Environment and Planning A 2002, volume 34, pages 2071 –2089

DOI:10.1068/a3541

The state, skilled labour markets, and immigration: the case of doctors in England

Parvati Raghuram, Eleonore Kofman
Department of International Studies, Nottingham Trent University, Clifton Lane, Nottingham NG11 8NS, England; e-mail: Parvati.Raghuram@ntu.ac.uk, Eleonore.Kofman@ntu.ac.uk
Received 2 February 2002; in revised form 21 June 2002

Abstract. Most recent research on skilled migration focuses on those working in the financial sectors and there has been very little work in Europe on the migration of people in welfare sectors. In this paper we seek to explore some of the complexities of shifting labour markets and immigration regulations and their influence on the geography of migration of doctors to England. We argue that state regulations, both of immigration and those governing the medical labour force, have been altered to meet the specificities of internal labour-market shortages and that the level of the state remains a useful analytical level for understanding the skilled migration of doctors.

Introduction

The mobility of skilled labour has been part of international migratory movements since the 1960s (Bhagwati, 1976). Even during the major phase of labour migration to Europe, it is clear that a number of those who moved were skilled (Oommen, 1989). Though not always acknowledged, skills have formed a significant criterion for immigration entry in most countries in the 'developed world' (Cheng and Yang, 1998; Iredale, 1999). In traditional settler societies, skills constitute one of the major criteria through which points for entry are accumulated. Even in the United Kingdom the issuing of employment vouchers from the mid-1960s in effect valorised skills as a criterion for regulating immigration and by the end of the 1970s it became difficult to enter the country legally for the purpose of employment without skills. Yet there was little discussion of the role of imported skills for economic development and the major concern from that period until very recently has been about how to limit immigration whilst allowing a small amount of skilled migration. Despite this the numbers entering the United Kingdom under work permits have been increasing steadily during the 1990s (Dobson et al, 2001; Home Office, 2000) and by the end of the decade had reached the levels of the early 1970s.

With the pronouncement on 11 September 2000 by Barbara Roche, the Minister for Immigration, of the need to make the work permit system more supple and increase the numbers allowed to enter the labour market, British immigration policy demonstrated a major shift (JCWI, 2001). This shifting rhetoric may be surmised from the results of an official study commissioned by the Home Office (Glover et al, 2000) which argued for the economic and social benefits of international migrants in the United Kingdom. The introduction of the new Highly Skilled Migrant Programme in January 2002 further eases the migration of skilled persons although this programme is weighted towards educational qualifications, wealth, and reputation and is not closely linked to labour shortages in the United Kingdom.

As a result of the shortages in a number of sectors particularly in the past decade there has been increasing interest in skilled labour migration by policymakers and the media (JCWI, 2001; OECD, 2002; SOPEMI, 1997; *The Guardian* 2000; 2001a; 2001b). Academic interest in skilled migration has also grown, although existing literature has focused primarily on those moving within the financial labour market

through intercompany transfers (Koser and Salt, 1997), especially the movement of single persons and, more particularly, men (but see Findlay et al, 1994; Kanjanappan, 1995; Robinson and Carey, 2000). The burgeoning literature on skilled migration in these sectors has built upon specific elements of this form of skilled migration: importance of entry into the labour market through institutions as, for example, when people move through intercompany transfers and entry through the work permit scheme (Beaverstock, 1994; 1996; Findlay, 1996).

An examination of the migration of skilled persons in welfare sectors—which are usually controlled by the government and professional bodies—produces a very different account of migration. The very different geography of migration to these sectors means that those wishing to work have not only to gain immigration clearance but also to obtain professional accreditation from regulatory bodies. The opening up of the labour market has been slow compared with that of the financial sectors. Moreover, these sectors still largely remain under national control in terms of training and service provision with both country of qualification and country of origin influencing access to training and employment (Iredale, 2001). Although other labour markets have felt the effect of neoliberal reforms, the state continues to determine the numbers produced within the national system and also controls those entering through migration. The diversity in different skilled sectors in relation to the freeing up of the movement of professionals, recognition of international qualifications, the conditions of recruitment, and openness to foreign labour also means that each sector necessitates its own specific analysis (Iredale, 2001).

Migration in welfare sectors has also had different historical roots. These flows primarily came from the Commonwealth countries and can be traced back to the period of 'brain drain' from Third World countries to the United Kingdom (and the United States) in the 1960s. The demand for skilled labour was the response to the expansion of postwar welfare provision at a time when the British educational system was not yet able to produce sufficient numbers to fill labour requirements, especially in the least desirable sectors. Labour was largely sought from Commonwealth countries with a legacy of British-influenced educational and training systems. The predominance of skilled migrants from Third World countries was particularly apparent in the UK health sector. This migration was facilitated and even encouraged as it was seen as mutually beneficial within the 'family' of Commonwealth countries. This quasi-official concept has survived as the underlying ideology to the present day (Decker, 2001, page 26).

Major political shifts have, however, influenced the territoriality of these labour markets. In recent years it has primarily been regulated within a regional European framework (Hay, 2000). 'European' dynamics appear to have a stronger influence on the tendency to market interdependence than 'global' dynamics as the state has continued to circumscribe the globalisation of labour markets. European harmonisation of labour markets has proceeded through the mutual recognition and accreditation of qualification and has thus facilitated the effective freedom of professional movement. The redrawing of the map of the European Union and the attendant creation of the 'single' labour market have facilitated flows of migrants within Europe at the same time that there have been increasing regulations influencing the entry of non-EU migrants to the EU labour market. As a result, the nature of the relationship between countries within Europe and their ex-colonies, frequently their major suppliers of labour, has been redefined.

In this paper we focus on migrant doctors, whose characteristics are quite different from those of immigrant professionals in financial sectors, thus extending current research on skilled migrants. Robinson and Carey's (2000) study of migrant Indian

doctors is one of the few to focus on skilled migrants working in the UK welfare sector. By focusing on a group whose migration trajectories have been influenced by longstanding colonial relationships, they highlight the similarities between the experiences of skilled migrants and those who have migrated from India and other parts of the Asian subcontinent to perform unskilled labour. Experiences such as racism have not been totally obviated by acquisition of skills. We complement their analysis of migration as a social and cultural phenomenon by providing a detailed overview of the labour market that such doctors are migrating into. The changing labour market also leads us to highlight the shifting geographies of skilled migration and the role of state and regional (European) legislation in reshaping the composition of British labour markets.

We have drawn upon a variety of sources compiled by the health sectors and medical bodies: published and unpublished statistics prepared by the National Health Service (NHS) statistical division, the General Medical Council (GMC), and the Department of Health (DoH). These sources provide a breakdown of employment patterns in the NHS although they too have their limitations. For instance, the GMC[(1)] registers the names of those who are allowed to practise medicine in the United Kingdom but an individual who is registered may not be in employment in a given year. These sources do nevertheless offer information on sectoral characteristics within the medical profession. Information obtained from these statistical sources has been complemented by interviews with key personnel in the GMC, the British Medical Association (BMA), an independent health consultant, and the personnel director of one Midlands hospital. Our understanding of these issues has further benefited from ongoing discussions with a number of overseas doctors.

Compared with some other countries such as Australia and Canada, UK immigration data are inadequate for purposes of studying flows into specific professions. The two main sources—the International Passenger Survey (compiled by the Office for National Statistics) and the Control of Immigration Statistics (Home Office)—give no information on the immigration of occupational groups or their geographical distribution in the country. Work permit data have been compiled since 1975 but until 1999 the occupational data were only partially classified. More recent statistics obtained from a Home Office study (Dobson et al, 2001) reveal that in the year 2000 health and associated professionals formed the largest group of work permit holders (22.4%) ahead of managers and administrators (18.3%) and computer analysts (16.3%). However, Dobson et al (2001) note that nurses and other health professionals account for most of these permits and that very few medical practitioners have entered through the work permit scheme. Moreover, the work permit data yield only broad professional categories and do not give a geographical breakdown about region of stay. The Labour Force Survey too has been of limited use for this study as it is based on a sample and sampling errors become large when analysing small numbers. These limitations do not affect the major source that we have drawn upon—the NHS Medical and Dental Workforce Census. This census is collated from the statistics submitted by individual hospitals, trusts, and practices on 30 September of each year. The NHS Census provides regional breakdown, by country of qualification and by specialism. However, because of the Data Protection Act, breakdown of applicants by individual nationalities is not released. Hence, the figures provided here have been aggregated to permissible geographic scales.

[(1)] Compliance with the Data Protection Act meant that we could not obtain some data by nationality.

The rest of the paper is divided into six sections. In the first section we analyse the changing preoccupations in relation to international skilled migration and outline the shift from the highly charged concept of 'brain drain' to the more neutral term of 'international skilled migration'. The second section provides the context of the labour-market shortage of doctors in the United Kingdom, and the third examines some of the specificities of the medical labour market as they pertain to migrant doctors. In the fourth section we examine the complex interplay of immigration and registration regulations that affect the entry and stay of migrant doctors and in section 5 we explore the impact of these regulations on the geography of source countries for migrant doctors. We conclude the paper by highlighting some of the specific characteristics of immigration to the medical sector and its implications for future migration research.

Globalisation, skilled migration, and the welfare sector

The globalisation paradigm in the 1980s shifted the rhetoric from that of earlier research in the 1960s and 1970s on skilled migrants where the key focus was 'brain drain' from both the Third World and the United Kingdom to the United States (Bhagwati, 1976; The Royal Society, 1963). Much of the recent literature on the migration of skilled people has been spurred by the 'globalisation thesis', where the movement of skilled people is tied to the rapid growth in the movement of goods, services, information, and capital, often considered to be accompanied by the diminishing agency of the state in the regulation of economic activities (for a discussion see Barry Jones, 2000; Waters, 2001). Studies within this genre have focused on the migration of skilled personnel employed in transnational financial corporations and the movement of people which it is argued facilitates and regulates flows of money and goods in an increasingly interdependent world (Beaverstock, 1994; Salt, 1988; Salt and Findlay, 1989). The key players in the globalisation of labour are thus the transnational corporations. The emphasis on their role has tended to occlude the role of the state, or other levels of governance, such as the macroregion (Hay, 2000), in the circulation of skilled labour migration.

The labour-market conditions influencing the migration of those working in sectors such as welfare (education, health, and social work) are often different from those in the financial sectors. Some of the key differences and distinctive elements of the migration within the welfare sector are discussed below. Briefly, they include the scope and nature of the involvement of the state in the labour market; the role of professional bodies and their accreditation regulations in monitoring entry and passage through the labour market; the nature of labour-market shortages; the role of migration regulations and the categories through which migrants enter; and the channels of entry utilised by migrants.

The state plays a significant part in defining the broader parameters of employment in the welfare sector. Even with the changes of the late 1980s and the development of practices common in the private sector—decentralisation and fragmentation—the state continues to be a key player in defining welfare labour markets. In the health sector, for example, although privatisation has led to the contracting out of and changing employment conditions of less skilled labour, such as cleaners, porters, and ward orderlies, its impact on the regulations pertaining to the employment of the highly skilled has been less clear. As Rosewarne (2001) argues, the impact of privatisation has been severe in particular sectors and/or occupations, with skilled migrants being more protected from deregulatory and global processes. In spite of the continuing expansion in the take-up of private medicine and growth in hospitals run through the private finance initiative scheme, the state still remains by far the largest provider of health

care but it also continues to orient and regulate provision through its educational, resource allocation, and employment policies. For instance, medical doctors need to gain accreditation through recognised professional bodies that have close links with the state. Privatised health services are entirely dependent on doctors who also hold public sector posts within the NHS.

More significantly, despite the shift in the provision of welfare from public to private sectors and an increase in self-provisioning of welfare, the rhetoric of public provision continues to be significant. The imposition of neoliberal policies has not led to the withdrawal of the state in setting guidelines and determining entry numbers through the medical educational system, for instance. Indeed, the demand for increasing accountability in recent years has led to calls for tighter regulation by the state.

In the case of doctors the state regulates the number of places provided in higher education establishments—and hence the supply of UK qualified workers—according to estimates of labour-market needs (MWSAC, 1997). It has then attempted to meet shortfalls in labour by using immigration and accreditation criteria to regulate the entry of overseas born and trained doctors. This intervention of the state in the medical sector has become particularly pronounced in the past few months. One reason for this has been the recognition and the widespread attention given to the extant labour shortages within this sector, which has led to a series of high-profile recruiting drives by successive UK governments in a number of countries (including seven European countries, North America, Australasia, and the Middle East) (see DoH, 2002).

In addition, professional bodies have played a major role in regulating entry into the welfare sectors, both for nationally qualified and for migrant professionals. Where levels of accountability are high and the proportion of skilled migrants in the labour market are also significant, well-established criteria for accrediting foreign qualifications have been established (Iredale, 1997). In the case of the health sector, the DoH influences these criteria as it attempts to meet public expectations from the health services. Moreover, accreditation of qualifications has been influenced by interstate negotiations such as the major restructuring of labour markets in Europe and attendant harmonisation of accreditation and employment practices (see below) in the last decade. The impact of changing regulations has been particularly evident in shortage specialities within hospital medicine and has resulted in further shifts in the composition of the workforce in such sectors.

The causes of labour shortages in the welfare sector are significantly different from and have a longer history than those in the financial sectors. Since the 1960s growing affluence has contributed to increasing expectations of education and health, and hence of demand for the services of welfare professionals. On the other hand, there were as yet insufficient numbers being trained to meet the demand and this pattern has continued to the present. The expectation of what constitutes appropriate care has continued to rise, increasing labour-market requirements for welfare professionals. In particular the health sector has also been influenced by shifts in the demographic profile of the United Kingdom and the increase in the proportion of elderly population, who place higher demands on particular forms of welfare. The relationship between economic growth and migration to the welfare sector is thus perhaps more tangential than in the case of the financial sector (MWSAC, 1997). Demographic factors and the shifting notions of welfare constitute two at least equally important factors influencing labour-market shortages in the welfare sector.

At the same time, the changing conditions of work in the welfare sector have made jobs in this sector less desirable. The widespread public scrutiny of provision and state intervention into their ways of working have eroded the autonomy of welfare professionals. The remuneration of state-funded welfare employees has also lagged behind

that of private sector workers, particularly of those employed in financial and producer services. The number of 'nationals' opting for jobs in the welfare sector has therefore not kept pace with the increased demand for welfare at the same time as there has been a drop-out of people from this sector (MWSAC, 1997). All these factors have together led to major labour shortages in several sectors of the welfare spectrum, especially in the provision of health and education and these sectors have become dependent on overseas labour. As a result almost a quarter of long-term UK work permits are being given to those working in this sector (Dobson et al, 2001).

The state constantly reviews the shortage areas and modifies its employment and immigration regulations accordingly. The second half of the 1970s saw substantial reductions in the number of work permits issued, including those to skilled migrants. Further changes in immigration regulations applied only to specific sectors such as the 1985 rule which affected the entry and conditions of employment of overseas doctors (MWSAC, 1997). Recent shifts in immigration regulations reflect state recognition of these labour shortages. For instance, the Review of the Work Permit Arrangements in 2000 sought to establish a rolling programme of sector analysis by establishing a number of sector panels for specific industries and professions. This was done to ensure that immigration regulations, particularly the work permit arrangements, are closely aligned to shifts in the labour market and thus migration can be regulated to meet the needs of employers better. The sector panels are visualised as one way of formalising the ongoing contacts between Work Permits (UK) and the wide range of stakeholders in different industries, areas, and professions. Significantly, the continuing rhetoric and practice of state provision of welfare have meant that the state remains the primary stakeholder in the context of immigration of welfare professionals.

Moreover, work permits provide only one route of entry for migrant doctors: 1.6% of work permits given in the year 2000 were for health professionals of which only 0.5% went to doctors (Dobson et al, 2001). As we discuss below, other modes of entry are far more significant for doctors. Although other migrant professionals primarily enter as work permit holders, it is also increasingly being recognised that significant numbers enter through other immigration categories: notably as spouses, students, and refugees (Kofman, 2000; Raghuram, 2000). Little is known, however, about the professional qualifications or employment of family migrants who are still assumed to be dependants of the primary migrant (Kofman, 2000). Refugee doctors in particular have become the focus of initiatives for retraining (JCORE, 1998) and are the only group currently allowed to work immediately upon entry as asylum seekers.

In contrast to the financial sector most welfare workers are not sent by their current employer, company, or by their state. They use a number of other different channels of entry to gain employment (Findlay, 1990; Findlay and Li, 1998), ranging from social and professional networks to recruitment agencies who often work with the employers themselves (Hardill and MacDonald, 2000). These moves therefore require far greater initiative and investment by the individual migrants themselves.

Finally, in the United Kingdom there are relatively few women migrants in the financial sector but many more women in EHW (education, health, and welfare). Only 7% of migrant men on long-term work permits were employed as professionals or managers in the EHW category whereas 40% of women were employed in this sector (Salt and Singleton, 1995). These migrants challenge the dominant picture of the skilled migrant as 'a company man'. The more difficult conditions of employment and entry influence the composition of the migration stream. In several parts of the welfare sector significant proportions of those migrating move from situations of precarious employment. They may be young Europeans coming from regions of overemployment

in their sector, they may come from regions of political instability, as in the case of South Africa, or from the Third World. A number of those who come from the Old Commonwealth do so to gain experience or come on working holidays. They often locate and obtain jobs only after their arrival in the United Kingdom and their moves are not eased by relocation packages. Focusing on the EHW sector therefore complements existing work on migration of the highly skilled.

Labour shortage in the medical sector

Currently the supply of about 5000 doctors per annum from the twenty-four UK medical schools is not keeping pace with the increasing workforce requirements of the NHS. The reasons for the shortfall are complex. Increasing longevity and shifts in the national demographic profile have led to the expansion of the elderly population, which makes a disproportionate call on medical services. According to the BMA's (1999) evidence to the House of Commons, between 1995 and 1999 inpatient and day-case activity has increased by 4.2% a year, new outpatients by 4.8% a year, and general practitioner (GP) consultations by 2.7% a year. At the same time the whole population has increasing expectations of health, but the provision in the United Kingdom of 1.8 doctors per thousand population is much lower than that in other comparable EU countries such as Italy with 5.5, Germany with 3.4, and France with 2.9 (BMA, 1999). The government attempted to address these politically charged discrepancies between UK health provision and that of other EU countries in "The NHS Plan" drawn up in July 2000 (DoH, 2000a). The Plan commits the government to hiring 7500 more hospital consultants, 2000 more GPs, 20 000 more nurses, and over 6500 more therapists and other health-associated professionals by 2004. With health having been a major issue in the UK general election of 2001, this pressure is continuing.

Limitations on the working hours of junior doctors in accordance with the New Deal and that of senior doctors in line with European working hours directives (Directive 93/104/EC), which was adopted by the Council of Ministers on 23 November 1993 and came into force in the United Kingdom on 1 October 1998, have also led to an increase in the demand for doctors. This increase is currently estimated at about 1.7% (MWSAC, 1997).

The number of doctors trained in the United Kingdom is not adequate to meet the demands of the NHS (Fletcher, 1997). Some 7% of medical students do not currently complete their course and this reduces the pool of those qualifying while increasing stress in medical-related professions and has led some doctors to discontinue medical practice after obtaining their qualifications or to retire early (Richard et al, 1997). Further erosion is occurring, as doctors demand a readjustment of the work–life balance and improved standards of their working lives. This is set to become particularly important as over half of those currently qualifying as doctors are women who over a professional lifetime supply fewer full-time hours of work than those they are replacing.[2] The migration of medically qualified professionals to other countries, particularly the Middle East and Australia, have also led to a decrease in the available labour pool.[3] As a result of these factors an annual wastage rate of 3.5% is estimated (MWSAC, 1997). Hence, the medical labour force is inherently dependent on having

[2] For example, a cohort study found that in 1995 nearly half of the women who qualified in 1977 were working part-time (Davidson et al, 1998).

[3] For instance, the BMA cohort study of those who graduated from medical colleges in 1995 indicates that 4% of all those who qualified in that year have left the UK medical labour market, about half of them to work overseas permanently and the other half because of dissatisfaction with their career or for family reasons (Davidson et al, 1998).

a 'reserve army of labour' to meet the increasing needs for medical care. Migrant doctors provide this labour.

Labour-market shortages occur in particular niches within the medical field. The DoH Vacancies Survey registers particularly high vacancy rates for consultants in accident and emergency, palliative medicine, psychiatry, paediatric surgery, and radiology (DoH, 2001).[4] The vacancy rates for all consultant doctors (excluding training grades) in England was 3.0%, an increase of 0.2% over the previous year. For instance in one Midlands hospital, there were shortages at consultant level in radiology, histopathology, and anaesthesia but there were no shortages at the training grades because of its status as a teaching hospital (interview with the personnel director of a Midlands hospital). GPs are the other primary providers of health care and even among GPs only 86% of vacancies were filled within 12 months (Medical Practices Committee, 1999).

The Medical Workforce Standing Advisory Committee (MWSAC) suggested a three-pronged initiative towards addressing this shortfall in UK-trained doctors in the NHS: an increase in the enrolment of medical students, improvement in recruitment and retention practices among those who are trained, and an increase in recruitment of overseas doctors (Beecham, 1997; MWSAC, 1997). Although medical student intake has increased by 1000 places per year since 1999 it is estimated that this increased recruitment will take about ten years to have an impact on the labour market. The new NHS also recognises and is attempting to address the problems of recruitment and retention of medical personnel (DoH, 1998a; 1999). However, the dependence of the NHS on its overseas doctors is predicted to rise and even where the aim of self-reliance on locally qualified doctors is professed this aims only to retain the number of overseas doctors at its current proportion.

Of doctors currently working in the NHS 26% have been trained overseas. In England this percentage has grown from 22% in 1991 to 25% in 1996 and 31% today. The growth rate in the number of UK-qualified doctors between 1991 and 1996 was 1.5% as opposed to 4.6% for all non-UK-qualified doctors. The relative proportions of UK-qualified doctors working in Wales and Scotland have also been falling and Wales registers an even higher dependence on overseas doctors than England. Despite the recognition that the critical shortage in the NHS labour force is being met by overseas doctors (Fletcher, 1997; Williams, 1998), there is very little research on the migration and entry into the labour force of these doctors (Jinks et al, 1998).

Migrant doctors in the United Kingdom

Doctors who do not have a right to residence in the United Kingdom or the countries of the European Economic Area (EEA) are termed 'overseas doctors'. This term, however, has different connotations within the medical field. Regulatory bodies within the medical profession may emphasise the place of qualification in their determination of who constitutes a foreign doctor. For example, the large number of medical students who come from countries such as Malaysia to study medicine in the United Kingdom may not be considered as overseas doctors. In this paper, we focus primarily on those who have qualified outside the EEA and have migrated to the United Kingdom to practise in the NHS.

[4] Although these figures reflect only consultant vacancies, similar patterns may be observed at training grades by studying the statistics for those registering difficulty in entering training grades in particular specialties. The BMA cohort study, for instance, suggests that, although 80% of applicants faced problems in obtaining a relevant training post in obstetrics and gynaecology, these figures were 9% for accident and emergency, and radiology (Davidson et al, 1998)

Medical migration to the United Kingdom has had a particularly long history with significant numbers of doctors entering the country even in the 1940s. Major increases occurred largely from 1953 when the number of medical posts were expanded but was followed by a cut in medical student intakes because of errors in 'manpower planning'. Emigration continued but with particular peaks between 1957 and 1960 and again a decade later (Decker, 2001).

Although the number of registered doctors increased by 48% from 1986 to 1995, the proportion who qualified in the United Kingdom fell from 61% to 42% (MWSAC, 1997). Between 1995 and 2000 the number of EEA-qualified doctors increased from 3320 to 3640 remaining at about 6% of the total hospital medical workforce, but the proportion of 'other overseas' doctors to total increased from 23% to 26% in the same period.[5] Figures published by the GMC indicate that the number of overseas doctors registering in 1997 totalled 5500, representing 60% of all registrations. A further 6600 were granted limited registration to allow them to train in the United Kingdom. Currently, about 1500 – 2000 overseas doctors enter the United Kingdom each year in order to undertake postqualification medical training and examinations.

The medical labour market for overseas doctors is highly differentiated. The distribution of doctors who qualified outside the United Kingdom across different career grades is uneven. Most come postqualification to obtain further qualifications, training, and experience. According to the DoH statistics [figures for September 1999 (DoH, 2000b)] about 10% of doctors currently employed in England who qualified in 'other EEA' countries are employed at the house officer grade whereas this proportion is 0.003% for 'other overseas' doctors. The latter are more commonly employed at higher grades (27% of registrars are from this category but only 7% are from the EEA). However, blockages in career mobility for 'other overseas' doctors lead to their eventual concentration in nonconsultant career grades (NCCGs), such as staff grades (in 2000, 66% of all doctors at this grade were from other overseas countries) and trust doctor posts (DoH, 2001; see table 1, over). Although these doctors meet a significant proportion of the labour requirements of the NHS, their career aspirations have so far not been adequately addressed, leading some like Bulstrode and Lourie (1997) to criticise the tendency of the NHS to take in doctors from the old Commonwealth "to swell the ranks of apprentices, then kicking them back before they can become masters" (page 260).

Another major vector in the medical labour market is the specialities which people enter (see table 2, over). Obstetrics and gynaecology, and psychiatry have the lowest proportion of UK-qualified doctors and the highest proportions are in clinical oncol4-ogy, general medicine, and radiology (DoH, 2001). On the other hand, future patterns may be surmised by the fact that the specialities with the highest recruitment figures of migrant doctors into the specialist registrar list are anaesthetics, psychiatry, and general medicine (DoH, 2001).

Women form a significant proportion of migrant doctors and over half the number of people seeking registration in the second half of 1998 were women (GMC, 1999).

[5] Since 1979 overseas doctors without a right of residence in the United Kingdom were not allowed to enter general practice and these restrictions were extended to assistant and locum posts in 1985. Furthermore, GP trainees were not allowed to enter under the permit-free training scheme so those aspiring to enter general practice had to meet the requirements of other business people wishing to obtain a work permit, including evidence of their ability to invest £200 000 into their practice (MWSAC, 1997). This meant that there had been little intake of new migrants into this part of the medical workforce. However, these rules were altered in November 2001 and it may be surmised that overseas doctors will increasingly enter GP training schemes. As the effect of these regulations has yet to be felt, further discussion of trends among overseas doctors concentrates on hospital doctors.

Table 1. Hospital medical staff in England by country of qualification and grade, 30 September 2000 (source: Department of Health Medical and Dental Workforce Census).

	UK qualified (%)	EEA[a] qualified (%)	Qualified outside the EEA (%)
Consultant	78	5	17
Nonconsultant career grade	29	5	66
Doctors in training	68	7	25
Other staff	75	3	21

[a] EEA European Economic Area.

Table 2. Hospital medical staff in England by specialty, gender, and country of qualification, 30 September 2000 (source: Department of Health Medical and Dental Workforce Census).

	UK qualified (%)			EEA[a] qualified (%)			Qualified outside the EEA (%)		
	all	male	female	all	male	female	all	male	female
All specialties	69	66	74	6	5	7	26	29	20
Accident and emergency	72	65	87	4	5	3	24	31	10
Anaesthetics	67	67	66	5	4	6	29	30	27
Clinical oncology	80	76	85	4	2	6	16	22	8
General medicine group	77	74	83	5	4	5	18	22	12
Obstetrics and gynaecology	58	57	60	6	7	6	35	37	34
Paediatrics	64	57	69	6	5	7	30	37	24
Pathology	72	74	69	7	6	8	21	20	23
Psychiatry	60	56	66	8	8	9	32	36	26
Radiology	76	74	82	6	6	7	17	20	11
Surgical group	66	64	78	5	5	7	28	31	15

[a] EEA European Economic Area.

Gender differences are less significant among the EEA-qualified staff (both UK qualified and those who qualified from 'other EEA' countries) particularly in the training grades than for those who qualified from 'other overseas' countries. In the surgical group the proportion of women employed is uniformly low—less than 15% of all surgeons are women (DoH, 2001). Women are particularly well represented in paediatrics, with more EEA-qualified women than men being employed in this specialism. Women from 'other overseas' countries are overrepresented in obstetrics and gynaecology, with 16% of all staff in this specialism having qualified outside the EEA.[(6)] Overall, a pattern of gender difference by specialism seems to be more significant than that by country of qualification, with the least discrepancy between men and women amongst those who qualified in 'other EEA' countries and the most in 'other overseas' countries. The only exception appears to be the 'female specialism' of gynaecology where the latter are well represented.

Of EEA-qualified doctors in training 46% are women, but this proportion falls to 32% for 'other overseas' qualified doctors (DoH, 2001; see also table 3). Women consultants account for less than a quarter of all consultants and these proportions vary from 22% for EEA qualified to 18% for those who qualified in 'other overseas' countries. These figures suggest a history of strong gender differences which are being eroded amongst younger doctors. This pattern also resonates with the increasing

[(6)] Less than 7% of all staff in England's hospitals are women from 'other overseas' countries.

Table 3. Hospital medical staff in England by country of qualification and gender, 30 September 2000 (source: Department of Health Medical and Dental Workforce Census).

	UK qualified				EEA[a] qualified				Qualified outside the EEA			
	male	%	female	%	male	%	female	%	male	%	female	%
Consultant	13923	78	4067	80	800	4	336	7	3207	18	712	18
Nonconsultant career grade	646	17	1069	53	182	5	123	6	3013	78	823	41
Doctors in training	11286	64	9786	74	1078	6	928	7	5272	30	2501	19
Other staff	2626	73	1623	79	115	3	81	4	833	23	354	17

[a] EEA European Economic Area

proportions of women amongst medical school graduates in the United Kingdom, with women now accounting for over half of the total (MWSAC, 1997). On the other hand, women form 62% of all UK-qualified doctors in the NCCGs, these figures dropping to 42% and 22% for 'other EEA' qualified and 'other overseas' qualified doctors (DoH, 2001). This suggests that UK-qualified women join men and women from 'other overseas' countries to form a labour force with few career prospects (see below).

These patterns of current employment in the NHS mask the potential workforce as a number of women (and men) may choose to take time out of the labour market, either to study or for familial reasons. As the NHS tries to improve its retention of women doctors, recording and understanding gender differences among doctors in the medical labour market will become increasingly important.

The current distribution of overseas doctors also varies by region, with the highest number of doctors from overseas countries in the West Midlands, Eastern, and North Western regions and the least in the South West (see table 4 and figure 1, over). Regional variations in the employment of 'other EEA qualified' doctors are less striking. Within regions, there are significant differences between teaching hospitals and district general hospitals, between those that are at the 'hub' and offer specialist services and 'spoke' hospitals from which specialist services are increasingly being withdrawn. Furthermore, certain London hospitals draw specialists from a wider range of countries because of their international reputation and they have unique profiles of overseas doctors in their employment.

Table 4. Hospital medical staff in England by country of qualification (percentage of total), by region, 30 September 2000 (source: Department of Health Medical and Dental Workforce Census).

	UK qualified (%)	EEA[a] qualified (%)	Qualified outside the EEA (%)
England	69	6	26
Eastern	65	6	30
London	70	7	23
North West	65	6	29
Northern and Yorkshire	69	6	25
South East	71	5	24
South Western	79	5	16
Trent	68	4	28
West Midlands	63	5	32

[a] EEA European Economic Area.

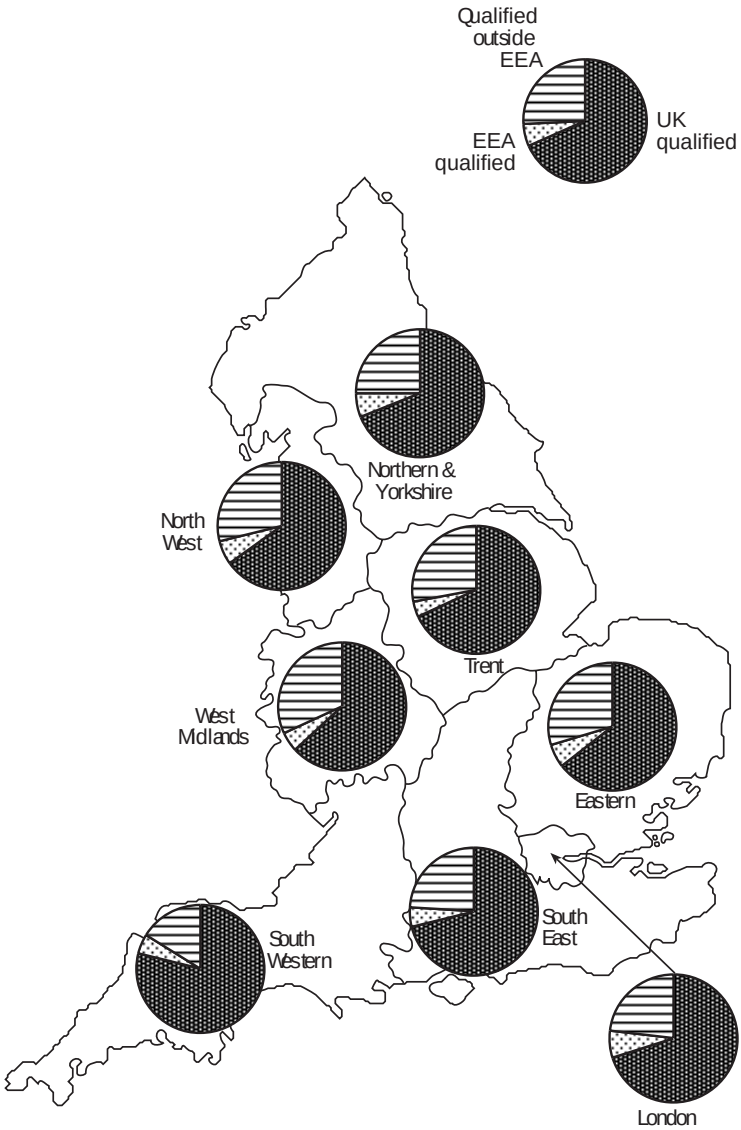

Figure 1. Hospital medical staff in England by country of qualification (percentage of total).

Labour-market and immigration regulations

The relationship between migrant doctors and the NHS is complex. The pattern of mobility of migrant doctors has been influenced by an elaborate set of labour-market and immigration regulations. In order to practise as a doctor in the United Kingdom, doctors must register with the GMC. Registration for overseas doctors was relatively flexible until 1985. Flows from the 1950s to the 1970s were largely from the New Commonwealth and most were male.[7] Hospital administration in the New Commonwealth countries was established on the UK model and doctors receive their medical training in English. For countries of the Old Commonwealth, the United Kingdom has remained a centre for postgraduate training throughout the 20th century. As a result,

[7] Postqualification training was not established in the former colonies and dominions until decolonisation began.

the primary flows of doctors to the United Kingdom were, until recently, dominated by persons from its old colonies.

Most overseas doctors faced a career block at senior registrar grade and entry into consultant posts was limited (Anwar and Ali, 1987). This was accompanied by the mushrooming of NCCG posts where doctors (almost all of whom are overseas doctors) are ossified in a 'career' grade. They filled the labour requirements of the NHS on lower salaries than consultants, with little or no independence in their work, no prospects of career progression, and no private practice. In recognition of these problems, the Overseas Doctors Association [8] (ODA) was formed in 1975 by a group of overseas doctors, and since then it has grown in membership, influence, and authority. The Commission for Racial Equality published a study on overseas doctors (Anwar and Ali, 1987), which noted that one in three of the overseas doctors they surveyed was not working in their first-choice speciality. They had to change specialities because they could not get a job in the speciality they had hoped for (page 37). As a result many of the overseas doctors (who formed one third of NHS doctors in 1985) had not reached consultant level and most of those who reached consultant level worked in geriatrics and mental illness (Anwar and Ali, 1987, page 13).

However, in the past fifteen years, a number of changes in both registration and immigration have altered the source countries from which overseas doctors originate (Iredale, 1997). First, changes were made to the immigration rules from 1 April 1985 and this along with the introduction of the Professional and Linguistics Assessment Board (PLAB) had the net effect of ending the special exemption from immigration rules which gave overseas doctors and dentists unrestricted right of entry and employment in the United Kingdom.

Second, the establishment of the single market within the EU and the harmonisation of professional qualifications (Directive 1993/16) increased the professional mobility of doctors trained within the EU. The cross-accreditation of training across the EU has created open and equal access of all medical professionals in the EU to jobs in the United Kingdom. As skilled EU migrants (including doctors) now have rights of free circulation within the single market and migratory space, there has been an increase in the number of EU-qualified doctors working in the NHS (GMC, 2002). The number of doctors from the EEA in the NHS has doubled since 1992, and the number of German doctors has increased tenfold since 1989.

Doctors who work in the United Kingdom may enter the country under one of several possible visa categories: as students, as visitors, or as work permit holders. Visa nationals, that is, those who require a visa to work in the United Kingdom are advised to enter the country on a visitor visa. They then obtain GMC registration through one of the routes outlined above. Once registered they may apply for jobs in the United Kingdom, which will entitle them to switch from visitor category to an employment visa. The exact nature of the visa they obtain will depend on the nature of the post they occupy. A large number of the visa nationals who are employed in the NHS are employed under the permit-free category. New immigration rules affecting migrant doctors came into effect on 1 April 1997 and more closely linked the immigration regulations of those with permit-free status with the nature of training that they were to undertake (table 5, over). These regulations particularly differentiated between different forms of specialist training, that is, those who were in Type II

[8] The ODA remit embraces welfare, advisory, and information services to its members and doctors overseas, and produces a bimonthly journal. The ODA is accepted as the only body to represent the viewpoints of all overseas doctors. It has working groups with the Department of Health, the BMA, and most of the Royal Colleges.

Table 5. Immigration regulations and career pathways (source: this table was created from information provided in DoH, 1998b).

Grade	Immigration regulation
Preregistration house officer	Permit free for 12 months Extension of stay for not more than 12 months
House officer	Permit free for up to 3 years
Senior house officer	Permit free for up to 3 years Extension of up to three years as long as not more than 3 years is spent at this or equivalent grade
Registrar	Permit free for 3 years with extensions, each of up to 3 years
Subconsultant grade	Work permit
Consultant	Work permit

training programmes—in Fixed Term Training Appointments, FTTAs—and those who were in Type I training programmes which would lead to Certificate of Completion of Specialist Training (CCST). The former are fixed-term appointments (as suggested by their title) and as such their permit to stay is more closely tailored to the particular 'training post' in which they are employed. Those in a Type I programme may on the other hand have a generalised three-year permit to stay, which is extendible, according to requirements. As most training programmes that lead to the award of the CCST are five years long, or longer, such extensions are usually necessary.

Doctors may also enter through other categories, as spouses or as refugees. Permission to switch from other categories such as spouse or student to permit free is easily given. Qualified spouses of those on permit-free visas are also allowed to work as doctors. Switching from one status to another is therefore much easier than in other forms of migration. It is within these structures that overseas doctors operate, if seeking a career in medicine within the NHS.

The geography of migration

The immigration and registration processes have together led to a complex but little-documented shift in the intake of doctors within the NHS. This is reflected in the numbers of doctors registering with the GMC. Between 1986 and 1995, the number of registrants with UK medical qualifications increased by only 2%, trebled for EEA-qualified doctors, and doubled for 'other overseas' doctors (MWSAC, 1997).

The geography of source countries of overseas doctors in the United Kingdom is influenced by regulations for accreditation of qualifications and immigration to the country. Doctors who are nationals of EEA countries and have qualified within the EEA have free mobility and their medical qualifications are fully recognised and are therefore eligible on entry to obtain permanent registration. However, a significant number of doctors coming from these countries, particularly Germany, come to take up preregistration house officer posts and are therefore given limited registration (interview with the personnel officer, Midlands hospital). Doctors who are nationals of the Old Commonwealth such as Australia and New Zealand have rights of mobility and their qualifications are recognised, but they face restrictions on prolonged stay. Medical qualifications obtained in the USA and Canada are not recognised in the United Kingdom, although nationals from these countries have rights of mobility. Doctors from other parts of the world face restrictions on rights to mobility and have limited accreditation of qualification (interview with personnel at the GMC).

There are also wide variations in the requirements for accreditation and levels to which qualifications may be recognised (interview with personnel at the GMC). For instance, in relation to Commonwealth countries, doctors from all but one medical college in South Africa, one college each in the West Indies, Hong Kong, and Singapore. and two in Malaysia are eligible for permanent registration with the GMC. Qualifications obtained from most medical colleges not in the above categories are recognised, but in order to obtain any form of registration, some certification of experience is required.

Currently, most migrant doctors who obtain GMC registration do so through the PLAB route. The PLAB examination is purportedly a test of medical proficiency. Examinations are held almost every month in the United Kingdom. PLAB examinations are also held in other parts of the world. Doctors with initial medical qualification in some countries, primarily from the Old Commonwealth, are exempt from the test. PLAB exemption may also be obtained by others who are sponsored as 'overseas doctors', through the Overseas Doctors Training Scheme (DoH, 1998b). This scheme operates in tune with labour-market requirements and is only available in some specialities, such as psychiatry. Doctors may also obtain PLAB exemption through the regulating bodies of the specialties, that is, the Royal Colleges. Gynaecologists and obstetricians may, for instance, obtain PLAB exemption on gaining a membership of their college (MRCOG), by passing their examinations. All non-EEA candidates are also required to show proficiency in English by passing the International English Language Testing System examinations. Furthermore, doctors who have migrated before they completed their final medical examination may complete their medical education and obtain qualifications through the United Examining Board (UEB).

Germany, Greece, Ireland, the Netherlands, and Italy are the largest providers of EEA-qualified doctors to the United Kingdom (GMC, 1999). Of the 18 844 grants of full registration granted to members of EEA countries between 1977 and 1998, 4658 (24.7%) went to doctors who qualified in Germany, 3151 (16.7%) in Greece, and 2484 (13.2%) in Ireland. Poor access to clinical training, either because of unsatisfactory medical training (Germany) or because of an overly hierarchical distinction between teaching and regional hospitals whereby regional hospitals provide limited clinical experience for doctors employed by them (Italy), is a major reason for migration (Cooper-Makhorn, 1999; interview with a doctor). In some countries such as Germany, the situation is further exacerbated by high unemployment (currently estimated at 18 000) because of overproduction of doctors. However, Germany's medical training system is to undergo reform and this may influence the number of German doctors emigrating to the United Kingdom (Cooper-Mahkorn, 1999). Greece has very few provisions for medical training and a number of Greek students travel abroad even to undertake their basic medical training (Marseilles, 1999).

Amongst the 'other overseas' countries, the highest number of applications for limited registrations come from those qualified in the Indian subcontinent, particularly India. For instance, 1051 of the 1870 people who obtained limited registration in 1998 had qualified in India (GMC, 1999). The other big sender countries are Pakistan and Nigeria (with 108 registrants each), Iraq, and Nigeria. In recognition of this, since 1997, four PLAB examination centres have been set up in India, and one each in Pakistan, Sri Lanka, and Egypt. Access to training and experience as well as the opportunity to receive internationally acclaimed accreditation through the examinations set by the Royal Colleges act as 'pull factors' for these doctors. Amongst the most significant 'push' factors influencing doctors leaving their country are the inability of the home country to absorb their local medical graduates and the inability to provide adequate exposure to the large number of doctors qualifying there. Doctors may also move to

the United Kingdom as part of a wider migration strategy. For instance, doctors coming to the United Kingdom may use this as a first step to a series of other destinations, particularly the Gulf countries. Ncayiyana (1999; cited in Bundred and Levitt, 2000) describes this as a "medical carousel", a form of repeat migration in search of increasing standards of life by medical personnel. By obtaining UK qualifications doctors receive substantively greater pay than if they had migrated directly to the Gulf from their home country. As Iredale suggests, these standards also "enable mobility of western trained professionals around the world while limiting the ability of non-western trained professionals to move" (2001, page 11). As a result, enhancing human capital by working in the NHS and then obtaining transferable accreditation becomes crucial for medical migrants.

Conclusion

This paper has highlighted the specificity of skilled labour markets, and through the example of the medical profession, has shown the need to focus on the complex interplay of labour-market regulations and immigration policies in defining the contours of skilled labour migration in a welfare sector. We have outlined some of the specialised ways in which government regulations, both of immigration and those governing medical labour force have been altered to meet the specificities of the internal labour market. Second, mesolevel actors in the migration of doctors are usually organisations, which regulate the labour market, particularly the Royal Colleges. These actors differ in significant ways from recruitment agencies and other mesolevel facilitators of migration. Third, unlike skilled migrants in corporate sectors, on whom most other research has been done, skilled migrants in the United Kingdom's medical sector still largely originate from countries of the Third World. They form part of the visible 'ethnic minority' in the United Kingdom and have been particularly affected by the UK shift in geo-political alliance from the Commonwealth to Europe. We have exemplified here some of the ways in which a new regionalisation has influenced the welfare labour market. Fourth, we suggest that utilising the work permit category can limit our understanding of migrants in the medical profession, as doctors who enter the United Kingdom are often not employed on work permits and may enter through other routes, such as spouses in family migration. They enter as visitors, students, or on permit-free training categories. Some enter through the Training, Work and Employment Scheme, but even this is limited. Furthermore, switching from and to most of these categories is permitted and is often achieved, either because of an individual's career trajectory or through that of spouses, many of who may also be doctors. The elision of training and service provision implied in the creation of a permit-free training category also questions the separation that is often made between students and workers in current research on migration (but see SOPEMI, 2001).

This paper has also outlined some of the complexities which influence the geography of migration of doctors to the United Kingdom. The demand for doctors in the NHS, which could not be met by UK medical schools, coupled with flexible immigration and registration policies, has facilitated the migration of overseas doctors to the United Kingdom. However, the state has not only retained a high degree of control over the size and composition of the labour force in this sector but has also circumscribed its global reach. The changing geography of migration needs to be viewed through the development of regional more than global labour markets. The countries (USA, Japan) which supply personnel in corporate sectors are virtually absent in the health sector. Major political shifts have influenced the territoriality of the medical labour markets. One such shift has been the redrawing of the map of the European Union and the attendant creation of the 'single' labour market so that flows of migrants

within Europe have been facilitated (Peixoto, 2001). The creation of a single labour market has meant that the training received by doctors in other EU countries has to be recognised in order to level the playing field. However, this accreditation is based on mutual recognition rather than on the principle of equivalence (Iredale, 1997). At the same time there have been increasing regulations on the entry of non-EU migrants to the EU labour market, and redefining the nature of the relationship between countries within Europe and their excolonies, frequently their major suppliers of labour. The historical patterns, largely based on colonial links, have continued through the recognition of medical training in specific countries. The European extension of labour supplies has thus complemented rather than broken up this geography.

Finally, on the basis of this particular labour market, one may ask to what extent it is possible to construct a general theory of skilled international welfare migration across specific occupations, systems of welfare provision and countries. The UK case presented here has its specificities as well as its commonalities. As have other states strongly influenced by neoliberal agendas, the British state has for two decades sought to constrain spending on welfare, including education and training. Like some European states, such as France, Britain also attracts medical students and labour from its former colonies, which continues to shape its geography of medical immigration. Together with increasing demands on medical facilities, this has meant that the national production of medical personnel has fallen below acceptable standards, forcing the current government to look externally for an immediate expansion. Despite the cutbacks, many other EU countries are, however, producing sufficient or more doctors than they can deploy. With increased possibilities of professional mobility within the EU, countries such as Germany and Spain are beginning to export their doctors to fill the niche in the United Kingdom.

The retreat from intervention in social reproduction in the United States and Australia has had a different impact on the welfare sector. Here too, there has been a reliance on overseas medical labour, especially to fill the less desirable posts (Iredale, 2001). However, although migrant doctors are concentrated in outlying and rural areas in the USA, Australia's attempt to cap expenditure on health has meant that they have simply limited the entry of doctors, except those entering on temporary contracts. Thus different strategies are pursued by states in the incorporation of migrant labour in relation to welfare sector labour markets.

Our study seeks to make a contribution to a wider analysis and theorisation of the relationship between skilled labour markets, immigration, and welfare but this is a complex and dynamic issue that requires much more comparative research. As we have seen, research on skilled international migration, especially in the welfare sectors, is woefully lacking, partly because of the view of the finance and high-tech sectors as the leaders of globalisation and an implicit assumption that welfare sectors are in decline in terms of employment. Any theorisation of skilled migration in welfare sectors would need to take into account the role of the state in the education and training of specific labour forces, the nature of labour shortages, the strength and effectiveness of protectionist bodies, such as professional organisations, their influence on immigration, and the recognition of migrant qualifications by states and within macroregions.

References

Anwar M, Ali A, 1987 *Overseas Doctors: Experiences and Expectations* Commission for Racial Equality, Elliot House, 10 – 12 Allington Street, London SW1E 5EH

Barry Jones B J, 2000 *The World Turned Upside Down? Globalization and the Future of the State* (Manchester University Press, Manchester)

Beaverstock J V, 1994, "Re-thinking skilled international labour migration: world cities and banking organisations" *Geoforum* **25** 323 – 338

Beaverstock J V, 1996, "Subcontracting the accountant! Professional labour markets, migration, and organisational networks in the global accountancy industry" *Environment and Planning A* **28** 303 – 326

Beecham L, 1997, "UK needs an extra 1000 doctors" *British Medical Journal* **315** 1487

Bhagwati N, 1976 *The Brain Drain and Taxation: Theory and Empirical Analysis* (North-Holland, Amsterdam)

BMA, 1999, "Supplementary evidence on NHS workforce submitted to the Parliamentary Select Committee on Health", March 1991, British Medical Association, BMA House, Tavistock Square, London WC1H 9JP

Bulstrode C, Lourie J, 1997, "More money for training?" *British Medical Journal* **315** 259 – 260

Bundred P E, Levitt C, 2000, "Medical migration: who are the real losers?" *Lancet* **356** 245 – 246

Cheng L, Yang P, 1998, "Global interaction, global inequality, and migration of the highly trained in the United States" *International Migration Review* **32** 626 – 653

Cooper-Mahkorn D, 1999, "Germany: doctors' training to change" *British Medical Journal* **318** 832

Data Protection Act 1984 *Public General Acts—Elizabeth II* chapter 35 (HMSO, London)

Davidson J, Lambert T, Goldacre M, 1998, "Career pathways and destinations 18 years on among doctors who qualified in the United Kingdom in 1977: postal questionnaire survey" *British Medical Journal* **317** 1429 – 1431

Decker K, 2001, "Overseas doctors: past and present", in *Racism in Medicine: An agenda for Change* Ed. N Coker (King's Fund, London) pp 23 – 58

Dobson J, Koser K, McLaughlan G, Salt J, 2001, "International migration and the United Kingdom: recent patterns and trends" RDS OP 75, Home Office, 50 Queen Anne's Gate, London SW1H 9AT

DoH, Department of Health, Richmond House, 79 Whitehall, London SW1A 2NL
1998a *Working Together: Securing a Quality Workforce for the NHS*
1998b *A Guide to Immigration, and Employment of Overseas Medical and Dental Students, Doctors and Dentists in the United Kingdom*
1999 *Working Lives: Recruitment, Retention, Return. Information, Good Practice and Resources to Encourage More Family Friendly and Flexible Ways of Working*
2000a *The NHS Plan: A Plan for Investment: A Plan for Reform* Cm 4818-I (The Stationary Office, London)
2000b *Annual Medical and Dental Workforce Census*
2001 *Statistical Bulletin—Medical and Dental Staff in England, 1990 – 2000*
2002 *Guidance on International Recruitment*

Findlay A, 1990, "A migration channels approach to the study of high level manpower movements: a theoretical perspective" *International Migration* **28** 15 – 22

Findlay A M, 1996, "Skilled transients: the invisible phenomenon", in *Cambridge Survey of World Migration* Ed. R Cohen (Cambridge University Press, Cambridge) pp 512 – 522

Findlay A M, Li F, 1998, "A migration channels approach to the study of professionals moving to and from Hong Kong" *International Migration Review* **32** 682 – 703

Findlay A M, Li F L N, Jowett A J, Brown M, Skeldon R, 1994, "Doctors diagnose their destination: an analysis of the length of employment abroad for Hong Kong doctors" *Environment and Planning A* **26** 1605 – 1624

Fletcher E, 1997, "Home medical students account for less than half of the full registrants Britain requires" *British Medical Journal* **314** 1278

GMC, 1999, *Statistics of Full, Limited and Pre-registrations*, General Medical Council, 178 Great Portland Street, London W1W 5JE

GMC, 2002, *New Registrants by Country 1996 – 2000* General Medical Council, 178 Great Portland Street, London W1W 5JE

Glover S, Gott C, Loizillon A, Portes J, Price R, Spencer S, Srinivasan V, Willis C, 2000, "Migration: an economic and social analysis", RDS OP 67, Home Office, 50 Queen Anne's Gate, London SW1H 9AT

Hardill I, MacDonald S, 2000, "Skilled international migration: the experience of nurses in the UK" *Regional Studies* **34** 681 – 692

Hay C, 2000, "Contemporary capitalism, globalisation, regionalisation and the persistence of national variation" *Review of International Studies* **26** 509 – 531

Home Office, 2000 *Control of Immigration: Statistics United Kingdom 1999* Cm 4876 (The Stationery Office, London)

Iredale R, 1997 *Skills Transfer: International Migration and Accreditation Issues* (University of Wollongong Press, Wollongong)
Iredale R, 1999, "The need to import skilled personnel: factors favouring and hindering its international mobility" *International Migration* **37**(1) 89 – 124
Iredale R, 2001, "The migration of professionals: theories and typologies" *International Migration* **39**(5) 7 – 24
JCORE, 1998, "A guide for refugee doctors", Jewish Council for Racial Equality, 33 Seymour Place, London W1H 6AT
JCWI, 2001 *Campaign Update* 1 August, Joint Council for the Welfare of Immigrants, 115 Old Street, London EC1V 9RT
Jinks C, Ong B N, Paton C, 1998, "Catching the drift" *Health Service Journal* 17 September, pages 24 – 26
Kanjanappan W, 1995, "The immigration of Asian professionals to the United States: 1988 – 1990" *International Migration Review* **29** 7 – 32
Kofman E, 2000, "The invisibility of skilled female migrants and gender relations in studies of skilled migration in Europe" *International Journal of Population Geography* **6**(1) 1 – 15
Koser K, Salt J, 1997, "The geography of highly skilled international migration" *International Journal of Population Geography* **3** 285 – 303
Marseilles M, 1999, "Displaced medics sue to stay in country" *The Times Higher Education Supplement* 18 June
Medical Practices Committee, 1999 *Recruitment Survey* Department of Health, Richmond House, 79 Whitehall, London SW1A 2NL
MWSAC, 1997, "Planning the medical workforce", third report, Medical Workforce Standing Advisory Committee, www.doh.gov.uk/medical/mwsca3.htm
Ncayiyana D, 1999, "Doctor migration is a universal phenomenon" *South African Medical Journal* **89** 1107
OECD, 2002 *International Mobility of the Highly Skilled* (OECD, Paris)
Oommen T K, 1989, "India: 'brain drain' or the migration of talent" *International Migration* **27** 411 – 426
Peixoto J, 2001, "Migration and policies in the European Union: highly skilled mobility, free movement of labour and recognition of diplomas" *International Migration* **39** 33 – 61
Raghuram P, 2000, "Gendering skilled migratory streams: implications for conceptualising migration" *Asian and Pacific Migration Journal* **9** 429 – 457
Richard P, McManus C, Allen I, 1997, "British doctors are not disappearing: but career patterns are changing" *British Medical Journal* **314** 1567
Robinson V, Carey M, 2000, "Peopling skilled international migration: Indian doctors in the UK" *International Migration* **38** 89 – 108
Rosewarne S, 2001, "Globalization, migration, and labour market formation – Labor's challenge?" *Capitalism Nature Socialism* **12**(3) 71 – 84
Salt J, 1988, "Highly-skilled international migrants, careers and internal labour markets" *Geoforum* **19** 87 – 99
Salt J, Findlay A, 1989, "International migration of highly-skilled manpower: theoretical and development issues", in *The Impact of International Migration on Developing Countries* Ed. R Appleyard (OECD, Paris) pp 159 – 180
Salt J, Singleton A, 1995, "The international migration of expertise: the case of the United Kingdom" *Studi Emigrazione* **117** 12 – 30
SOPEMI, 1997 *Trends in International Migration Annual Report* (OECD, Paris)
SOPEMI, 2001 *Trends in International Migration Annual Report* (OECD, Paris)
The Guardian 2000, "Fortress Europe confronts the unthinkable", 30 September
The Guardian 2001a, "NHS ready to buy more hospitals", 9 August
The Guardian 2001b, "Germany to offer permanent future to skilled migrants", 5 July
The Royal Society, 1963 *The Emigration of Scientists from the United Kingdom* (The Royal Society, London)
Waters M, 2001 *Globalization* 2nd edition (Routledge, London)
Williams K, 1998, "Overseas doctors: underpaid, undertrained and over here" *BMA News Review* 10 October, pages 16 – 17