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Trends in International Migration
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PART III

The international mobility of health professionals: An evaluation and analysis based on the case of South Africa[1]

Summary

The international mobility of highly skilled workers increased substantially in the 1990s. Most visible in professions connected with new information and communication technologies, it also became increasingly common among health professionals. In South Africa, in particular, where the migration balance has steadily deteriorated over the last fifteen years, the international mobility of health professionals has become an important issue.

The factors that determine the international mobility of health professionals broadly coincide with those that apply to highly skilled workers in general, and derive from a combination of push and pull factors. However, certain aspects that are more specific to health workers also need to be mentioned, such as relative pay in origin countries, and deteriorating working conditions in the health sector.

This study, based on the example of South Africa, shows that emigration is not always the main cause of the problems facing the health systems of developing countries, even though it remains an aggravating factor. The South African government recently introduced a series of measures intended to retain South African workers, and make it easier for skilled foreign workers to immigrate. This report looks at the main reforms that have taken place in the health sector, including: *i)* the introduction of compulsory community service, *ii)* training, *iii)* improved working conditions, including pay, and *iv)* greater international co-operation with the leading countries of destination for South African health professionals.

The detailed study of South Africa shows that, in countries facing an exodus of skilled labour, government policy, in the health sector and beyond, has a key role to play in promoting and improving human resource management. In the specific case of South Africa, and with reference to several other countries, this report shows how important it can be, both at national level in countries of origin and at international level, to strengthen policy coherence in the spheres of migration and development aid, so as to ensure that the benefits arising from the international mobility of health professionals are shared in a way that is both fair and sustainable.

Introduction

This chapter, based on the case of South Africa, looks at the international mobility of health professionals. Growing demand for healthcare, partly due to greying populations in most OECD member countries, has caused the international mobility of health professionals to accelerate, and will probably continue to do so. Several OECD member countries have already changed their immigration policies, so as to make it easier to recruit foreign doctors and nurses (OECD, 2002a). This development is a source of growing concern to countries of origin, faced with the departure of workers that are expensive to train and vital for their economic growth, raising fears of what, in the 1960s and 1970s, used to be

called the "brain drain".[2] Such fears are all the more real, when countries of origin offer few prospects that might encourage skilled emigrants to return.

The example of South Africa and several other countries, which soon risk facing an increasingly rapid outflow of skilled workers (OECD, 2002b), therefore raises the issue of policy coherence in development and migration. It also points to the need for measures relating to human resource management, in countries of both destination and origin, and the benefits that arise from the international mobility of labour. These issues echo the questions raised in the context of the activities recently initiated by the OECD concerning policy coherence for development.

This study assesses the real scale of the international mobility of health professionals in South Africa, and reviews the situation in the healthcare sector. It goes on to describe the causes and consequences of the international mobility of health professionals, and the policies introduced by the South African authorities in response to the emigration of health workers. If the OECD member countries intend to continue to recruit health workers from developing countries, the South African experience shows that it will be essential to strengthen international co-operation in the development and management of health workers, and to seek greater coherence between development and migration policies.

The case of South Africa is exemplary in several respects. The country faces considerable healthcare problems, and has internationally renowned health professionals. In addition, international mobility, especially of skilled workers, is a long-standing feature, for both historical[3] and geopolitical reasons.[4] Last, South Africa, like other countries, such as Russia, finds itself in the interesting position of being both an attractive destination for skilled labour from less developed countries, and a source of skilled workers for the world labour market.

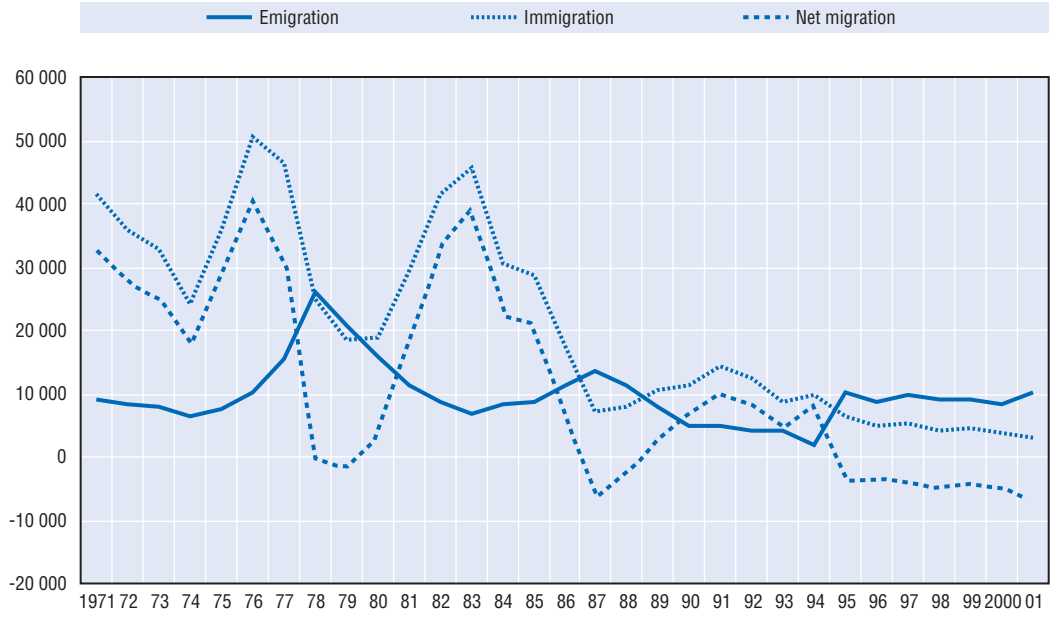
1. Movements of highly skilled workers to and from South Africa: a historical perspective

The international mobility of highly skilled workers has long been a very sensitive issue in South Africa (Bhorat, Meyer and Mlatsheni, 2001). Over the last two years, in the debate on the loss of skills, the question of the migration of health workers has superseded that of the mobility of IT staff, and human resources in science and technology, in general.

In a context of high birth rates, immigration has long been an important component of South African demographics. 300 000 new immigrants arrived from Europe between 1965 and 1975, plus over 70 000 whites from other African countries[5] (Crush, 2002). Between 1975 and 1985, net immigration continued to account for almost 4% of annual population growth. In the last fifteen years, however, the migration balance has steadily deteriorated (see Chart III.1). According to official statistics, immigration has fallen sharply, while emigration has increased. The decline in immigration has taken place under the dual influence of tougher immigration laws (Mattes, Crush and Richmond, 2002), and a worsening employment situation. The rise in emigration is due to a range of factors linked to the prospects for the South African economy and national security, political changes, and rising world demand for skilled labour, especially in the new technology and healthcare sectors.

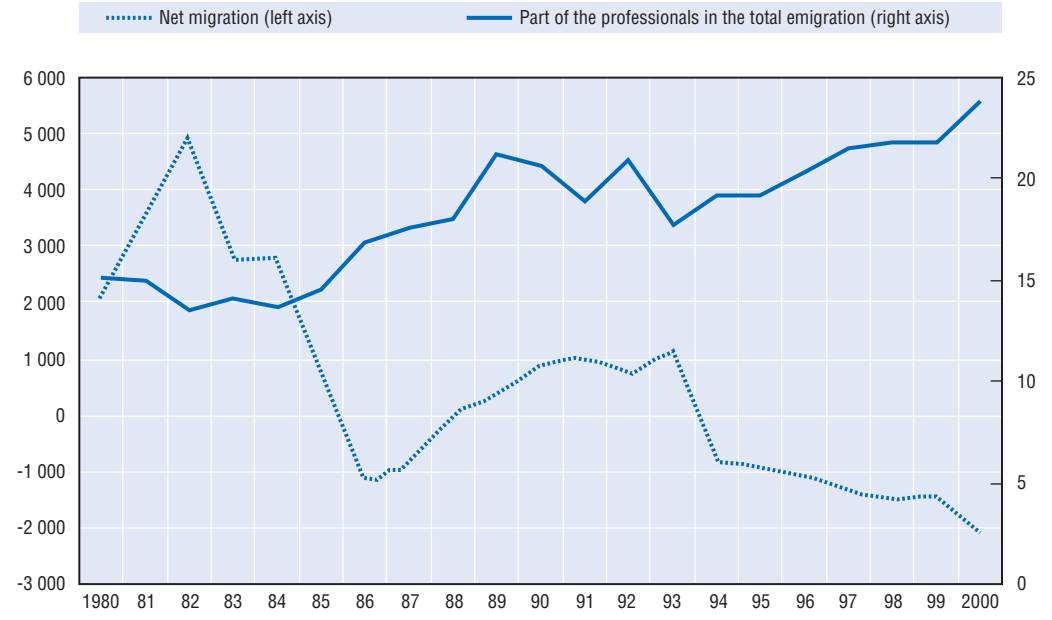
Official emigration statistics underestimate the scale of outflows (see Box III.1), though they do reflect the rising trend in the numbers of skilled workers leaving the country (see Chart III.2).

Chart III.1. **Migration flows in South Africa, 1971-2001 (official data)**



Source: Statistics South Africa Migration Reports.

Chart III.2. **Emigration of South African professionals, 1980-2000 (official data)**



Source: Statistics South Africa Migration Reports.

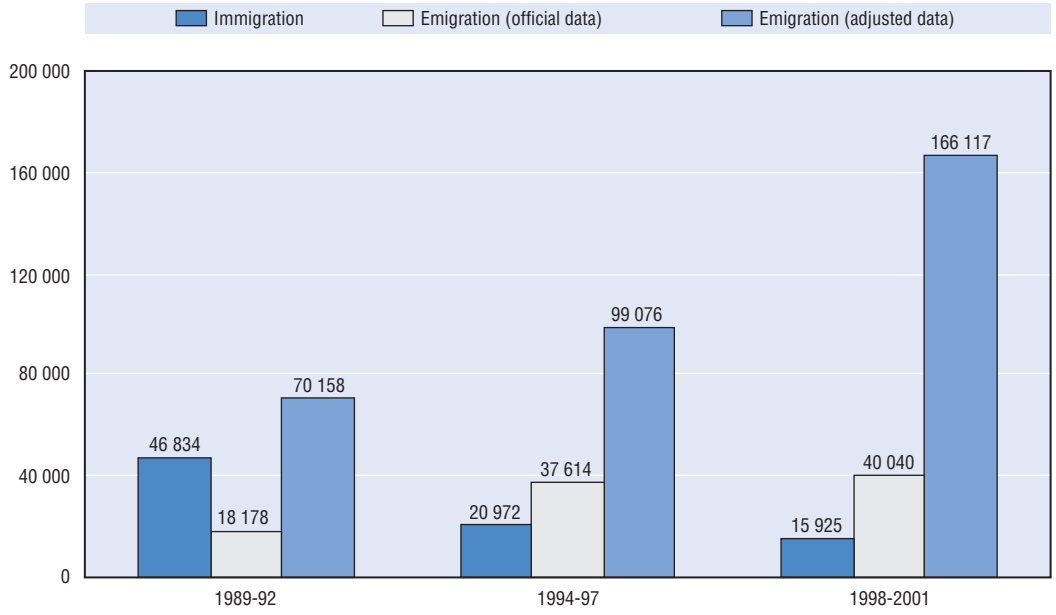
Table III.1, which shows the population aged 15 and over born in South Africa and residing in OECD member countries by level of education, illustrates the scale of emigration from South Africa. According to these figures, over 372 000 people of South

Box III.1. **The reliability of migration statistics**

Broadly speaking, statistical data in South Africa are both abundant and detailed. That is true of migration statistics, which are constantly available and updated in the publications of Statistics South Africa (SSA), a public body which gathers and processes statistical information. However, SSA's migration data include only those migrants who declare themselves as such, thus overlooking a substantial proportion of outflows. Many of those leaving the country do not wish to be recorded as emigrants, for a variety of reasons, such as the possibility of returning at a later date, tax, psychological or family reasons, etc. Unfortunately, migration statistics for highly skilled workers are no exception.

In order to remedy this shortcoming, several studies use statistics from the main countries of destination for South African expatriates (Fourie and Joubert, 1998; Meyer, Brown and Kaplan, 2000; HSRC, 2003), such as the United Kingdom, Australia, Canada, the United States and New Zealand. These figures indicate that emigration from South Africa could be underestimated by a factor of four between 1989 and 1992, by a factor of three between 1994 and 1997, and again by a factor of four between 1998 and 2001 (see Chart III.3). Extrapolating official totals on the basis of these estimates gives a more realistic idea of the true scale of emigration from South Africa.

Chart III.3. **Evolution of migration flows in South Africa, 1989-2001 (official and adjusted data)**



Source: Statistics South Africa Migration Reports, Meyer, Brown and Kaplan (2000), HSRC (2003).

African origin were residing in OECD member countries in 2000. Approximately 46% of them had a higher education diploma. An emigration rate for the same year can be calculated by comparing the expatriate South African population aged 15 to 64 with the

Table III.1. **Numbers and breakdown by educational level of persons aged 15 and over born in South Africa and residing in certain OECD member countries**

		Primary	Secondary	Higher	Number
Australia	2001	*22.1%*	*34.9%*	*43.0%*	67 441
Canada	2000	*20.4%*	*17.6%*	*62.1%*	54 501
United States	2001	*17.2%*	*42.1%*	*40.8%*	90 759
New Zealand	2001	*3.5%*	*41.7%*	*54.7%*	19 875
United Kingdom	2001	*10.2%*	*42.8%*	*47.0%*	115 426
European Union[1]	2001	*12.1%*	*43.6%*	*44.3%*	158 679

1. South Africans are resident in European OECD member countries, other than the United Kingdom, but the significance thresholds of the Eurostat employment survey mean that it is not possible to give a detailed breakdown by country of destination and skill level. The countries included in the EU total are Austria, Belgium, Spain, France, Portugal and the United Kingdom.

Sources: Eurostat employment survey for the European countries, *Current Population Survey* for the United States, *Survey of Longitudinal Income Dynamics* for Canada and census data for Australia and New Zealand.

same age group resident in South Africa. This calculation gives a total aggregate emigration rate of 1.4% for the entire population under consideration, and 7% for skilled workers. The result, which is comparable with world averages,[6] sets alarmist references to a South African brain drain in perspective, especially as the figures include those who were born in South Africa, but educated abroad. However, the overall upwards trend in the emigration of skilled workers from South Africa remains a source of concern (see Box III.2).

Box III.2. **Forecasting the emigration of highly skilled South Africans**

Mattes and Richmond (2002) surveyed a representative sample of 725 skilled South Africans, who were asked about their migration plans. Approximately 70% of those interviewed said they had already thought of emigrating, and 7% said they intended to leave within the next six months (6% had applied for a work permit). The authors then constructed a composite indicator designed to represent the probability of carrying out a planned migration project of at least two years' duration in the next five years. They concluded that the probability of the skilled South Africans in the survey leaving the country was "very high" for 2% (giving an extrapolated total of 32 000 individuals), and "high" for 10% (192 000). The United States was the preferred destination for 24% of them, followed by Australia (22%), the United Kingdom (15%), New Zealand (12%) and Canada (11%). Although these figures should be treated with the utmost caution, they nevertheless illustrate the direction of the current trend.

Many skilled emigrant workers are senior managers, teachers and health professionals. Furthermore, according to data compiled by Bailey (2003), the education and health sectors accounted for a declining share of total skilled immigration between 1988-92 and 1994-2000, while their share of total skilled emigration rose steadily over the entire period.

2. A review of the human resources situation in the healthcare sector in South Africa: the role of international mobility

South Africa is facing a very difficult healthcare situation, despite the quality of its health training and research. In 2001, according to the World Health Organisation (WHO), life expectancy at birth was 49 years and life expectancy in good health was just 41 years.[7] At the same time, infant and juvenile mortality rates remained high (55‰ and 70‰, respectively, in 2000). In view of South Africa's level of development,[8] and the scale of its health spending,[9] these figures may seem surprising.[10] In fact, they are due partly to the number of deaths attributable to AIDS,[11] and partly to the persistence of considerable inequality in access to healthcare. In terms of the fairness of financial contributions to the health system, the WHO puts South Africa 142nd in the world, out of a total of 192 countries.[12] This situation is largely attributable to the health system inherited from the apartheid era, the effects of which are still widely felt today.

Universal and free access to the health system dates from 1994. The new policy resulted in a very rapid rise in demand for healthcare, especially in rural and deprived areas which suffered from chronic under-allocation of human resources and healthcare infrastructure. On the basis of the principles of the new health system set out in the *White Paper for the Transformation of the Health System in South Africa* (Department of Health, 1997), the South African government decided to operate a shift in public health services, traditionally directed towards the needs of the mainly white upper and middle classes, so that they would benefit the entire population, focusing on primary healthcare and the fight against AIDS. Considerable thought was given to the development of human resources (Pick *et al.,* 2001), including numbers, the social and geographical distribution, and the profile of physicians and nurses.[13]

The question of the international mobility of South African health professionals cannot be understood without taking into account the transformation of the health system, and the use of its human resources. The changes provide an explanation for some migration movements, and highlight their impact in view of the new public health guidelines, based on fairness and quality, adopted by the South African government.

Supply of and demand for health workers: continuing imbalances

Two recent studies review the human resources situation in the health sector in South Africa (Erasmus and Hall, 2003; Doherty and Joffe, 2003). They show that, despite the efforts made by the South African government, considerable imbalances remain between the supply of, and demand for, health workers. Four main findings emerge (see Table III.2).

- Overall, in comparison with other developing countries,[14] the ratio of physicians to the population in South Africa is relatively satisfactory (7.1 per 10 000), though lower than in Latin America (12.7 in Brazil, for example). For nurses, the ratio of 4 is relatively high, comparable with ratios in certain Central and Eastern European countries (3.85 in Hungary and 4.1 in Romania in 1998). This finding has led some commentators to conclude that the problem is due not so much to the availability of human resources, as to their allocation (Pick *et al.* 2001).
- Numbers of generalists have increased recently, at the expense of specialists. This trend reflects the shift in emphasis in the health system since the end of apartheid, towards primary health care.

Table III.2. **Number of health professionals registered with their respective councils, 1996-2001**

	1996	2001	Average annual growth rate (%)	Number per 100 000 inh.
Physicians	**24 696**	**30 740**[1]	**4.5**	**71.5**
Generalists	16 819	22 369	5.9	52.1
Specialists	7 877	8 371	1.2	19.5
Nurses	**172 520**	**172 338**	**0.0**	**401.1**
Professional	87 783	94 552	1.5	220.0
Enrolled	33 170	32 120	–0.6	74.8
Assistant	51 567	45 666	–2.4	106.3
Dentists	**3 723**	**4 648**	**4.5**	**10.8**
Pharmacists	**9 700**	**10 742**	**2.1**	**25.0**
Psychomotricians	**1 732**	**2 599**	**8.5**	**6.1**
Physiotherapists	**3 328**	**4 487**	**6.2**	**10.4**
Orthophonists	**1 030**	**1 435**	**6.9**	**3.3**
Radiologists	**5 467**	**6 387**	**3.2**	**14.9**
Psychologists	**4 259**	**5 766**	**6.2**	**13.4**

1. According to Erasmus and Hall (2003), 29 655 physicians were registered with the medical council and had paid their registration fee in 2002.

Source: Doherty and Joffe, 2003.

- Numbers of nurses, specialist physicians and, to a lesser extent, pharmacists, are growing more slowly than the total population. The situation for enrolled and assistant nurses is even more worrying, since the number of such nurses registered with their council has fallen over the last five years, even though they are supposed to be one of the pillars of the primary healthcare policy.[15]
- Human resources are very unevenly distributed between the public and private sectors, and between regions. Fewer than 38% of active physicians work for the public health sector (Erasmus and Hall, 2003), which caters for 80% of the population.[16] For nurses, the public sector/private sector split is about 50%, but only 43% of professional nurses work in the public health system, compared with 64% and 62%, respectively, for enrolled and assistant nurses (Erasmus and Hall, 2003; Doherty and Joffe, 2003).[17] The geographical imbalances are equally plain. The highly urbanised provinces of Western Cape and Gauteng have approximately 180 physicians per 100 000 inhabitants, two to three times more than the national average, whereas the more rural Northern Province and Eastern Cape have only 21 and 34 physicians per 100 000 inhabitants, respectively, three to four times less than the national average. Likewise, 81% of nurses work in urban areas which contain only 54.4% of the population.

Nevertheless, unsatisfied demand remains for medical personnel in the public sector. The Department of Health estimates that there are 4 222 unfilled vacancies for physicians, and 32 734 unfilled vacancies for nurses, representing a little over a quarter of the total annual number of vacancies for these two categories in the sector (Erasmus and Hall, 2003). To give just one example, the Chris Hani Baragwanath public hospital in Soweto employs 1 100 professional nurses and 176 enrolled nurses, but has credits that ought to enable it to take on a further 950 nurses (450 professional nurses and 500 enrolled nurses), currently unavailable on the labour market, under the working conditions and pay on offer. The hospital is also looking for 18 pharmacists, in addition to the 17 currently employed there.

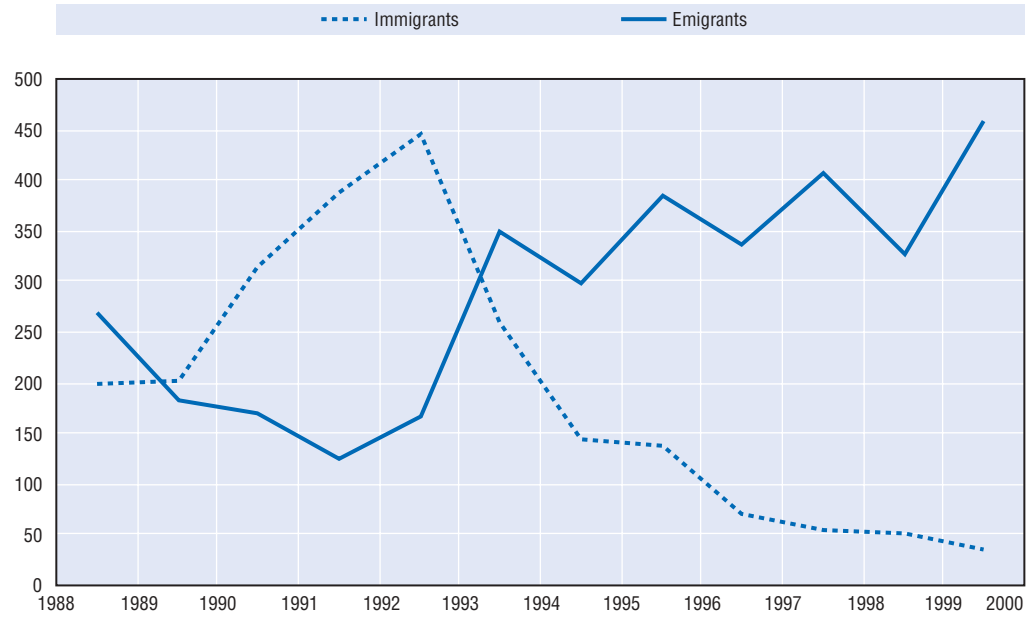
In contrast, there is a surplus of professional nurses in the private sector, especially in the Cape region. While professional nurses' pay has increased substantially in the private sector in recent years, rising by 14% in 2000 (Erasmus and Hall, 2003), specialists' pay has increased more slowly in the private sector than in the public sector, rising by 7.5% and 12%, respectively, in 2000.

A comparison of public sector needs with the capacities of South Africa's training system clearly shows that the imbalances are likely to persist. 1 420 physicians (including 226 specialists), 4 828 professional nurses (including 1 992 retrained enrolled nurses), 1 919 new enrolled nurses (fewer than the number of retrained nurses), and 1 520 assistant nurses, were trained in 2000. According to estimates of supply and demand for physicians and nurses up to 2011, made by Erasmus and Hall (2003), South Africa faces an acute shortage of health workers, even assuming that the net migration rate remains the same. In the short term, much needs to be done to alleviate labour shortages in the public sector; in the long term, the imbalances could affect the entire health system. Against this background, the role of international mobility is decisive.

The international mobility of South African health professionals

Annex 1 contains official statistics for health professionals from 1988 to 2000, by categories. From 1994, an almost continuously widening gap appears between emigration, which increases steadily, and immigration, which falls sharply over the entire period (see Chart III.4).

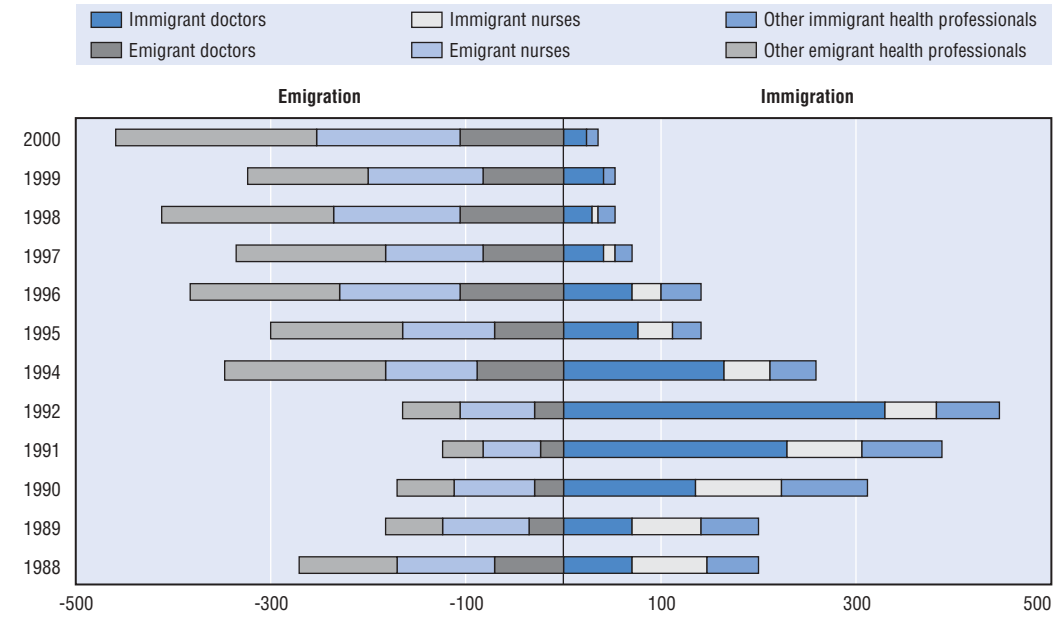
Chart III.4. **Migration flows of health professionals in South Africa, 1988-2000 (official data)**



Source: Doherty and Joffe, 2003.

A breakdown of migration movements by sub-category shows a very sharp drop in inflows of foreign physicians, and an increase in outflows of nurses and, above all, other health professionals (see Chart III.5).

Chart III.5. **Migration flows of health professionals in South Africa by categories, 1988-2000 (official data)**



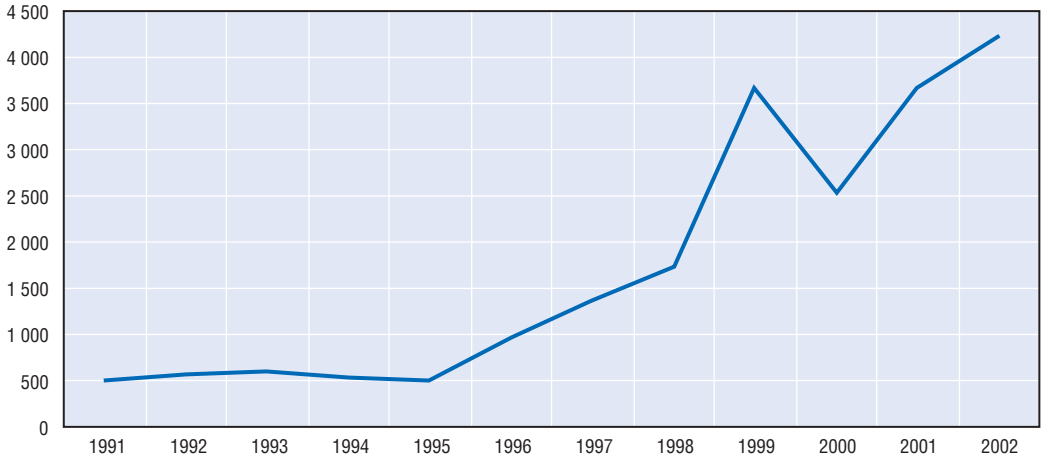
Source: Doherty and Joffe, 2003.

With additional data, the extent of the phenomenon and, more importantly, the direction of the trend, can be evaluated rather more precisely. For example, the Health Professions and Pharmacy Council records the address of medical practitioners, excluding nurses. Approximately 4% of those registered, representing 2 800 individuals, were officially residing in another country in 2001 (Doherty and Joffe, 2003). This figure is a minimum, since, among those who have left the country, some still maintain an official address in South Africa, and others do not keep up their registration.

For nurses, an approximation of the trend of migration flows can be obtained from the number of applications for skill certificates (see Chart III.6). Although most foreign employers insist on such certificates, they do not necessarily mean that a plan to migrate has been put into practice. However that may be, the number of applications rose very sharply from the mid-1990s, with especially big leaps in 1996 (+87%) and 1999 (+110%).

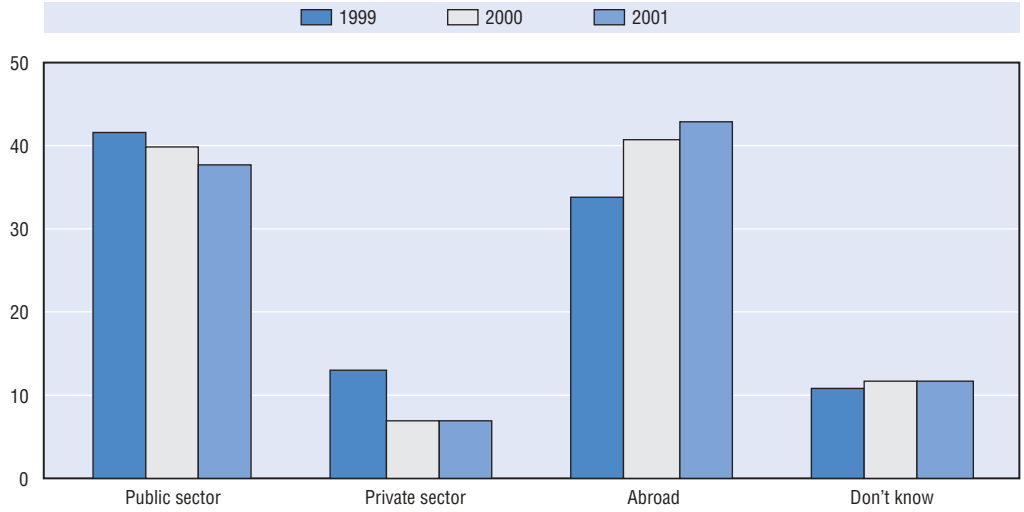
A survey of 1 200 young doctors completing their year of community service (see below) provides further information about intentions to emigrate (Reid, 2002). Asked "Where do you intend to work after your year of community service?", a large and growing number said that they were considering working abroad (see Chart III.7), even if about three-quarters of them wanted subsequently to return to South Africa.[18] The numbers of young, white doctors envisaging a move abroad are significantly higher.

Chart III.6. **Requests for certificates of qualification by South African nurses, 1991-2002**



Source: South African Nursing Council.

Chart III.7. **Intentions declared by young South African doctors for assignment at the end of community service, 1999-2001**



Source: Reid (2002).

The emigration of South African health professionals, as seen from countries of destination

Statistics from countries of destination (see Table III.3) show that over 23 400 health workers from South Africa currently practise a medical profession in Australia, Canada, the United States, New Zealand or the United Kingdom. This figure corresponds to approximately 9.8% of all health professionals registered in South Africa, suggesting that emigration rates are significantly higher for health workers than for skilled workers in general (see above).

Table III.3. **Number of South African-born workers practising a medical profession in certain OECD member countries in 2001**

	Practitioners[1]	Nurses and midwives	Other health professionals[2]	Total
Australia	1 114	1 085	1 297	*3 496*
Canada	1 345	330	685	*2 360*
New Zealand	555	423	618	*1 596*
United Kingdom	3 625	2 923[3]	2 451	*8 999*
United States	2 282	2 083	2 591	*6 956*
Total	*8 921*	*6 844*	*7 642*	***23 407***

1. Doctors, dentists, veterinarians, pharmacists and other diagnostic practitioners.
2. Including assistants.
3. Possibly including some assistant nurses.

Sources: Eurostat employment survey for the European countries, *Current Population Survey* for the United States, *Survey of Longitudinal Income Dynamics* for Canada and census data for Australia and New Zealand. Provisional data for the United Kingdom and the United States.

Breaking down these statistics by category, practitioners (doctors, pharmacists, dentists, etc.) are the largest category of expatriates, with 8 921 individuals, representing almost 17% of the corresponding available labour force in South Africa. Emigration among nurses and midwives, though rising sharply, still remains relatively low, representing 5.4% of the available labour force in South Africa, even though it is possible that many emigrants are among the most highly skilled workers.

However, when considering these figures, it must be remembered that they include earlier waves of migration.[19] Nevertheless, the countries for which the most detailed figures are available confirm the recent trend increase in the emigration of South African health workers, especially nurses.

The links between South Africa and the United Kingdom go back a long way. The mobility of health professionals is nothing new, and should be seen in the light of institutional relations between the two countries, especially between training institutions and the strength of family ties. While the mobility of South African physicians does not seem to have increased particularly in recent years, in contrast, more and more nurses are emigrating to the United Kingdom: their numbers increased fourfold between 1998 and 2002 (see Table III.4). Almost 2 100 South African nurses obtained a United Kingdom work permit in 2000-01, and 1 319 first-time applications for a work permit were received. This figure highlights the extent to which the official statistics presented earlier underestimate the scale of the phenomenon, since they showed only 147 official departures of nurses in 2000, all destination countries included. In addition, many of the emigrating nurses are intensive-care or theatre nurses.

However, South African health workers are not the only ones to emigrate to the United Kingdom, since the number of nurses recruited from the Philippines and India rose, respectively, from 52 to 7 235, and from 30 to 994, over the same period.[20] In fact, the figures reflect the needs of the United Kingdom labour market in the sector. It is estimated

Table III.4. **United Kingdom recruitment of South African nurses**

1998-99	1999-2000	2000-2001	2001-2002
599	1 460	1 086	2 114

Source: UKCC.

that, in all, over 30 000 nurses of foreign origin were working in the NHS in 2002. The NHS has set itself the target of recruiting at least 35 000 new nurses by 2008, while 50 000 retiring nurses will need to be replaced over the same period.[21]

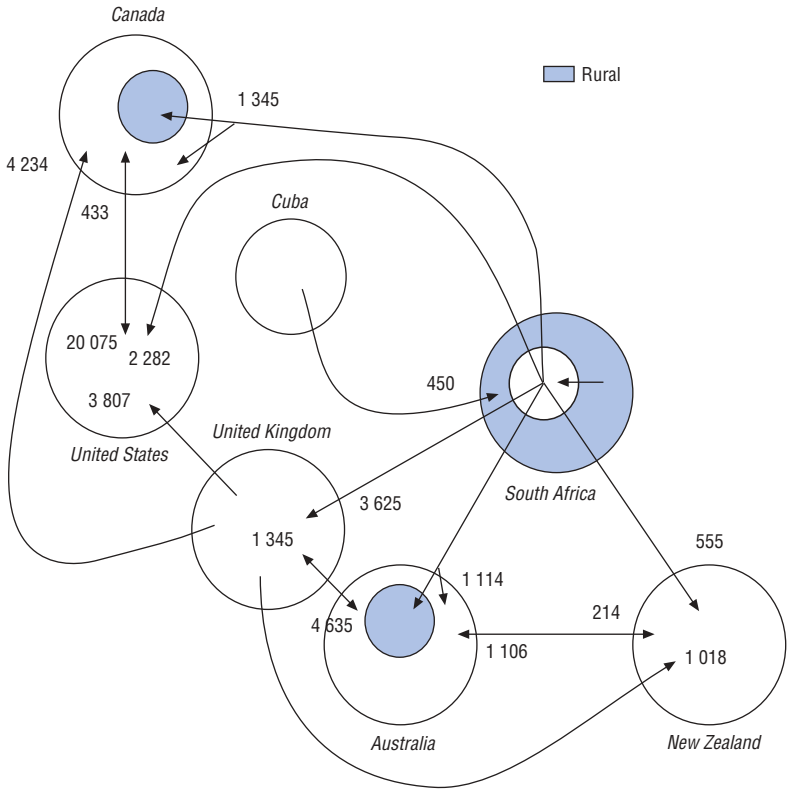
The shortage is less acute in Canada and Australia, even though both countries recruit substantial numbers of foreign nurses and physicians. Demand for health workers is mostly linked to regional imbalances,[22] and the need to offset emigration by their own nationals.[23] South African health professionals are greatly appreciated for their professional and language skills. In Australia, foreign-trained physicians accounted for 21.3% of the available labour force in 1998. Between 1993/94 and 2001/02, the annual number of temporary work visas for foreign doctors increased by over 187%, rising from 670 to 1 929. 2 496 temporary work visas were issued in 2002-03, over 12% of them to South Africans. Immigrants from South Africa tend to stay longer than those from OECD member countries. 46.5% of South African physicians recently arrived in Australia said they wanted to stay for more than a year, while the comparable percentage is 30% for British doctors, 22% for New Zealanders and 16% for North Americans. The number of South African-trained physicians practising in Canada is also rising, from 270 in 1980, to 691 in 1990, and 1 290 in 1998 (Barer and Webber, 1999; 2000). There are currently over 1 500 South African-trained physicians practising in Canada, representing approximately 9.7% of foreign doctors. 17% of all medical practitioners in the province of Saskatchewan are from South Africa.

Foreign-trained physicians represent about a quarter of all medical practitioners in the United States.[24] Over 11 000 H-1B visas were issued to health professionals in 2001, including a very small proportion of South Africans. During the 1990s, the American authorities introduced a temporary immigration scheme enabling them to recruit 6 000 to 7 000 foreign nurses a year on H-1A visas. By 1995, when the scheme ended, some 13 000 nurses had been recruited, mostly from the Philippines. A new law passed in 1999 enables nurses to obtain an H-1C work visa, if they have a job offer in a so-called disadvantaged area, whether urban or rural. Only 500 visas per year are currently available under the scheme. However, the Department of Health considers that, in view of the number of training places, and the demographic profile of the population concerned, the shortfall of nurses will rise to 12% of the labour force by 2010, representing 275 000 vacancies to fill (HRSA, 2002).

South Africans are also emigrating in increasing numbers to the Gulf States, where the pay is particularly attractive. In this case, these movements seem to be mostly temporary. According to some sources, around 30 000 highly skilled South African workers have emigrated to the Gulf States, including many health professionals.

In reality, the international mobility of South African health professionals should be set in a much broader and more complex context than might be supposed from the description of a few bilateral relations (see Chart III.8). For example, Canadian doctors who go to work in the United States are replaced, especially in rural areas, by South African doctors, generally from urban backgrounds. This mobility creates opportunities in South Africa, which amplify regional imbalances, which the authorities partly seek to redress by recruiting Cuban physicians. Likewise, the United Kingdom, which loses health professionals to North America, is recruiting in Germany (and, more recently, Poland). At the same time, Germany is receiving growing numbers of physicians from Central and Eastern European countries, especially the Czech Republic. These movements contribute to the on-going globalisation of the market for skilled labour, the determinants of which are to be found in countries of both origin and destination.

Chart III.8. **Diagram of the principal axes of international mobility of health professionals between the old Commonwealth countries, the United States and Cuba (by country of birth)**



Note: The fact that the figures are based on the place of birth, and not the place of qualification, explains the size of the figure for Canadians resident in the United States (20 075). The reverse applies to Americans resident in Canada (433).

Sources: See Table III.3, except for British and American nationals in Canada (register data for 1998) and for British and Australian nationals in New Zealand (medical register data).

3. Causes and consequences of international mobility of health professionals

Emigration has many causes

The factors that determine the international mobility of health professionals broadly coincide with those that apply to highly skilled workers in general, and derive from a combination of push and pull factors. The available studies (Mattes and Richmond, 2002; Van deer Vive and de Villas, 2000) advance the following reasons for emigration from South Africa:

- Insecurity and crime, which now affect a population that had previously enjoyed better protection.[25]
- Affirmative action, which at equal skill levels, penalises young white male jobseekers, with the aim of rectifying the flagrant imbalances that are a legacy of the apartheid era.
- The deteriorating state of public education, which is an inevitable consequence, at least in the short term, of the democratisation of access to schooling.
- Uncertainties about the future, especially for children, in a tense social context inevitably affected by recent events in neighbouring Zimbabwe.

- The perceived fragility of the South African economy, especially due to the volatility and underlying depreciation of the rand.

But there are also many reasons linked to the attractiveness of the destination countries, such as:

- The transferability of South African qualifications in OECD member countries, especially the English-speaking ones, where South African diplomas and professional experience are generally highly regarded.
- Integration into a knowledge-based global economy, in which competition for skills increased very sharply during the 1990s (see OECD, 2002a).
- The activity of foreign recruitment agencies, sometimes with the backing of destination country governments, especially in the education and health sectors.

In addition to these general reasons, other factors related more specifically to health workers should be mentioned. For example, there may be differences between one country and another in the pay for an equivalent position. After several years in practice, a generalist earns 169 000 rand (approximately USD 21 000) in the public sector and 294 000 rand (approximately USD 37 000) in the private sector. The equivalent scales for a specialist are 286 000 rand (USD 36 000) in the public sector, and 381 000 rand (USD 48 000) in the private sector (Erasmus and Hall, 2003). Although rates of pay, which include social insurance and other charges, increased significantly in the 1990s, they remain much lower than those offered in OECD member countries. In the United States, for example, the average annual pay for doctors is USD 160 000 (USD 130 000 for a generalist, and USD 240 000 for a surgeon), three to five times higher than in South Africa.

A comparable problem seems to apply to nurses. A sister earns 88 000 rand a year (USD 11 000) in the public sector, and 96 000 rand (USD 12 000) in the private sector. The equivalent figures for a professional nurse are 72 000 and 83 000 rand (USD 9 000 and USD 10 000) (Erasmus and Hall, 2003). The salaries offered by international recruitment agencies for an enrolled nurse in Saudi Arabia can easily reach USD 30-35 000, plus benefits, such as air travel, accommodation, medical insurance, etc. A recently qualified nurse earns the equivalent of roughly USD 22 000 in the United Kingdom, and almost twice as much in the United States, but offers may be much higher according to the qualifications required.

However, when pay differentials are evaluated at purchasing power parity, especially including housing costs, the advantages may be much smaller than they appear at first sight. The South African press regularly reports on the plight of nurses facing the exorbitant cost of living in the London area, which unexpectedly amputates their income, and ultimately drives them back to South Africa.

Despite substantial financial incentives, many commentators, including some employee representatives (Denosa, 2001), emphasise that in many cases, pay is not the prime motive for leaving the country. Deteriorating working conditions in the public sector is one factor that is frequently mentioned. A significant increase in the workload, due to wider access to healthcare, and the uneven distribution of human resources between private and public sector, and urban and rural areas, leads health professionals to seek better working conditions. Exposure to AIDS, and other endemic infectious diseases, like tuberculosis, insecurity resulting from delinquency, the lack of suitable equipment, and social and racial factors, are also cited as difficulties that specifically affect the practice of medicine.

Last, the international mobility of health professionals is regarded as perfectly normal, linked with the opening up of the country, and globalisation. In such cases, mobility is seen as a temporary phenomenon which may take the form of replacing a specialist in a clinic in the United Kingdom, for example, or regularly joining a hospital department in Northern Europe during the summer, temporarily taking a highly-paid nursing job in the Middle East, enrolling in a specialist training course in an OECD member country,[26] etc. They are occasional absences, linked to international demand, often highly paid or professionally rewarding. The workers concerned are not long-term expatriates, nor do they intend to leave the country for good: they are merely taking advantage of favourable opportunities when they arise.

Most of the effects of emigration are indirect

Taking all these various factors into account, emigration cannot be held responsible for all actual or anticipated shortages of labour. For example, there are approximately 7 000 South African expatriate nurses in the main OECD member destination countries; at the same time, there are 32 000 vacancies in the public sector, and 35 000 registered nurses in South Africa are either inactive or unemployed.[27] Emigration is not the fundamental reason for the continuing imbalances in the allocation of human resources, though it is an aggravating factor.

This is the case, in particular, when adverse working conditions are attributable to an excessive workload linked to a lack of human resources. In such cases, there are powerful incentives for seeking better opportunities in the private sector or abroad, with the attendant risk of compounding the initial problem. The situation is particularly worrying in isolated rural areas, or in the most deprived areas. By leaving vacancies in urban areas, international migration directly or indirectly contributes to a brain drain from rural areas, which has tangible repercussions on the performance of the health sector, and undermines the South African government's efforts to alleviate regional imbalances in the allocation of health workers.

It is also the case when migration affects scarce and essential human resources, such as the departure of a gastro-enterologist, which entailed the closure of the department in which he was the only specialist. The emigration of pharmacists and radiologists, much in demand in the public sector, also causes very practical working difficulties in certain hospitals.

Because many of those who emigrate are among the most highly skilled, international mobility disproportionately involves those likely to contribute to the training system. While such mobility is not necessarily disastrous, because it remains limited, and may be offset by short-stay personnel from other countries, in the medium to long term, it nevertheless exerts pressure on the country's training capacity at a time when, if anything, it ought to be strengthened. As South African professors of medicine have professional skills that are acknowledged worldwide, this risk should certainly not be under-estimated.

Last, part of the loss attributed to the emigration of skilled workers lies in the share of the cost of their training, borne by the state. For health professionals in South Africa, the fact that almost all training institutions are public-funded, means that the potential loss of public investment is substantial. The Department of Health estimates that it costs around 780 000 rand (USD 97 000) to train a physician and 340 000 rand (USD 42 000) to train a nurse. Given the estimated number of health workers who have been trained in

South Africa, but practise in another country, the overall loss may be estimated at around USD one billion, equivalent to approximately one-third of the public development aid received by South Africa between 1994 and 2000 (OECD, 2002c). However, a significant proportion of current expatriates will probably return to South Africa with new individual skills acquired abroad. Fund transfers from emigrants also offset some of this financial loss. For that reason, the net tax loss attributable to the emigration of health professionals is particularly difficult to estimate, though it is likely to be unfavourable to a country of origin which, like South Africa, assumes most of the cost of training.

South African nurses and doctors do not emigrate only because destination countries seek to recruit them. The conditions under which they practise in South Africa are also a determining factor, implying that the policies of the South African government have a dominant role to play in limiting the scale and potentially adverse effects of emigration.

4. Some aspects of South African government policies to stem emigration by the highly skilled

The South African government seems to have realised both the scope of the international mobility of their highly skilled workers, especially in the health sector, and the issues at stake. It recently introduced a whole series of measures designed to encourage the immigration of skilled foreign workers, and retain South African personnel. The main reforms in the health sector concern: *i)* the introduction of compulsory community service, *ii)* training, *iii)* better pay and working conditions, and *iv)* greater international co-operation with the main countries of destination for South African health professionals. From this standpoint, the example of South Africa, with its successes and failures, contains instructive lessons for other developing and transition countries facing the emigration of their skilled workers.

A new Immigration Act to make it easier to recruit skilled foreign workers

After the strict controls on those entering and leaving the country imposed during the apartheid era, South Africa is now keen to guarantee the right of its nationals to travel freely. Consequently, there has never been any question of restricting the mobility of skilled workers. However, the advent of democratic government gave rise to massive immigration, some of it illegal,[28] which worries many South Africans. The government responded by drastically curtailing the possibilities for foreigners to settle in South Africa. The measures applied to all categories of entrants, including skilled workers. As seen earlier, inflows of skilled workers have dried up considerably over the last ten years, a situation which employers' representatives have regularly criticised.

But South Africa is not alone in taking such steps. In the sometimes chaotic context of national construction and the assertion of national identity, several developing countries have imposed highly restrictive conditions on immigration and citizenship. Such policies have had an indirect effect on their capacity to offset the emigration of their own human resources through inflows of foreigners, especially at regional level.

The new Immigration Act,[29] which was passed by the South African parliament in May 2002, but did not come into force until March 2003, is supposed to remedy these problems, by controlling the entry of undesirable migrants more effectively, and encouraging skilled workers, potentially useful to the country's economic development, to

come and settle. It marks the culmination of a long process of preparation, lasting over five years in all, which has given rise to numerous criticisms.

The Immigration Act introduces a quota system negotiated between the social partners and the Labour, Trade and Interior Ministries. Although the South African Chamber of Business (SACOB) has reacted favourably, emphasising the opportunity it represents for reversing the flow of skills, the Centre for Development and Enterprise, a business think tank, is much more cautious, pointing in particular to the potential difficulties, in a modern, fast-moving economy, of evaluating labour needs from the centre (CDE, 2002a, b).[30]

Looking at the list of categories covered by the quotas, the system appears relatively unrestrictive, it is true, but also not particularly helpful. The categories are broadly defined, the numbers are high, and the system is organised as a cascade.[31] In fact, a genuine quota system is probably not very realistic in the context of South Africa, since it requires a substantial administrative capacity, and mechanisms for continuous monitoring and negotiation. But the new act proves that the South African government is aware of the need to create conditions in which it can assert the country's advantages in an increasingly global market for skilled labour.

Will the Immigration Act enable South Africa to close the migration gap? If so, it will have to reverse the trend of the last 12 years, which has seen a 40-60% decline in inflows over each four-year period. In order to achieve a positive migration balance over the next four years, assuming that emigration does not continue to rise, at least 33 000 professionals will have to immigrate, representing an 1 800% rise in relation to the previous period.[32] The Immigration Act quotas allow for such an inflow, but will there be enough candidates? Close monitoring will soon show whether or not that is the case, but it is highly likely that the revised entry conditions will not be sufficient to make the South African labour market instantly more attractive, thus underlining the importance of the other current or planned measures.

Reforming human resource management in the health sector, to remedy emigration by South African health professionals

The South African Department of Health attaches growing importance to human resources management, and the issue of migration. Several recent reforms have been introduced, with precisely that in mind. They concern, for example, the introduction of compulsory community service, and a review of the pay and working conditions of health professionals in the public sector. They also concern bilateral and multilateral co-operation initiatives.

Community service: a bit of "bad" for another good

Under the community service system introduced in 1999, when recently qualified doctors complete their training, they are assigned for a year to a disadvantaged part of the country, generally in a rural area. The system is one of the key measures taken by the government to remedy imbalances in the allocation of human resources. The requirement is justified as a counterpart to the public subsidy for training health professionals. As physicians have to complete their community service in order to register, the system retains most of those who would like to work outside South Africa, for one year at least. So far, only a very small minority has dropped out (8% of graduating classes), either by deferring their year of community service, or emigrating, or refusing to register (Reid, 2002).

After several years in operation, the programme seems to be relatively uncontroversial. Some commentators argue that the inexperience of young doctors makes them less effective, and hence limits the scope of the measure, while others point to their ability to adapt, the formative nature of the social conditions in which they are required to practice and, ultimately, their binding into South African society. The scheme, already in place for most practitioners (doctors, dentists, pharmacists, radiologists, orthophonists, physiotherapists, dieticians, psychologists, etc.), could be extended to other categories of health workers, including professional nurses in 2007. There has also been talk of extending the length of community service to two years, but this would doubtless not only provoke the ire of health professionals but also significantly increase the drop-out rate, thus producing the opposite effect to that intended.

What is the real scope of the measure? The number of practitioners concerned (approximately 1 200 interns in the first year of the system in 1999) is much smaller than the number of vacancies in the public sector (see above). To some extent, nevertheless, it is sufficient to meet the most urgent needs in the most deprived areas. The numbers are far from negligible, in comparison with the emigration statistics for health professionals. However, the scheme has limitations, insofar as mobilisation is temporary, and the stock of mobilisable practitioners is not inexhaustible. Migration, in contrast, is not only rising, but also more lasting. The scheme is therefore worthwhile in the short and medium term, but not necessarily sufficient in the long term. Paradoxically, its scope can be increased, only if more is done to train health workers.

Training health professionals and changing curricula

In a context of budget restrictions, and in view of the priorities set by the South African government, there is little scope for increased funding of the higher education of health workers.[33] Certain choices have been made, for example, to favour the training of nurses and generalists, but achieving the desired shift towards providers of primary health care is likely to take an extremely long time, unless more radical action is taken, or additional resources are made available. The need is all the more acute, bearing in mind forecasts of a trend rise in unsatisfied demand for human resources over the next ten years (Erasmus and Hall, 2003).

That is the background against which the South African government and those responsible for medical training (at nursing and medical council level, for example) are considering the options for revising curricula, and adjusting the length of studies. The aim is both to train providers of basic healthcare more quickly, and to ensure that the training is better matched to the needs of the population and the realities of medical practice in South Africa. Indirectly, some also hope to make the skills acquired by health professionals less easily transferable, and hence more difficult to export. By focusing the training of generalists on diseases specific to South Africa, such as malaria, children's diseases, sexually transmissible diseases (STD), etc., rather than on health problems that require resource-intensive hospital treatment, it may be supposed that South African practitioners will be of less interest to OECD member countries, in which functional and organic ailments are more prevalent.

However, this strategy is sharply criticised within the medical profession, which regards medicine as a universal science (Cohen, 2001), and does not wish to contemplate abandoning high-quality medical practices which, though certainly expensive, nonetheless also meet patients' needs. In other words, they argue that South African

medicine should continue to operate in areas in which it has a proven track record, even if those areas are not particularly representative of the needs of the majority.

Without calling the current system into question, one option under consideration is to fit nurses' training into three years, rather than four. Students would have to choose one specialisation rather than four, as is the case at present. Such measures are likely to preserve the national health system from over-exposure to international demand, without being excessively protectionist, and without undermining the professionalism of health workers. As regards physicians, Price (2001) has put forward an interesting proposal which consists in reorganising curricula around two blocks, corresponding respectively to: *i*) basic training defined according to international standards, and *ii*) medical practices specific to the typical conditions of exercise in each country.

However, such reflections about curricula should not be reduced to a mere matter of training, but should contribute to a broader redefinition of the organisation of work in the health sector, and the skills mix. This debate is well-advanced in some OECD member countries, but it is even more urgent in the context of South Africa.

Improving the working conditions of health professionals: necessary, but inevitably of limited scope

The authorities responsible for public services recently signalled their intention to improve pay and working conditions in the public sector, and to make jobs in rural areas more attractive through non-financial incentives, such as housing, social benefits, greater security, etc. From their point of view, even without pretending to rival northern countries, pay rises would significantly improve the situation.

Average pay in the public sector, including benefits, increased in 2000 by almost 5% for generalists, over 12% for specialists and 14% for professional nurses (Erasmus and Hall, 2003). In addition, in January 2003, the Treasury accepted the Department of Health's request to increase the allowances paid to physicians in priority rural areas, previously set at 20 000 rand (USD 2 500), and there are plans to extend this measure to other groups of health professionals. At the same time, work is being done to identify the main problems relating to the working conditions of health professionals. 61 million rand (approximately USD 6.5 million) could be allocated to increasing the security of the medical infrastructure. Thus, the South African authorities are trying to make the idea of work outside South Africa relatively less appealing, but it must be acknowledged that the government has very little financial room for manœuvre in the short term.

Increasing international co-operation relating to the international mobility of health professionals

Since 1 October 2001, despite shortages of health workers, South Africa has promised not to recruit any physicians or nurses, except under the terms of specific agreements with the country of origin, so as not to deprive other countries of scarce human resources.[34] This praiseworthy attitude is nevertheless criticised by South Africans, who regard it as discriminating against them, underlining the sensitivity of such measures, and the underlying conflicts of interest between individuals and societies.

At the same time, South Africa has concluded agreements with several countries, such as Cuba and Germany, so that physicians, with the agreement of their national authorities, can practise in South Africa for a predefined period. The best-known of these programmes concerns Cuban doctors. It began in February 1996, and there are now 450 Cuban physicians

practising in South Africa.[35, 36] In fact, this inflow makes up for only a fifth of the number of South African physicians who left the country during the same period.[37] Cuban doctors are assigned to the most disadvantaged parts of the country (isolated rural areas and townships), where their contribution is nevertheless appreciable. The different players in the health system are satisfied with the arrangement, but the press occasionally mentions language difficulties, or the fact that some Cuban doctors seek to settle in South Africa for good.[38]

South Africa is also seeking to negotiate bilateral or multilateral agreements with the leading countries of destination for its health professionals (*i.e.* the Commonwealth countries that are also OECD member countries), with the aim of soliciting an undertaking from them not to actively recruit such workers. In 2001, the NHS brought out a code of practice for international recruitment, under which the British authorities undertake not to organise campaigns to recruit health professionals in South Africa[39] and 153 other countries (see Annex 2 and below). In contrast, attempts by the South African authorities to reach an agreement with Canada have so far been unsuccessful.[40] More recently, considerable progress is reported to have been made within the Commonwealth towards the definition of minimum ethical criteria for recruitment in the health sector. The South African government attaches vital importance to this aspect of international co-operation, even if it has shown its limitations to date (see below).

5. The lessons of the South African experience with regard to the international mobility of health professionals: greater international co-operation and policy coherence

The preceding analysis has shown that, although the emigration of health professionals is not the principal cause of the difficulties facing the South African health system today, it is nonetheless an aggravating factor, which could hamper the effectiveness of the government's efforts to remedy the imbalances inherited from the apartheid system, and meet the main public health challenges, especially those linked to poverty and HIV/AIDS. This conclusion certainly applies to other developing countries, like India and Argentina, but cases also exist where the international mobility of health professionals has much more direct and immediate implications. For example, almost two-thirds of nurses trained in Jamaica during the last twenty years have emigrated, mainly to the United States, and very few have returned (Thomas-Hope, 2002). In other countries, in contrast, when the education system trains more than enough doctors and nurses, especially through a private sector oriented towards the needs of the world market, the international mobility of health professionals may be regarded as a factor that favours economic development, if it translates into skill transfers or financial transfers to the country of origin. The case of Filipino nurses is generally seen in this light. Even in the Philippines, however, the emigration of other categories of health professionals, especially generalists and specialists, can also pose problems.[41]

Although all situations are not comparable, there are many lessons to be learnt from South Africa, because of the scope of the problem there, the range of solutions considered, and the country's specific geopolitical and economic position.

A comprehensive and concerted approach to the international mobility of health professionals

To simplify, it is possible to distinguish two types of effect resulting from the international mobility of health professionals. The first is due to the fact that governments traditionally play an important role in the health sector where, because of its social importance, they influence both labour supply[42] and labour demand. The emigration of health professionals affects the capacity of governments to manage health sector human resources efficiently, *i.e.* their capacity to predict the number of people that would need to be trained in each specialisation, in order for the health system to work properly. Indirectly, this problem has repercussions, either on the availability of health professionals (if not enough are trained), or on the real cost of training (if more people than necessary are trained, in order to offset numbers leaving for other countries).[43] In addition, the international mobility of doctors and nurses helps to meet the needs of those countries that benefit from it, favours technology transfers, and may generate additional resources for the country of origin.

From this dual standpoint, countries of both origin and destination are concerned by the measures that need to be taken to ensure that the benefits of the international mobility of health professionals are shared fairly.

Three priorities may be identified from the South African experience:

Treating causes, not symptoms

Few governments now still exercise direct control over the mobility of their nationals. Consequently, when they are not in a position to offer their skilled workers working conditions that are competitive on the international market, some countries feel at a loss in knowing how to deal with the emigration of their workers. This feeling is probably even stronger where health professionals are concerned, since they make a vital contribution to a country's social welfare. Of course, mobility is partly determined by financial reasons, but the example of South Africa has also shown that they are not the only reasons, or even the most important. South African studies and numerous media reports highlight factors, such as respect for people and property, the future prospects for children, and working conditions. In addition, the question of motivation is often a key factor, for health professionals, in particular. In all these areas, home country authorities doubtless have much more scope for action than might initially appear.

For example, experience has shown that vocational training, the redefinition of the organisation of work and careers, and increased managerial capacities, are effective means of improving the service quality and motivation of health workers (Martineau and Martinez, 1997; Hicks and Adams, 2001). Likewise, practitioners are highly sensitive to the material conditions in which they have to work (security, medical equipment, support staff, etc.). If working conditions are too precarious or unsuitable, feelings of uselessness and loss of motivation may gain the upper hand. Even more generally, it is important to enhance the worth of healthcare professions among the population, and within the public service. In many African countries, exposure to HIV/AIDS places considerable pressure on health professionals; consequently, it is essential to address the practical difficulties they face through measures such as training, and the availability of tritherapy for doctors and nurses exposed to HIV/AIDS in their professional lives.

Another important motivating factor for health professionals is the quality of the medicine they practise, and of the senior ranks of the profession. From this standpoint, the presence of internationally recognised figures and highly qualified staff is an important advantage in keeping and developing human resources in the country of origin. It is therefore necessary to preserve research activities that are acknowledged to be of international standard. The creation of centres of excellence at supra-regional level within SADC, the South African Development Community, or NEPAD, the New Partnership for Africa's Development, in some cases partly funded by the private sector, should help to encourage competitive medical research that is also adapted to regional health issues. This type of infrastructure is also important in encouraging technology transfers and exchanges with skilled professionals who have left the country (Brown, 2003).

However, the possibilities for using non-pay incentives to retain more health professionals are limited. In many cases, it is therefore essential to increase the number of health professionals being trained, in order to offset departures due to emigration. Greater openness to private education, under the control of the public authorities (especially professional councils) could increase the number of graduates, without the state having to bear all the cost. The private sector would help to meet international demand, while the subsidised public sector would guarantee broader (universal) access to higher education. Private institutions play a decisive role in training the Indian computer scientists and Filipino nurses who steadily feed the world market. However, this sort of approach is insufficient where the provision of high-level medical training is concerned, since the costs are so high as to make the development of private, non-subsidised institutions unlikely.

Last, it is also important to identify and rectify policies that may dissuade expatriate health professionals from returning. In particular, it is important to guarantee the possibility of reintegration into public service, taking into account the seniority and skills acquired abroad. Steps should also be taken to facilitate financial transfers, and to help those choosing to return with administrative procedures for resettling in their country of origin, such as professional registration, enrolment of children in schools, etc.

Renewing the debate about pay, stepping up co-operation

During the 1970s, debate about the international mobility of skilled workers focused on the issue of pay. Bhagwati proposed levying a tax on highly skilled emigrants which would be collected by the country of destination for ten years, and paid into a United Nations fund to promote development in the country of origin (Bhagwati and Hamada, 1974). According to estimates at the time, the amount raised could have been as much as USD 750 million, at 1972 rates. Although the proposal was studied attentively in academic circles, it was never given serious consideration as a practical proposition. The difficulty of assessing the amount of the levy, uncertainty as to the use of the funds and, above all, the hostility of host countries and the migrants themselves, got the better of the efforts made to promote the idea. However, this has not prevented countries of origin from since seeking compensation for the loss of human resources whose training has been paid from the public purse. But the proposal has little chance of coming to fruition, and most observers agree that some other routes should be investigated.

In fact, developed countries can help to support the efforts made by countries of origin to develop their human resources in other ways than through direct monetary compensation. Development aid policies provide a framework for such transfers, through expert missions, specific training initiatives, the secondment of human resources, and

support for development projects. Their effectiveness is sometimes questioned (Naudet, 1999) and "new" forms of co-operation, bringing in non-governmental organisations and the private sector, can be encouraged in this area (see, for instance, the case of NEPAD).

Possible options could include enabling health professionals in host countries to take sabbaticals, so that they can take part in development initiatives in southern countries, supporting twinning projects between hospital departments in the north and south, offering scholarships to foreign students, so that they can continue their studies in their country of origin, and creating financial incentives, so that skilled expatriates can embark on projects in their particular area of competence. Many projects of this type exist already, but they are mostly highly fragmented, and their viability horizon does not extend beyond the short term.

In this context, host countries could give more formal undertakings to improve the qualitative and quantitative coherence between development aid policies and migration policies. Although such a move concerns most skilled activities, it is especially important in the health sector, which is often a priority, both for public development aid, and for the international recruitment of skilled labour.

Defining a code of practice for the international recruitment of health professionals

The United Kingdom authorities can be credited with an interesting attempt to regulate the international mobility of health professionals, without seeking to restrict it, in the form of a document for employers issued in 1999,[44] *Guidance on International Recruitment* (DoH, 1999), revised as the *Code of Practice for NHS Employers Involved in International Recruitment of Healthcare Professionals* (DoH, 2001).[45] The code of practice lays down the conditions for recruiting, receiving and employing health professionals from EU Member States and third countries. It defines the required language skills and the role of private recruitment agencies.[46] It also includes a list of countries in which the Department of Health undertakes not to organise recruitment campaigns (see Annex 2). The code states that NHS employers must not target developing countries, unless the government of the country concerned has given the Department of Health its official consent in the form of a Memorandum of Understanding, which encourages exchanges of health professionals and expertise between the two countries. In addition, the code asserts that international development co-operation authorities should undertake to provide assistance and training in the health sector in countries of origin.

Several other organisations are considering drawing up their own code of practice.[47] The Commonwealth recently produced a code of practice with a wider scope, the *Code of Practice for International Recruitment of Health Workers*. An initial version of the document was discussed at the Commonwealth council of health ministers in November 2001 and May 2002 but the member states were unable to reach agreement. However, the principles of the code were widely accepted at the meeting of health ministers in 2003.[48] The document is comparable in its broad outlines to the one produced by the United Kingdom, but stipulates, in addition, that Commonwealth member states will encourage non-member states to adopt the code, and will promote the code through international organisations, such as the ILO, WHO and ICN.

Although there is no question about the justification of this approach from the standpoint of fairness, its impact remains to be proved. Buchan (2002) points out that while the United Kingdom decision not to actively recruit South African nurses seems to have

had an effect on the number of nurses recruited in 2000, numbers began to rise again in 2001, to a level 45% higher than in 1999, and more than two and a half times as high as in 1998-99 (see Table III.4 above). However, South African nurses represented 24.4% of all incoming foreign nurses in 1999, but only 15.4% in 2001. It is probably too soon to evaluate precisely the impact of such a measure in practical terms, but several factors suggest that, in all events, it will be limited.

First, none of the codes are really binding. They constitute "soft law", their scope being similar to that of a statement of intent. In other words, the codes make no provision for sanctions against employers who are in breach, or even any form of incentive for compliance.

Second, the agreements do not rule out the recruitment of personnel from countries identified as suffering from a shortage of health workers, but merely the organisation of recruitment campaigns. Nowadays, much information about job offers is available on the internet, which anyone can access. Consequently, a recruitment agency can still target potential emigrants from a particular country via the Web, without formally conducting a targeted recruitment campaign.

Third, as the undertaking concerns only a small number of destination countries for the time being, its global scope is inevitably limited. While the authorities in the United Kingdom were trying to restrict the recruitment of South African nurses, they emigrated in greater numbers to New Zealand, Australia and the United States. In a global marketplace where most countries have comparable needs, such measures must be global, if they are to be truly effective.

Last, it is possible that such means of regulation will become a victim of their own success. If the number of countries from which it is possible to organise recruitment campaigns remains very small, as will probably be the case if the developed countries do not support the development of human resources in the southern countries more actively, recruitment will focus on a small number of countries, and surpluses will very soon disappear as a result, thus drying up the pools from which it is currently possible to draw resources.

Various steps could be considered to improve these practices, such as:

- Rapidly honouring promises to increase the development aid earmarked for human resources in the health sector (see above).
- Promoting international agreements along those lines that would include all OECD member countries, and other countries that rely on immigrant health workers, like the Gulf States and certain newly industrialised countries.

Despite all the limitations mentioned above, it is important to emphasise that the first steps towards the definition of a code of practice for international recruitment of health workers represent a decisive move towards better regulation of the international market for health professionals. Such a move is all the more necessary, given the imperfections of the market in question, and the nature of health as a "global public good"(Chen, Evans and Cash, 1999).

Conclusion

South Africa is not an isolated instance. In the SADC sub-region, and even across the entire African continent, the problem of the international mobility of health professionals is becoming increasingly important. The South African example has shown that, while the

emigration of health workers is not always the primary cause of the problems facing the health systems of developing countries, it is nonetheless an aggravating factor. This mobility is only partly determined by financial factors: other factors are also at work, such as working and living conditions in general, job recognition, etc., and may sometimes be more important. Consequently, government policies in developing countries have a significant part to play in improving human resource management in the health sector.

As shortages of health workers are a global phenomenon, and as demand for healthcare in the OECD members countries is likely to continue to grow, the international mobility of health workers will also tend to increase, generating emigration flows which would considerably reduce the numbers of health workers in developing countries.

The detailed study of South Africa, and the references to several other countries, show the potential importance of strengthening policy coherence in the spheres of migration and development aid, both at national level in countries of origin and at international level, so as to ensure that the benefits arising from the international mobility of health professionals are shared in a way that is both fair and sustainable. It is right to reflect on how public development aid can be increased in the health sector, especially in training health workers.

In the medium term, the best way of limiting the potentially adverse effects of the international mobility of health workers is to increase training in developed countries where shortages exist, and to raise the status of the healthcare professions, so that they attract recruits in sufficient numbers to address the consequences of ageing populations.

Notes

1. This chapter has been prepared by J.C. Dumont (OECD) and J.B. Meyer (IRD, Institut de recherche pour le développement, Paris).
2. The term "brain drain" was used for the first time in a study for the British Royal Society, which voiced fears about the effects of the large-scale emigration of British scientists and doctors to the United States.
3. South Africa is a settled country in which immigration has played an important role. As a former member of the Commonwealth, it has retained special ties with several OECD member countries.
4. As a dominant economy in the sub-region and in the continent as a whole, South Africa attracts large numbers of immigrants. However, the apartheid era increased the exodus of mostly highly skilled South African workers (Mattes *et al.*, 2000).
5. Under apartheid, the South African government clearly demonstrated a preference for immigrants from Germany and the Netherlands. Protestants were also preferred to Catholics (see Peberdy, 1999).
6. The United Nations Population Division estimates that there were almost 175 million migrants in the world in 2000, representing approximately 2.9% of the world population. There is no overall estimate for skilled workers, but an emigration rate at least twice as high is very likely.
7. 23 countries worldwide had worse results, all of them African, with the exception of Afghanistan.
8. In 2000, South African GDP per capita reached 9 160 $PPP, and was thus higher than for Turkey (7 030) or Mexico (8 790). The average GDP per capita for sub-Saharan Africa is 1 600 $PPP.
9. Total spending on health represents approximately 8.8% of GDP, comparable with Norway and Belgium, and much higher than the average for Africa (3.2%), and the world as a whole (5.2%).
10. According to a WHO estimate (2000), South Africa is 182nd out of 192 countries in terms of the performance of its health system (*i.e.* the capacity to convert spending on health into life expectancy adjusted for incapacity).
11. According to a recent HSRC report, the overall prevalence rate is 11.4%, but 15.6% of those aged between 15 and 49 are HIV positive (Shisana and Simbayi, 2002).

12. Another indicator, for equality in infant survival, puts South Africa in 128th place.

13. Physicians are divided into two categories (generalists and specialists), and nurses into three categories (professional nurses, enrolled nurses and assistant nurses), according to the classification used in South Africa.

14. Over the period 1990-99, the WHO estimates that the ratios are 5.6 physicians per 10 000 inhabitants in South Africa, compared with 4.8 in India, 3 in Namibia, 2.4 in Thailand, 1.8 in Nigeria and 1.4 in Zimbabwe.

15. Furthermore, these results do not necessarily take account of losses attributable to emigration or change of professional status (inactivity, change of job), since these events are not systematically recorded in council registers.

16. Only 16% of South Africans have healthcare cover that gives them access to private medicine.

17. For nurses, the exodus from the public to the private sector seems to be neither as rapid nor on such a large scale as the media suggest. The percentage of nurses working in the private sector has increased by only five points over the last fifteen years. However, the situation is very different for generalists, since the proportion of those working in the public sector fell at an annual rate of 6.4% between 1997 and 2001.

18. Young pharmacists seem less inclined towards expatriation, since only 21% said they were considering working abroad.

19. In Australia, for example, 75% of South African-born nurses, and 70% of practitioners, have acquired Australian nationality.

20. The United Kingdom has concluded agreements with these countries, under the terms of which it may actively recruit nurses. In November 2000, the United Kingdom Health Minister also signed an agreement with his Spanish counterpart allowing the NHS to recruit up to 5 000 Spanish nurses. Some 375 Spanish nurses were recruited under this scheme in 2001-02 (Nursing and Midwifery Council, 2002).

21. In view of the number of training places for nurses in the United Kingdom (approximately 15 000 a year), and emigration to other OECD member countries (estimated at 6 250 in 2002), it is reckoned that all the new posts will have to be filled by recruitment from other countries.

22. Australia has introduced a special programme for immigrants who settle in rural areas, the Regional Sponsored Migration Scheme. In Canada, regional aspects of immigration are currently handled by provincial immigration schemes, generally directed towards local labour market requirements. For example, Saskatchewan runs a special scheme for health professionals, and British Columbia has a programme for nurses.

23. An estimated 550 Australian doctors emigrated in 1997-98, mainly to the United Kingdom (38%) and North America (20.5%) (AMWAC, 1999). The emigration of Canadian health workers to the United States has also been an issue for several years. There was a negative net migration balance for Canadian doctors, 50% of them specialists, in the late 1970s (–663 in 1978) and mid-1990s (–777 in 1994). The migration balance in 1999, though still negative, was much smaller (–200, compared with –500 in 1996) (Barer and Webber, 1999).

24. Almost 20% of foreign-trained doctors practising in the United States are American citizens, a third of them are permanent residents (green card holders), approximatelty 7% have H1-B-type visas and about 30% have non-renewable J1 visitor visas (Biviano and Makarehchi, 2002).

25. In a survey conducted by Mattes and Richmond (2002), over 80% of the skilled white workers interviewed expected security to deteriorate considerably in the next five years, compared with 54% for black workers. Furthermore, 86% of skilled white workers thought that security problems were much less significant in other countries, compared with 55% for black workers. All in all, 25% of those interviewed mentioned security as the main reason for planning to emigrate.

26. In a forthcoming study, Professor W. Pick has interviewed some 560 emigrant South African doctors about their motives. About one-third emphasised professional experience acquired in other countries.

27. For doctors, the number of expatriates is greater than the number of vacancies in the public sector. Nonetheless, the continuing surplus of doctors in urban areas proves that the existing imbalances are not necessarily attributable to emigration.

28. According to unofficial Interior Ministry estimates, some 500 000 foreigners are currently residing illegally in South Africa.

29. The Immigration Act replaces the former Alien Control Act, in force under the previous regime, and during the early years of transition.

30. Another controversial measure contained in the Immigration Act relates to the payment of a fee equivalent to 2% of the foreign worker's salary. The proceeds from this levy are earmarked for the National Training Fund, so as to contribute to the development of skills in South Africa. The tax replaces the need for labour market testing, since agreeing to pay an additional charge for employing a foreign worker attests to the existence of a recruitment problem. The tax may be suspended for certain professions, where the South African economy is painfully short of available workers.

31. For example, the first category, open to "job opportunities for which the employer can prove the need for a third-cycle diploma, and at least five years' professional experience", for which there is a quota of 90 000 applications, is followed by the second category, "job opportunities for which the employer can prove the need for a second-cycle diploma and at least five years' professional experience", for which there is a quota of 75 000, and the third category, "job opportunities for which the employer can prove the need for a second-cycle diploma, and at least two years' experience", with a quota of 70 000.

32. This figure is based on the assumption that official statistics underestimate South African emigration by a factor of about four.

33. Public expenditure is due to rise in real terms over the next three years, including an extra 7.8 billion rand earmarked for infrastructure spending, 16 billion rand for STD/AIDS, and 4 billion rand for improvements to the prison system. At the same time, the South African government is intending to cut 8.3 billion rand off taxes through income tax reform. It is also maintaining its objective of budget discipline, and relying on privatisation to reduce long-term government debt (OECD, 2002d). Education is another priority, accounting for 21.5% of the government budget in 2000. In view of existing disparities, however, the emphasis is on primary and secondary schooling.

34. The commitment concerns all G77 countries and the Commonwealth countries. A similar commitment has been in effect with the SADC countries since 1995.

35. Zimbabwe has also concluded an agreement with Cuba. There were 117 Cuban doctors practising in Zimbabwe in 2002.

36. In practice, these doctors are hired under the same conditions as local doctors, but 30% of their salary is paid directly to the Cuban government, 27% into a personal account in Cuba, where they also receive their normal salary, and the remaining 43% is paid directly in South Africa.

37. Official statistics record 544 South African generalists and specialists leaving the country between 1996 and 2000. Assuming that only one departure in four is officially recorded (see Box III.1), approximately 2 200 physicians are therefore estimated to have emigrated over the period.

38. According to the available figures, only ten such cases have been reported in the last six years.

39. In fact, the NHS stopped actively recruiting health professionals from South Africa in 1999, at the request of the South African government.

40. In September 2000, the South African ambassador to Canada sent all provincial and federal health ministers a letter asking them to cut back the recruitment of South African health professionals. However, the two countries have not reached any formal agreement to date.

41. In 1997, the ratio of nurses to the population in the Philippines was comparable to that of Spain (approximately 42 nurses per 10 000 inhabitants), but the corresponding ratio for doctors was three times lower (12 per 10 000, compared with 42 per 10 000 in Spain).

42. Governments generally play an important part in the training of doctors and nurses, since they help to define curricula, at least partially subsidise university training and, in some cases, set the numbers of those admitted into the profession.

43. In the specific case of the health sector, the argument that greater opportunities for expatriation could have a beneficial effect on the supply of graduates is difficult to accept (Stark and Wang, 2001; Stark, 2002; Mountford, 1997). The problem is definitely not one of finding people capable of and interested in training in medicine, but of finding the necessary resources to train them. In other words, in a system based on public education, the restriction is mainly on the side of education supply, and not really on the side of demand. That being so, the hope of higher pay linked to international mobility cannot affect the supply of graduates.

44. South Africa decided in 1996 not to recruit health professionals from other developing countries.

45. The documents can be consulted at *www.doh.gov.uk/international-recruitment/*

46. Private international recruitment agencies in the health sector work in three ways: *i)* they themselves recruit doctors and nurses whom they then sub-contract to employers on fixed-term contracts; *ii)* they organise recruitment drives in other countries for employers; and *iii)* they identify the countries of origin likely to provide the labour sought by employers, who then organise recruitment interviews themselves.

47. For example, a report prepared by Blouin, Foster and Labonte (2002) for the Commission on the Future of Health Care in Canada proposes the introduction of a similar code in Canada.

48. The document may be consulted at *www.commedas.org/files/COP/COP.pdf*. In addition, in February 2001, the Commonwealth steering committee for nurses and midwives drew up a document entitled *Guidance on Workforce Issues: the Global Crisis in the Recruitment and Retention of Nurses and Midwives*, which includes recommendations relating to international recruitment, and has been approved by the Commonwealth.

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ANNEX 1

Table III.A1. **Distribution of official migration flows by occupation, 1988-2000**

	1988			1989			1990			1991		
	Immigration	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*
Grand total	10 400	7 767	2 633	11 270	4 911	6 359	14 499	4 722	9 777	12 379	4 256	8 123
Total economically active	5 010	3 496	1 514	5 093	2 372	2 721	6 727	2 377	4 350	6 040	2 008	4 032
Medical, dental and related health services	**198**	**269**	**–71**	**202**	**184**	**18**	**314**	**171**	**143**	**387**	**125**	**262**
Medical practitioner, physician	61	60	1	56	32	24	125	23	102	218	21	197
Medical specialist	7	13	–6	13	4	9	10	7	3	11	2	9
Medical professions NEC[1]	4	2	2	6	13	–7	10	6	4	5	2	3
Dental professions	12	13	–1	4	4	0	19	6	13	16	4	12
Veterinary sciences professions	2	2	0	9	1	8	7	0	7	7	2	5
Pharmaceutical professions	11	26	–15	16	10	6	8	11	–3	14	11	3
Supplementary medical professions	7	43	–36	13	24	–11	27	28	–1	17	16	1
Nursing professions	79	97	–18	72	85	–13	89	81	8	77	58	19
Technicians: Medical and related sciences	5	3	2	5	4	1	5	1	4	8	8	0
Health services professions NEC[1]	10	10	0	8	7	1	14	8	6	14	1	13
Engineer, engineering technician, architect and related	**456**	**372**	**84**	**463**	**285**	**178**	**655**	**274**	**381**	**573**	**250**	**323**
Educational and related	**125**	**194**	**–69**	**108**	**153**	**–45**	**137**	**164**	**–27**	**207**	**141**	**66**
Humanities and related	**266**	**312**	**–46**	**308**	**226**	**82**	**341**	**172**	**169**	**285**	**139**	**146**
Legislative, executive and managerial occupations	**607**	**353**	**254**	**686**	**216**	**470**	**810**	**219**	**591**	**775**	**221**	**554**

1. NEC stands for Not Elsewhere Classified.

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Table III.A1. **Distribution of official migration flows by occupation, 1988-2000** *(cont.)*

	1992			1993			1994			1995		
	Immigration	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*
Grand total	8 686	4 289	4 397	9 824	8 078	1 746	6 398	10 235	–3 837	5 064	8 725	–3 661
Total economically active	4 132	2 077	2 055	4 134	–	–	2 568	4 860	–2 292	1 762	4 526	–2 764
Medical, dental and related health services	**445**	**166**	**279**	**368**	**–**	**–**	**260**	**349**	**–89**	**143**	**298**	**–155**
Medical practitioner, physician	317	25	292	244	–	–	158	72	86	70	56	14
Medical specialist	10	6	4	4	–	–	5	21	–16	4	15	–11
Medical professions NEC[1]	3	6	–3	11	–	–	1	22	–21	2	17	–15
Dental professions	19	10	9	7	–	–	12	16	–4	3	14	–11
Veterinary sciences professions	4	3	1	4	–	–	4	8	–4	5	6	–1
Pharmaceutical professions	11	11	0	2	–	–	8	34	–26	4	31	–27
Supplementary medical professions	10	27	–17	27	–	–	15	53	–38	14	50	–36
Nursing professions	53	72	–19	57	–	–	51	91	–40	35	92	–57
Technicians: Medical and related sciences	6	3	3	5	–	–	3	6	–3	1	1	0
Health services professions NEC[1]	12	3	9	7	–	–	3	26	–23	5	16	–11
Engineer, engineering technician, architect and related	**498**	**279**	**219**	**448**	**–**	**–**	**321**	**472**	**–151**	**208**	**373**	**–165**
Educational and related	**189**	**152**	**37**	**128**	**–**	**–**	**153**	**305**	**–152**	**127**	**314**	**–187**
Humanities and related	**189**	**126**	**63**	**196**	**–**	**–**	**187**	**463**	**–276**	**178**	**404**	**–226**
Legislative, executive and managerial occupations	**515**	**237**	**278**	**835**	**–**	**–**	**488**	**622**	**–134**	**372**	**653**	**–281**

1. NEC stands for Not Elsewhere Classified.

Table III.A1. **Distribution of official migration flows by occupation, 1988-2000** *(cont.)*

	1996			1997			1998			1999		
	Immigration	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*	*Immigration*	*Emigration*	*Net*
Grand total	5 407	9 708	–4 301	4 103	8 946	–4 843	4 371	9 031	–4 660	3 669	8 487	–4 818
Total economically active	1 995	5 163	–3 168	1 548	4 907	–3 359	1 198	5 105	–3 185	1 365	4 848	–3 483
Medical, dental and related health services	**139**	**384**	**–245**	**71**	**336**	**–265**	**54**	**407**	**–353**	**51**	**326**	**–275**
Medical practitioner, physician	64	92	–28	36	60	–24	3	86	–83	38	68	–30
Medical specialist	6	11	–5	4	22	–18	25	19	6	1	15	–14
Medical professions NEC[1]	3	12	–9	2	6	–4	8	18	–10	0	9	–9
Dental professions	4	33	–29	2	50	–48	0	13	–13	1	12	–11
Veterinary sciences professions	3	4	–1	3	8	–5	0	12	–12	0	4	–4
Pharmaceutical professions	9	23	–14	1	9	–8	1	42	–41	5	39	–34
Supplementary medical professions	17	52	–35	7	54	–47	2	55	–53	4	50	–46
Nursing professions	30	124	–94	10	101	–91	10	133	–123	1	117	–116
Technicians: Medical and related sciences	1	9	–8	2	7	–5	2	0	2	0	3	–3
Health services professions NEC[1]	2	24	–22	4	19	–15	3	29	–26	1	9	–8
Engineer, engineering technician, architect and related	**246**	**409**	**–163**	**109**	**445**	**–336**	**89**	**425**	**–336**	**66**	**334**	**–268**
Educational and related	**133**	**351**	**–218**	**115**	**320**	**–205**	**79**	**272**	**–193**	**69**	**314**	**–245**
Humanities and related	**157**	**441**	**–284**	**136**	**442**	**–306**	**144**	**454**	**–310**	**107**	**494**	**–387**
Legislative, executive and managerial occupations	**464**	**723**	**–259**	**320**	**751**	**–431**	**424**	**772**	**–348**	**255**	**670**	**–415**

1. NEC stands for Not Elsewhere Classified.

Table III.A1. **Distribution of official migration flows by occupation, 1988-2000**
(cont.)

	2000		
	Immigration	*Emigration*	*Net*
Grand total	2 400	10 262	–7 862
Total economically active	662	6 434	–5 772
Medical, dental and related health services	**36**	**459**	**–423**
Medical practitioner, physician	21	89	–68
Medical specialist	1	16	–15
Medical professions NEC[1]	2	21	–19
Dental professions	1	31	–30
Veterinary sciences professions	1	10	–9
Pharmaceutical professions	2	24	–22
Supplementary medical professions	0	71	–71
Nursing professions	4	147	–143
Technicians: Medical and related sciences	2	10	–8
Health services professions NEC[1]	2	40	–38
Engineer, engineering technician, architect and related	**24**	**433**	**–409**
Educational and related	**106**	**357**	**–251**
Humanities and related	**114**	**616**	**–502**
Legislative, executive and managerial occupations	**241**	**879**	**–638**

1. NEC stands for Not Elsewhere Classified.

Source: Statistics South Africa.

ANNEX 2

List of countries and regions for which NHS decided not to actively recruit health professionals

Afghanistan
Albania
Algeria
Angola
Anguilla
Antigua and Barbuda
Armenia
Aruba
Azerbaijan
Bahamas
Bahrain
Bangladesh
Barbados
Belize
Benin
Bermuda
Bhutan
Bolivia
Bosnia and Herzegovina
Botswana
Brazil
Burkina Faso
Burundi
Cambodia
Cameron
Cape Verde
Central African Republic
Chad
Chile
China
Chinese Taipei
Columbia
Comoros
Congo, Rep.
Cook Islands
Costa Rica
Cote d'Ivoire
Croatia
Cuba
Democratic Republic of Congo
Djibouti
Dominica
Dominican Republic
East Timor
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Ethiopia
Fiji
Gabon
Gambia
Georgia
Ghana
Grenada
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Honduras
India[1]
Indonesia
Iran
Iraq
Jamaica
Jordan
Kazakhstan
Kenya
Kiribati
Korea, Democratic Republic
Kyrgyz Republic
Laos
Lebanon
Lesotho
Liberia
Macedonia
Madagascar
Malaysia

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Morocco
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Myanmar
Namibia
Nauru
Nepal
Nicaragua
Niger
Nigeria
Niue
Oman
Pakistan
Palau Islands
Palistinian Administered Territories
Panama
Papua New Guinea
Paraguay
Peru
Philippines[2]
Rwanda
Samoa
Sao Tome and Principe
Saudi Arabia
Senegal
Seychelles
Sierra Leone
Solomon Islands
Somalia
South Africa
Sri Lanka
St Helena
St Kitts and Nevis
St Lucia
St Vincent and Grenadines
Sudan
Suriname
Swaziland
Syria
Tajikistan
Tanzania
Thailand
Togo
Tokelau
Tonga
Trinidad and Tobago
Tunisia
Turkey
Turkmenistan
Turks and Caicos Islands
Tuvalu
Uganda
Uruguay
Uzbekistan
Vanuatu
Venezuela
Vietnam
Virgin Islands
Wallis and Futuna
Yemen
Yugoslavia
Zambia
Zimbabwe

Notes

1. The Department of Health recommends that recruitment only occurs via government agreement and therefore only from those states that do not receive DFID aid. The states that receive aid are Andhra Pradesh, Madhya Pradesh, Orissa and West Bengal.

2. There is an agreement between the United Kingdom and Philippine governments to enable the United Kingdom to recruit registered nurses.

Source: Department of health, United Kingdom (*www.doh.gov.uk/international-recruitment/*).