Impact, regulation and health policy implications of physician migration in OECD countries

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Abstract

Background

In the face of rising demand for medical services due to ageing populations, physician migration flows are increasingly affecting the supply of physicians in OECD countries. This paper offers an integrated perspective on the impact of physician migration on home and host countries and discusses international regulation and policy approaches governing physician migration.

Methods

Information about migration flows, international regulation and policies governing physician migration were derived from two questionnaires sent to OECD countries, a secondary analysis of EUROSTAT Labour Force Surveys, a literature review and official policy documents of OECD countries.

Results

OECD countries increasingly perceive immigration of foreign physicians as a way of sustaining their physician workforce. As a result, countries have entered into international agreements regulating physician migration, although their success has been limited due to the imposition of licensing requirements and the protection of vested interests by domestic physicians. OECD countries have therefore adopted specific policies designed to stimulate the immigration of foreign physicians, whilst minimising its negative impact on the home country. Measures promoting immigration have included international recruitment campaigns, less strict immigration requirements and arrangements that foster shared learning between health care systems. Policies

restricting the societal costs of physician emigration from developing countries such as good practice guidelines and taxes on host countries have not yet produced their expected effect or in some cases have not been established at all.

Conclusions

Although OECD countries generally favour long-term policies of national self-sufficiency to sustain their physician workforce, such policies usually co-exist with short-term or medium-term policies to attract foreign physicians. As this is likely to continue, there is a need to create a global framework that enforces physician migration policies that confer benefits on home and host countries. In the long term, OECD countries need to put in place appropriate education and training policies rather than rely on physician migration to address their future needs.

1. Background

Migration of physicians has become a prominent issue as a result of the increasing globalisation of the physician workforce. The establishment of regional labour markets has provided a new legal framework governing the international movements of individuals. Such a framework may foster the free movement of physicians, particularly through the harmonisation and recognition of qualifications and diplomas across countries. Foreign physicians also play an important role in compensating for an inadequate domestic supply in many countries of the Organisation for Economic Co-operation and Development (OECD).

However, the increasing flows of physicians might generate unintended consequences. The permanent departure of skilled labour might deplete the human capital of home countries, thus reducing the possibility for economic growth and raising the level of inequalities and poverty in those countries. Moreover, increasing concerns in host countries about the safety and quality of health care provision by foreign physicians has created barriers to migration and, in some cases, discrimination against foreign physicians.

This paper presents a comprehensive study of international migration of physicians by documenting migration flows in OECD countries and by analysing impact, regulation, and health policy implications of physician migration. The empirical evidence on the contribution of foreign physicians to the physician workforce of OECD countries is briefly reviewed. A societal

perspective is then adopted to analyse the benefits and costs of physician migration on home and host countries. International regulation governing physician migration and its impact on migration flows are examined in the subsequent section. Policies that OECD countries have implemented to attract foreign physicians in order to sustain their domestic physician workforce are then evaluated. The final section discusses lessons learnt from experiences of OECD countries with physician migration with a view to developing approaches to physician migration that confer benefits on home and host countries.

2. Methods

In order to investigate the complexity of international migration of physicians, information was derived from a variety of data sources [1]. The Secretariat sent a quantitative questionnaire to national correspondents of participating OECD countries. This questionnaire elicited data about the proportion of practising physicians who are foreign-trained and the number of physicians who move abroad to attend postgraduate training or to practise. In order to be able to judge the quality and comparability of data across countries, national correspondents provided details of the body responsible for collecting data, the national source of information, the coverage and time period of the data. Correspondents were also able to provide additional comments on data quality, if they so wished. In addition to this, the Secretariat sent a qualitative questionnaire to correspondents, which dealt with issues relating to the impact of immigration and emigration on physician supply, the recognition of foreign-trained physicians, and policies governing physician migration.

Both questionnaires were designed by the Secretariat and approved by national correspondents during an expert meeting dedicated to the data collection exercise in April 2001. Questionnaires were sent to the 22 OECD countries that expressed a wish to participate in the study during autumn 2002, with 17 countries returning at least one of the two questionnaires. These countries were Australia, Austria, Canada, France, Germany, Japan, Korea, Mexico, Netherlands, New Zealand, Norway, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom and United States (response rate of 77%). This was supplemented by a secondary analysis of data on physician migration flows from the EUROSTAT Labour Force Survey.

The Secretariat also carried out a desk review of the relevant literature. The review was not systematic, but designed to identify and learn from the experiences of OECD countries with respect to the impact, regulation and health policy implications of international migration of physicians. The following electronic databases were searched: MEDLINE, EMBASE, HealthSTAR, Social Science Citation Index, Health Management Information Consortium, and ECONLIT. Individual journals in this field were searched and additional studies were collected from the bibliographies of articles retrieved. National correspondents and a number of experts in this area of research were also contacted in an effort to access official documents produced by OECD governments, unpublished studies and conference reports. Statements made in this article are based on the findings of the survey, unless otherwise stated.

3. Results

3.1. Physician migration flows in OECD countries

Migration of physicians is increasingly affecting OECD countries. Annual flows of physicians in and out of a country are an important factor influencing domestic supply. In Canada, the net effect of immigration and emigration flows of physicians has generally been a net loss to the Canadian physician workforce over the last two decades (see Figure 1). Foreign-trained physicians now make a substantial contribution to the national supply of physicians, particularly in Anglo-Saxon countries where they comprise more than 20% of the physician workforce in 2000 (see Figure 2). International migration of physicians appears to be driven by a number of ‘pull’ factors such as opportunities for professional training, offers of higher wages, and better employment opportunities in the host country. ‘Push’ factors such as less attractive pay and working conditions, high unemployment rates, political instability and insecurity in the home country also play a role [1].

Physicians move abroad for training purposes, either to obtain a medical degree, to acquire additional professional qualifications or to gain experience with medical techniques. Immigration for training purposes can account for a substantial number of foreign-trained physicians in a country. Overseas physicians who were attending postgraduate training in England made up 39.6% of all overseas physicians in the National Health Service in 1995, 36.2% in 2000 and 37.3% in 2001. International medical graduates who came to the United States to attend postgraduate training comprised 11.9% of all international medical graduates in 1980, 12.1% in 1990, 15.1% in 1995 and 13.1% in 2000. Similarly, training opportunities may account for a significant proportion of emigrating physicians. In 2001, the number of physicians who were registered in Switzerland, but were living abroad to attend postgraduate training and to practise was 555 and 629, respectively.

Table 1 reports the composition of the foreign(-trained) physician workforce of selected OECD countries. These data show that developing countries are just one, but not necessarily the main source of international recruitment of physicians by OECD countries: a large contribution to the foreign physician workforce of Australia, Austria, Belgium, Canada, Denmark, France, Germany, Ireland, Norway and Switzerland originated from another European country. Although a large proportion of foreign(-trained) physicians in the United Kingdom and the United States originate from India, this country is actively pursuing a policy to export physicians.

Additionally, Table 1 illustrates that flows of physicians between OECD countries are not always uni-directional. For instance, in 2001, Irish physicians made up 15.2% of the foreign physician workforce in the United Kingdom. Conversely, 29.2% of foreign physicians in Ireland originated from the United Kingdom. This is sometimes referred to as a ‘carousel movement’ [2].

The direction of migration flows may also change over time. For instance, in the 1960s many physicians working in developing countries originated from developed countries, but in the 1990s developing countries were estimated to supply 56% of all migrating physicians and receive less than 11% [3].

Language affects migration flows in that physicians are more likely to move between countries speaking the same language. Amongst OECD countries, this is mirrored in the incidence and extent of migration flows between Australia, Canada, Ireland, the United Kingdom and the United States; between Austria, Germany and Switzerland; between Belgium and France; and between Denmark, Finland, Norway and Sweden (see Table 1).

Historical, administrative and legislative frameworks, training institutions, professional associations and regulation have influenced practices in former colonies and affected the migration of physicians for training and employment opportunities. This explains the significant migration flows of physicians from India towards Australia, Canada, the United Kingdom and the United States and from North African and Middle Eastern countries to France (see Table 1).

3.2. Impact of physician migration

Migration of physicians is not necessarily beneficial from a social point of view. In making the decision to move, the potential migrant takes into account the private costs and benefits of the move. However, migration also produces externalities that influence the welfare of people in both the home and host country.

3.2.1. Consequences for the home country

In assessing the impact of physician migration on health care provision in the home country, it is crucial to consider the issues of physician supply and the duration of migration.

A number of countries such as Cuba, India and the Philippines systematically train more physicians than they need and send them abroad to benefit from remittances. Remittances, the money that migrants earn working abroad and send back to their home country, can be a crucial source of foreign exchange and aid the long-term development of the home country. For instance, a study focusing on physicians from the Philippines who practise overseas estimated that

remittances were large enough to compensate for the economic losses associated with emigration [4]. The impact of emigration on health care provision in the home country is limited, as these countries have an adequate supply of physicians.

However, many host countries are developing countries that face physician shortages themselves. In this case, emigration represents a brain drain from home countries and is likely to lead to a deterioration in the working conditions of remaining physicians. Moreover, it may affect access to and quality of care, and impair the ability of the health care system to achieve health objectives for its population [1]. Migration may also influence the capacity of the home country to provide quality training to new physicians and the research capacity of medical schools. For instance, in Nigeria and other countries in sub-Saharan Africa, most medical research institutions have collapsed from the massive emigration flows of highly-skilled physicians [5].

It is also important to distinguish between permanent and temporary migration. Whereas temporary migration of physicians may produce benefits through an upgrading of skills, technological and financial transfers, permanent migration represents a net transfer of human capital from the home to the host country. In the case of permanent migration, the home country incurs two types of costs: the first corresponds to resources spent to educate a physician; and the second represents the value of the health care services that the emigrating physician would have rendered to his/her country in the absence of migration. Permanent migration might improve the prospects of individual physicians, but substantial and lasting emigration flows may weaken the capacity of the home country’s health care system. These consequences are most important in the poorest countries that are not able to attract substitutes from other countries.

Temporary migration may be inspired by the desire to acquire higher professional qualifications or to gain experience with new techniques not available in the home country. If the host country subsidises the education of foreign students and these migrants return to their home country after they graduate, temporary migration of physicians can contribute to a general upgrading of skills in the home country. Yet there may be certain limits to this. If the skills that migrants have acquired during their stay abroad are too specialised, the home country may not be in a position to take advantage of them.

3.2.2. Consequences for the host country

In OECD countries, foreign physicians are predominantly used as a supplement to local labour. This is because foreign physicians are more willing to practise in certain organisational settings and in certain geographical areas that domestic physicians tend to avoid. This is sometimes referred to as the ‘safety-net’ role. In the United Kingdom, general practitioners who graduated in South Asian medical schools (Bangladesh, India, Pakistan and Sri Lanka) are concentrated in less attractive areas with large patient lists and relatively deprived populations [6]. In the United States, international medical graduates contribute significantly to care in rural areas [7]. However, in Canada, policies requiring foreign physicians to practise in pre-specified areas have been legally challenged as a violation of basic human rights and have been judged against the Canadian Charter of Human Rights [8].

Increased supply in the host country might bring benefits to consumers. Consumers may benefit from improved access to care and may gain from reduced medical care prices. Estimates of the gain to consumers from immigration in the United States, measured as a percentage of total

expenditures on physician services, ranged from near 1% in 1966 to over 12% by 1971 [9]. Increased competition between physicians may raise the quality of health care services provided in the host country. On the other hand, immigration may endanger the safety and quality of health care provision if the physicians concerned have a lower standard of medical practice. Concerns that qualifications are not equivalent across countries and differences in practice patterns have been used by professional associations to exclude foreign physicians [10].

3.3. International regulation governing physician migration

Although OECD countries generally favour long-term policies of national self-sufficiency to sustain their physician workforce, such policies usually co-exist with short-term or medium-term policies to attract physicians from abroad, on a temporary or permanent basis. Immigration of physicians is considered to be important in maintaining an adequate supply of physicians in countries such as Australia, Canada, England, Germany, New Zealand, Norway, Sweden, Switzerland and the United States. Conversely, Canada, New Zealand and Sweden perceived physician emigration to negatively affect the supply of physicians in their country.

As a result, OECD countries have entered into international agreements regulating physician migration by imposing general requirements that physicians have to fulfil in order to move and work abroad. These provisions refer to, amongst other things, nationality and citizenship requirements, national regulation governing the issuance of work permits, procedures and tests for examining asylum applications. One of the agreements that covers the temporary immigration of physicians into an OECD country is the General Agreement on Trade in Services (GATS).

If a WTO member decides to make a commitment to the sector of health services, the country must specify whether and to what extent market access and national treatment are granted. If a WTO member grants full market access, the country must refrain from operating any of six types of restrictions enumerated in Article XVI of the agreement. These are mostly quota-related barriers that may limit, for example, the number of service providers (hospitals, physicians, etc.) or operations (number of beds, practices, etc.). Also precluded under this Article is the use of economic need tests, e.g. the conditioning of access approvals on pre-established indicators such as the number of hospital beds or practices per head of population. Members may also provide some, but limited market access, i.e. they may maintain any of the six types of restrictions provided they list them in their schedule of commitments. Article XVII defines national treatment as the absence of any measures that modify the conditions of competition to the detriment of foreign services or service suppliers. Again, however, Members are free to make no commitment on national treatment, or to provide partial national treatment provided they list the measures they maintain which discriminate in favour of nationals in their schedule.

For the health services sector, commitments under GATS can be made separately for four modes of supply: (a) cross-border trade (e.g. telemedicine); (b) consumption abroad (e.g. a patient travels to another country for health treatment); (c) commercial presence (e.g. a foreign hospital establishes in another country); and (d) temporary movement of service suppliers (e.g. a physician working temporarily in another country). Commitments can also be made for a mode of supply across all service sectors (a so-called “horizontal commitment”). Although most countries' commitments on movement of service suppliers are horizontal, they tend to be very limited, due

to sensitivities over the potential impact of temporary foreign workers and the desire of countries to retain full flexibility in their temporary migration regimes.

GATS seems to have had a limited impact so far on the migration of physicians. Very few commitments have been made for trade in health services: only 29 countries have made commitments for health services, and then only partial commitments for some health services [11,12]. Commitments to the movement of physicians are also very limited. For instance, as a result of commitments under the GATS, temporary resident visas are available in Australia only for suitably qualified physicians who satisfy labour market requirements (i.e. provide services to rural and remote communities).

Moreover, within the GATS framework, Members are free to pursue domestic policies in areas such as technical standards, licensing and qualifications to ensure the safety and quality of health care provision. That implies that a commitment to allow entry of foreign physicians is still subject to those physicians meeting all domestic regulatory requirements to practise. GATS states only that such requirements must be transparent (i.e. made publicly available) and must be administered in a reasonable, objective and impartial manner.

International agreements stimulating the immigration of foreign physicians have been accompanied by requirements licensing medical practice in a country to ensure the quality and safety of services provided by migrants. However, licensing provisions may also serve to reduce competition in the host country and to raise the income of domestic physicians. This raises the issue of how foreign physicians are mobilised within the health care system of the host country and the conditions under which they have to work. In some cases, this has lead to a situation

where physicians whose qualifications have not been recognised by the host country still practise medicine even though their status is unclear. In other cases, specialists work as generalists or generalists work as nurses. Once registered, physicians may also face discriminatory employment practices. A survey showed that 9% of foreign physicians claim discriminatory practices in finding employment in the United Kingdom [13].

Licensing requirements usually consist of holding the required qualifications (i.e. medical degree) from a recognised medical school and of having completed a period of training. However, the license is only valid within the jurisdiction of the granting body. This is usually an entire country, but in some cases a province or state, as in Canada and the United States. This implies that physicians who wish to practise in another country have to go through the process of having their qualifications recognised by the relevant body in the host country. In Australia, physicians who are seeking permanent residency are required to pass an examination administered by the Australian Medical Council. This examination is set at the standard of medical knowledge, clinical skills and attitudes required of newly qualified graduates from Australian medical schools. In Canada, international physicians must take the Medical Council of Canada Evaluating Examination and must fulfil registration requirements of licensing bodies. In order to practise in the United States, physicians trained abroad must pass a clinical skills assessment exam. In addition, they must complete graduate training in most cases.

Simplified procedures exist for physicians trained in specific countries. For instance, from 1 May 2002, graduates of British medical schools recognised by the General Medical Council are eligible for permanent registration in New Zealand without having to sit the New Zealand Medical Council registration examination. There is also a Mutual Recognition Agreement between

Australia and New Zealand, providing for automatic recognition of primary medical qualifications conferred by all medical schools within these jurisdictions. Licensing provisions governing the migration of Canadian physicians to the United States have been simplified in that fewer visa restrictions apply and Canadian physicians do not have to pass the Clinical Skills Assessment exams.

The European Union has adopted a range of measures to simplify licensing provisions. The European Union generally provides for a broad right to labour mobility. The Treaty of Rome (enforced in 1957 and subsequently amended by the Treaty of Amsterdam in 1997) gives every European Union citizen a fundamental, personal right to move and reside freely within the territory of the Member States. No visas or work permits are required, although residence permits may be. In addition to this, Member States have adopted sectoral directives that facilitate the movement of physicians through the harmonisation and recognition of qualifications and diplomas. In the context of physician migration, the most relevant directives are the so-called "doctors' directives" (75/362/EEC and 75/363/EEC). These directives entitle any European Union physician who has completed basic training in a Member State and who holds a recognised qualification to be automatically registered in any other Member State. To this effect, the doctors' directives have established minimum standards with respect to the nature, minimum content and length of education and training programmes.

The sectoral directives are based on the principle of mutual confidence and comparability of training levels. This is reflected in the "Recognition of Foreign Professional Qualifications Act", which requires European Union Member States to consider the practical experience of an individual in the process of recognition of qualifications. In case of structural differences in

education and training programmes between countries, Member States are entitled to require an adaptation period and an aptitude test, which imposes an additional barrier on the migration of physicians.

The impact of the European Union doctors' directives on the movement of physicians has been minimal, except in some isolated cases. For instance, since the adoption of the directives in 1977, there has been an increase in the number of physicians emigrating to the United Kingdom from other Member States, although these numbers have reached a ceiling in more recent years.

The limited impact of the European Union doctors' directives is linked to the general absence of physician surpluses in other Member States (which restricts the pool of potential migrants), failure to implement the directives and recognise the equivalence of qualifications by some Member States.

In addition, there have been reports that some professional associations refuse to register physicians from certain Member States who comply with European Union minimum qualification standards [10]. To justify such practices, professional associations claim variations in qualifications that might occur because of differences in the number of patient contacts or in practical experience. This might be linked both to the educational and cultural system of the migrant. In this regard, we note that flows are more intense among countries with similar health care systems.

Furthermore, despite the presence of provisions allowing Member States to request information regarding the good character, reputation or the criminal past of an individual, many Member

States are concerned about the immigration of physicians who have had dubious medical practices in the past. Such concerns are motivated by the fact that some Member States have difficulty in keeping reliable data on physicians. In fact, cases have been reported of physicians who lost their licence to practise in one country for misconduct who were subsequently authorised to practise in another European Union country.

3.4. Health policy implications of physician migration

Given the limited success of international agreements regulating physician migration, OECD countries have adopted specific policies designed to stimulate the immigration of foreign physicians, whilst minimising its negative impact on the home country. OECD countries have generally adopted three types of policies to attract foreign physicians. These have consisted of launching international recruitment campaigns, easing immigration requirements and setting up special arrangements that foster shared learning between health care systems. International recruitment campaigns have involved advertisements in the medical press and participation in job fairs in Germany and language courses in Norway.

Some OECD countries have eased general immigration requirements for physicians. In Canada, changes to the Immigration Act Regulation favour the immigration of physicians and increased efforts are being made to support licensure of foreign-trained physicians. Australia and the United States have made the relaxation of immigration requirements conditional on foreign physicians practising in rural areas. In Ireland, the option exists to fast track working visas for foreign physicians.

In addition to the two previous types of policies stimulating physician immigration, the United Kingdom has put in place arrangements that foster international co-operation and promote the National Health Service abroad. An International Fellowship Programme was launched in 2002 to attract experienced specialists from abroad to selected posts in the National Health Service for periods of one to two years. It targets those specialities that need to grow in order to fulfil the National Health Service plan and those specialities with perceived shortages such as cardio-thoracic surgery, histopathology, radiology, nuclear medicine and psychiatry.

However, concerns about ethical recruitment have led some OECD countries to discourage recruitment from developing countries. In May 2003, Commonwealth countries adopted an International Code of Practice for the International Recruitment of Health Workers. The code of practice is intended to discourage physician recruitment from countries that are themselves experiencing shortages. Moreover, it sets out a number of principles that guide international recruitment. Transparency of recruitment would normally involve an agreement between host and home countries. Fairness implies that host countries would not seek to recruit physicians who have an outstanding obligation to the home country and would inform migrants of their rights and job requirements. Finally, international recruitment of physicians would be based on mutuality of benefits to host and home countries.

Given that the temporary outflow of physicians from developing countries may be beneficial in terms of investment in skills, a second type of policy has focused on offering grants to foreign students to enter medical school, while at the same time making it impossible for foreign graduates to obtain a work permit for a certain amount of time (e.g. five years). This, in effect, forces them to return to their home country after they graduate. Some OECD countries have

created regulations or have entered into bilateral agreements restricting the stay of foreign physicians. For instance, the United States has created a 'cultural exchange visa' that can be issued to foreign health care workers only for a limited duration of work. After the permitted stay, the visitor is required to return home for a two-year period before he is entitled to apply for re-admittance.

A third approach has consisted of financially compensating the developing country for losses in terms of costs of education and training and the value of the health care services that could have been provided if the physician had not left the country. The reimbursement of educational costs is in fact proposed by the International Code of Practice approved by Commonwealth countries. However, the problem with such policies is the difficulty in evaluating the country's net loss (subtracting direct and indirect costs created by the departure of the physicians from migration gains, such as an increase in scientific knowledge and remittances). In addition, the potential return of the physician might represent a problem in setting the level of compensation. Such difficulties may explain the fact that previous schemes attempting to tax host countries, and even migrants, have not proven to be successful [14].

Few OECD countries appear to have implemented policies to reduce the level of emigration of physicians and little is known about the effectiveness of existing programmes. New Zealand has undertaken efforts to maintain contact with expatriate physicians, encouraging their overseas development while offering some incentives for their return. In Ontario, Canada, a repatriation programme was introduced for Canadians who had undertaken a postgraduate training programme in the United States.

4. Discussion

This paper has examined the impact of physician migration on home and host countries, and focused on international regulation and policy approaches governing physician migration. When formulating policy recommendations, it is helpful to first consider the determinants of international migration of physicians.

On the one hand, physician immigration to OECD countries is driven by a number of 'pull' factors such as opportunities for professional training, higher wages, and better employment opportunities in the host country. This takes place within the overall context of OECD countries actively promoting international recruitment as a way of sustaining their domestic physician workforce. Therefore, many OECD countries have entered into international and regional agreements easing border controls in order to facilitate the movement of physicians across countries. However, the success of these legal changes remains limited due to practical barriers relating to qualification and licensing requirements. Alternative policies that ease immigration requirements, launch international recruitment campaigns and set up special arrangements that foster shared learning between health care systems appear to have been more successful in increasing the flow of physicians into host countries. However, in many of these countries, there are still remnants of traditional hostility towards foreign-trained physicians, especially within the domestic medical profession, as foreign-trained physicians may not reach the quality standards of the host country and may infringe vested interests of the domestic physician workforce.

On the other hand, a number of 'push' factors such as less attractive pay and working conditions, high unemployment rates, political instability and insecurity in the home country play a role in

encouraging emigration of physicians [1]. Therefore, even though it is reasonable for home countries to argue that they can't compete with for example higher pay and more attractive training and working conditions offered to physicians in host countries, home countries still need to recognise that they themselves have a role to play in developing strategies that attract and retain physicians [2].

These driving forces of international migration of physicians suggest that migration is likely to continue. Therefore, one needs to focus on how the process of international migration of physicians can be managed and regulated in ways that confer benefits on both home and host countries.

Home countries need to face the reality of increasing globalisation of the physician workforce and the freedom of individual physicians to move. In addition, physician migration may produce benefits through remittances and an upgrading of skills upon return of the physician to the home country. To balance concerns about brain drain, home countries can attract and retain physicians by reforming their education system, improving pay and working conditions, and implementing strategies that encourage physicians to return to their home country. South Africa, for example, has tried to sustain and increase domestic physician supply by shortening the educational curriculum; by making medical training more responsive to the needs of the South-African population and the reality of clinical practice in South Africa; by requiring physicians to serve in mostly rural areas for one year upon graduation; and by offering housing, social advantages, improved pay and security to physicians working in the public health sector [15]. It is also important to create incentives for physicians to return to their home country by guaranteeing

employment that takes account of the experience and competences that the physician acquired abroad [5].

Host countries need to reconcile their desire to attract foreign(-trained) physicians with the need to adhere to principles of good practice in international recruitment. However, to date, codes of practice on ethical recruitment have not yet produced their expected effect, given that such codes are not legally binding; do not exclude recruitment of physicians from identified countries, but only forbid recruitment campaigns in such countries; and apply to a limited number of countries [15]. Therefore, countries need to develop and strengthen codes of good practice on international migration of physicians on a global scale. Current bilateral agreements and agreements developed as part of regional world areas need to be co-ordinated as to ensure consistency and improve opportunities both for home and host countries. Identifying countries that have a surplus of physicians and putting in place an international framework that creates and enforces ethical policies governing the international recruitment of physicians need to be explored. Such a framework must exclude recruitment from countries in which emigration could harm local health service provision and include policies that promote temporary migration.

It has also been suggested that host countries compensate home countries for the cost of educating and training physicians and the value of health care services that would have been provided if the physician had not emigrated. To date, the implementation of such policies has been hampered by difficulties in quantifying the home country’s net loss associated with physician emigration. Therefore, work that the WHO is currently carrying out on this issue needs to be applauded and may provide an avenue for considering such compensation schemes [1]. Such compensation

schemes may enable home countries to train a sufficient number of physicians to compensate for physician emigration and to sustain the domestic workforce.

Alternatively, host countries can aid developing countries in sustaining domestic supply of physicians by strengthening development aid policies [15]. Host countries, for instance, can provide grants to foreign students to enter medical school in the host country; set up projects of shared learning with home countries; support the transfer of medical technology to home countries; and encourage physicians from host countries to spend a sabbatical year abroad.

Finally, in the context of growing physician shortages in many OECD countries, it can be argued that migration flows can only offer temporary solutions and act as a short-term buffer. Instead, countries need to focus on how they can create an adequate supply by implementing policies affecting education and training, levels and methods of remuneration, retention and retirement of domestic physicians [16].

5. Conclusions

The experience of OECD countries with respect to the impact, regulation and policy approaches to international migration of physicians suggests that physician movement between countries may confer benefits to both home and host countries in specific cases. Many OECD countries are sustaining their physician workforce by facilitating international recruitment of physicians. Temporary migration may produce benefits in the home country through remittances and an upgrading of skills. However, international migration of physicians may put pressure on the health care system of a few countries that are net exporters. Additionally, moves to recruit physicians

from developing countries need to be balanced by concerns about a brain-drain in the home country. Further work is needed to devise mechanisms that reconcile the freedom of individual physicians to migrate with societal interests of home and host countries to develop a health care system that meets the health needs of the population.

Competing interests

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Figure legends

Figure 1. Emigration and immigration flows in the Canadian medical workforce, 1980–2000

Figure 2. Percentage of practising physicians who are foreign-trained, 2000

Table

Table 1. Supply of foreign(-trained) physicians in selected OECD member countries

Australia (1998): 21.4% of foreign-trained physicians, of those:

Country	%
United Kingdom	39.0%
Asia	28.0%
New Zealand	12%
Other countries	21%

Austria (2001): 3.3% of foreign physicians, of those:

Country	%
Germany	84.3%
Italy	7.3%

Belgium (2001): 7.8% of foreign physicians, of those:

Country	%
Netherlands	28.0%
Italy	17.7%
United Kingdom	16.5%
France	16.4%
Slovak Republic	12.4%
Africa	9.0%

Canada (1998): 20% of foreign-trained physicians, of those:

Country	%
United Kingdom	32%
South Africa	9.7%
India	9.6%
Eastern Europe	8.5%
Western Europe	8.2%

Denmark (2001): 7.8% of foreign physicians, of those:

Country	%
Norway	50.0%
Spain	24.7%
Germany	20.1%
United States	5.2%

France (2000): 2.2% of foreign physicians, of those:

Country	%
Europe	49.0%
North-Africa	33.0%
Sub-Saharan Africa	7.0%
Middle East	5.0%

Germany (2000): 3.5% of foreign physicians, of those:

Country	%
EU countries	27.5%
Other European countries	37%
Non-European countries	35.5%

Ireland (2001): 13.1% of foreign physicians, of those:

Country	%	Country	%
United Kingdom	29.2%	France	3.2%
EU countries	13.6%	Italy	3.2%
Germany	6.0%	Canada	3.1%
Australia	4.2%	Central and Eastern Europe	3.1%
United States	3.4%	Others	31.2%

Norway (2001): 11.2% of foreign physicians, of those:

Country	%	Country	%
Germany	32.7%	United Kingdom	6.2%
Sweden	19.9%	Iceland	6.1%
Denmark	15.8%	Finland	5.3%
Central and Eastern Europe	11.5%	Netherlands	2.4%

Switzerland (2001): 19.1% of foreign physicians, of those:

Country	%	Country	%
Germany	59.7%	Italy	4.8%
Yugoslavia	13.1%	Albania	4.0%
Belgium	7.4%	Spain	3.2%
Sweden	4.9%	Argentina	2.9%

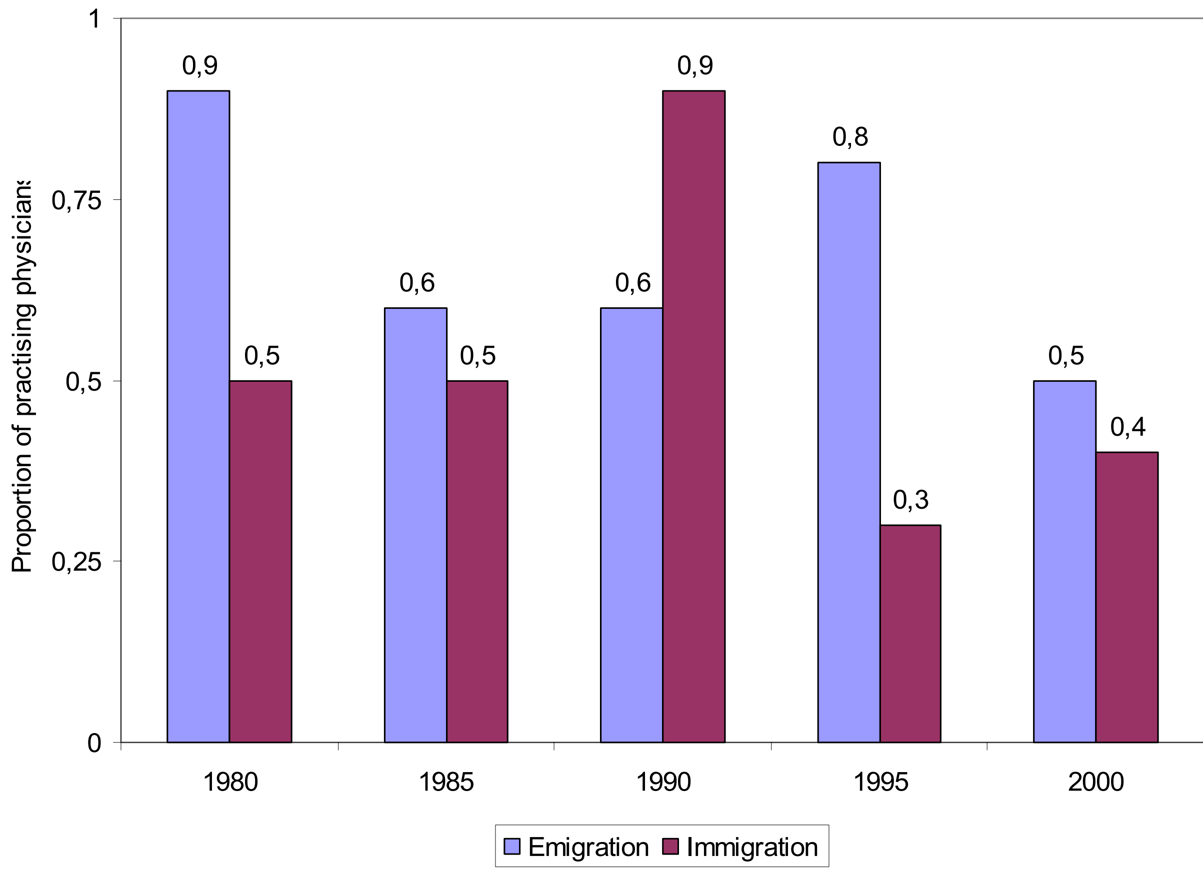
United Kingdom (2001): 12.6% of foreign physicians, of those:

Country	%	Country	%
India	18.3%	South America	2.4%
Ireland	15.2%	Ukraine	1.7%
South Africa	7.0%	Poland	1.6%
Other Africa	7.0%	Australia	1.6%
South and South-Eastern Asia	7.0%	Belgium	1.6%
Northern Africa	5.3%	China	1.6%
Greece	4.7%	Denmark	1.5%
Pakistan	4.4%	France	1.5%
Germany	4.0%	Western Asia	1.5%
Algeria	3.6%	Italy	1.4%
Iraq	3.1%	Bosnia Herzegovina	1.4%
Spain	2.6%		

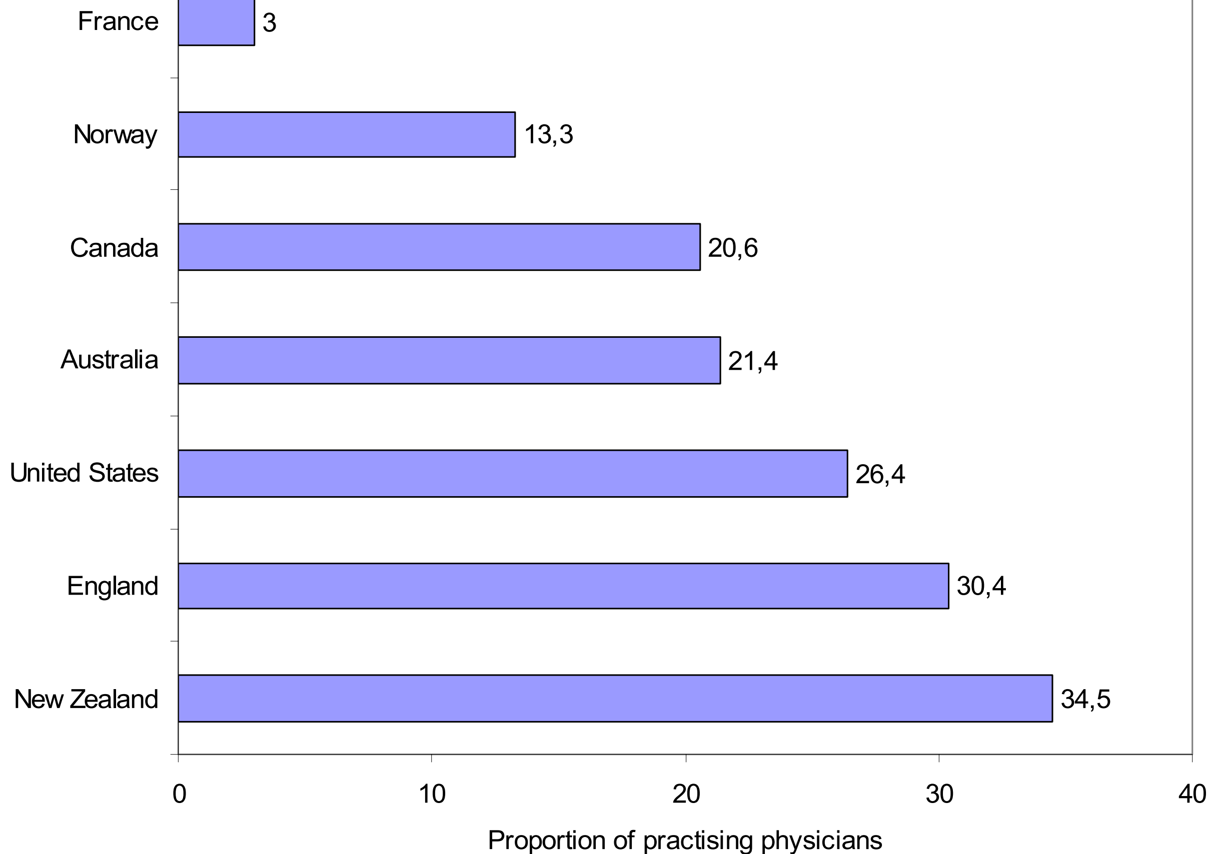
United States (2001): 27% of foreign-trained physicians, of those:

Country	%
India	19.5%
Pakistan	11.9%
Philippines	8.8%
Ex-U.S.S.R.	3.1%
Egypt	2.6%
Dominican Republic	2.5%
Syria	2.5%
United Kingdom	2.4%
Germany	2.3%
Mexico	1.8%

Sources: EUROSTAT Labour Force Survey, [17-21].



Source: OECD Human Resources for Health Care project.



Source: OECD Human Resources for Health Care project.
Notes:
Data for England relate to physicians in the National Health Service.
Data for New Zealand refer to foreign-trained practicing physicians .