementation of the guidelines may have had some effect at reducing direct recruitment from South Africa and the West Indies. However, the most recent figures show that the effect was transitory, if indeed it was a result of the ethical guidelines.

It is also clear from Table 4 that there have been continuing increases in the number of nurse registrants from other developing countries, such as Ghana, India, Nigeria and Zimbabwe. The growing significance of these countries was confirmed by the work permit data for 2001. In particular, there has been significant growth in the number of registrants from the Philippines – up from 52 in 1998/9 to 3396 in 2000/2001. Overall there was a 40% increase in registrants from non-EU countries over the period from 1999/2000 to 2000/2001. Data in the table therefore suggest that the 1999 guidelines may have had some effect in reducing recruitment from South Africa and the West Indies, but that this recruitment activity may then have been displaced to other developing countries.

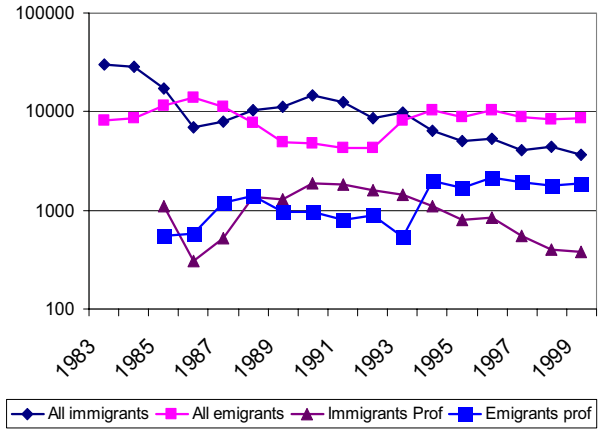
There have continued to be new registrants from South Africa and the West Indies, and while some of these registrants are individuals applying on their own initiative, others will have been recruited by private-sector employers or recruitment agencies. One main limitation of the 1999 guidance was that it did not cover private-sector recruitment agencies and employers.

The UK has a long tradition of recruiting permanent and temporary workers from overseas, and as a result of the need to combat staff shortages and meet the NHS Plan staffing targets, international recruitment of nurses and other health care staff has become a priority issue. England now has a code of practice for employers that discourages active recruitment of overseas nurses unless there is a prior bilateral agreement between governments. Numbers of nurses recruited from other places, especially the Philippines, have increased. While the Philippines is traditionally a country that exports its health staff, some other developing countries, such as Ghana or Zimbabwe, do not have a reserve stock of human capital with which to make up for an overall loss.

While the movement of UK registered nurses to other countries fell markedly in the early 1990s, as measured by the number of verifications that the United Kingdom Council for Nursing, Midwifery and Health Visiting (UKCC) issues to regulatory bodies of other countries, there has been some increase in the number of verifications issued since the late 1990s, though this has not been at the same rate of increase or to the same level as that of inflow.

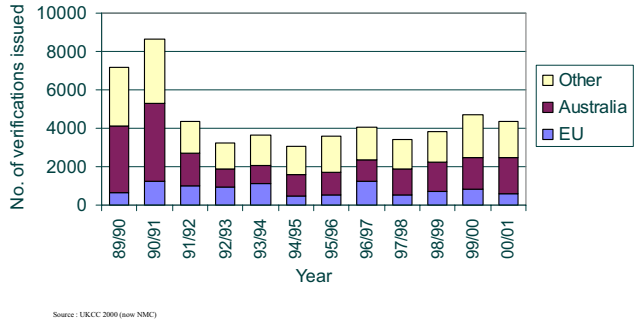
In 1999/2000 a total of 5083 verification documents were issued. This is an increase over recent years, as illustrated in Fig. 10. Outflow appears to be linked primarily to nurses moving to other developed countries. Some of these countries, such as Australia, Canada and Ireland are also experiencing or projecting demographically related nursing shortages.

However, verifications can be issued to nurses from overseas who have registered with the nursing council in England. This means that some of the nurses leaving could have come from a developing country to the UK, and thence gone to another developed country. While there is anecdotal evidence that many migrant health workers have a migratory itinerary, it is difficult to track this. More in-depth studies of health worker migration could help explain the global movement of the health workforce.



Source: http://www.statsa.gov.za (last accessed 04/05/2002).

Figure 9
South Africa: Emigration and immigration



Source : UKCC 2000 (now NMC)

Figure 10
"Outflow" as measured by annual number of UKCC verifications issued

Discussion

Medical practitioners and nurses make up a small proportion of all migrating professionals, but nevertheless the loss of health human resources for developing countries represents a loss of capacity of the health system to deliver health care equitably. However, India and the Philippines systematically produce surplus nurses and medical practitioners for export to richer countries. This results, inter alia, in remittances to the source countries, with significant foreign income being generated.

Data on migration remains patchy, based on limited databases with highly inconsistent categories of education and skills. A comparison of data from the sending and receiving countries shows much higher rates of immigration reported by receiving countries than by the sending country – in this case, South Africa. This provides a cautionary note for countries estimating outmigration: it appears to be more accurate to use data from countries of destination, and may indicate a need for better tracking of outmigration. Qualitative data related to factors that influence migration are scarce, which means there is a lack of data on the attributes, motivations and itineraries of individual migrants. This is compounded by the difficulty of tracking outmigration with any accuracy.

Reasons for increased professional migration are thought to be a convergence towards international standards of education and skills acquisition. The OECD comments that in the last few decades nation-states and international organizations have pursued an agenda of "advancing liberalization through regulatory reform" [2].

The effects of a net outflow of professionals results in the phenomenon of "brain drain", and this is currently seen in South Africa. Though not reported here, this is feared to be occurring in many African countries [26].

Policies to address migration must take into account issues of freedom to move, and to identify ameliorating strategies advantageous to would-be migrants. Freedom of movement is a human right. Arango [27] suggests that migration is motivated by the perceived net gain of migrating: that is, the gain will offset the tangible and intangible costs of moving. Castles [13] points out that decisions to migrate are often a family strategy to produce a better income and improve survival chances. While there is international concern at the increasing outflow of health professionals from developing countries, for individuals and families an improved standard of living through the receipt of remittances is likely to be of more direct importance [28]. Writing from Nairobi to Loefler suggests that doctors "use their qualifications as a passport to freedom, intellectual and emotional fulfilment and professional satisfaction", and it is not only economic motives that "push" physicians to migrate [29]

In their review of human resources management in health services, Martinez and Martineau [30] point out that the reality for many health workers in developing countries is to be "underpaid, poorly motivated and increasingly dissatisfied and sceptical". The relevance of motivation to migration is self-evident: there can be little doubt that for many health workers an improvement in pay and conditions will act as incentives to stay in their country. Improved pensions, child care, educational opportunities and recognition are also known to be important [31,32,18].

In this sense migration is a symptom of the deteriorating health systems in many poor countries. In many countries there are low wages, poor working conditions, no leadership and few incentives of any kind. It is not surprising that health workers respond positively to active recruitment strategies to countries with high wages and the technology in place to do a good job. On an international level, the economic differences between rich and poor countries have, in recent years, been growing, and remittances provide essential foreign investment for many developing countries. It is notable that remittances now significantly exceed official development aid and are the second largest source, behind foreign direct investment, of external funding for developing countries.

Compensating the donor country for the cost of educating the migrating health professional may be more likely to preserve individual freedom than policies to restrict exit or entrance of individuals [33], though evidence and further analysis are needed to support such a policy recommendation. If costs are to be used as a basis for compensation, then those other than education costs have to be accounted for. This might include loss of taxation, loss of work contribution of the migrant and loss of health to the population as a result. A study is currently underway to model costs associated with migration, and this may provide a basis for further exploring compensatory mechanisms.

This briefing paper has used one case study to raise and discuss issues that have emerged as WHO has constructed a conceptual framework for considering migration that is by no means complete. In studying the migration of health professionals, WHO seeks to develop a greater understanding of collective and individual migration; economic, social and cultural influences; and individual motivation. This is an emerging field of study in the demography of migration, as yet unexplored in the migration of health workers.

Competing interests

none declared.

Authors' contributions

K. Diallo and P. Zurn performed the statistical analyses. All authors participated in interpreting the results, and read and approved the final manuscript.

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