

# **MEDICAL MIGRATION: OPTIONS AND RESPONSIBILITIES FOR THE “BRAIN DRAIN”**

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## **ABSTRACT**

Various strategies have been proposed in the literature to reduce medical migration or 'brain drain' and mitigate its effects on health status. This paper outlines an ethical framework and uses it to examine these strategies, emphasizing the goal of a basic level of health care for all people, the protection of rights and the fostering of responsibilities, and the prioritization of the least-advantaged. A social connection model of responsibility is used to consider the different duties of migrants, source countries, destination countries, and global institutions. Solutions which change the inequities driving medical migration are preferable to those which simply reduce the harm resulting from the phenomenon.

**Keywords:** medical migration; brain drain; policy solution; ethics.

**Subject Terms:** brain drain; medical personnel; emigration & immigration; developing countries

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## INTRODUCTION

In today's globalized world, seeking employment overseas has become a possibility for many people, including health professionals. The terms "brain-drain" and "medical migration" refer to the movement of health professionals such as doctors, nurses, and pharmacists from one country to another. Though migration can occur between any two countries, it most often involves the movement of professionals from low and middle income countries (LMICs) to wealthier ones. This phenomenon leads to distinct ethical questions. In the 20th century, recruiting doctors from developing countries was seen by the West as an innovative solution to personnel shortages (Wright, Flis & Gupta, 2008). More recently, the HIV/AIDS epidemic in sub-Saharan Africa (Kuehn, 2007; WHO, 2006) has highlighted the lack of health workers in the region, and the migration of health workers out of LMICs to countries like Canada, the United States, and Britain is now considered a problem since the health of those who stay behind is threatened (Wright et al, 2008).

Medical migration (and the policy solutions proposed to address it) raise a multitude of questions. How accurate are statistics quantifying migration? How feasible are proposed policy solutions? What are the personal experiences of the migrants? Do more health care workers necessarily result in better health?

These are interesting and important questions, but to address them all is beyond the scope of this paper. What this paper does is review some of the policy strategies to address 'brain drain' most commonly proposed in the literature, and examine them using an ethical framework to determine which are acceptable from a moral perspective.

The ethical framework to be used draws from the ideas of Dwyer's (2007) and Young (2006); however, it represents a distinct interpretation and combination of these ideas. The framework will set out a goal that proposed policy solutions for 'brain drain' ought to meet, some conditions that the solutions ought to fulfill, and a model for considering our responsibilities as global citizens when discussing medical migration. The ethical framework will be explained in further detail after a brief discussion of the scale of 'brain drain,' the factors driving this phenomenon, and a description of policy solutions in the literature. The different 'players' involved in medical migration will then be identified to guide the application of the ethical framework to assess proposed policy solutions.

## **WHY DOES BRAIN DRAIN HAPPEN?**

Globalization is defined as ‘the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa’(Giddens, 1990). Socially, globalization has meant increased interconnectedness and interdependency, with a metaphorical shrinking of geographical distances (Olufemi, 2007). Economically, it has meant that unhindered international trade and migration is assumed to be crucial to the world’s ‘success’ (Pappas, Hyder & Ahkter, 2003).

Open borders and interconnectedness have facilitated labour migration. Globalization allows workers greater scope for seeking employment, and it provides companies and organizations an international pool of personnel (Olufemi, 2007). While the language surrounding worker migration often portrays the phenomenon in terms of freedom and opportunity, using terms like “professional mobility,” in reality, unobstructed migration has resulted in uneven global development (Olufemi, 2007; Marchall & Kegels, 2003). Medical migration is no exception: the flow of health care workers is overwhelmingly unidirectional with developing “source countries” (SCs) losing personnel to “destination countries” (DCs).

The decision of a worker to leave home and seek a future elsewhere is ultimately an individual one, but the circumstances surrounding such a decision are also based in broader social and structural circumstances (Crozier, 2009). Nevertheless, there are often commonalities to the circumstances that both ‘push’ workers away from their home country and ‘pull’ them to another one; below, some of the factors driving medical migration are considered.

*“I have been working in a hospital in southwest Ethiopia as a general surgeon for almost three years now. . . Beside the poor salary, how long can a person go on working 16 hours a day with no holidays throughout the year?”*

- Zebayel Baye, Ethiopia (Eyal & Hurst 1993)

As the quote above suggests, working conditions for doctors and nurses in LMICs may be difficult. Low salaries, long working hours, and limited holidays can make for a grueling, unrewarding lifestyle (Hagopian, Ofosu, Fatusi, Biritwum, Essel, Hart & Watts, 2005; Eyal & Hurst, 1993; Lesniowska, 2008; Zelnick & O’Donnell, 2008; Aiken, Buchan, Sochalski, Nichols & Powell, 2004). Poor working conditions include everything from a lack of clean water to violent attacks in countries experiencing civil conflict (Hagopian et al, 2005; Muula, 2005; Lancet editorial, 2008). Health workers may become demoralized when patients suffer as a result of shortages of supplies and equipment (ICN, 2006). Limited opportunities for professional training and thus advancement mean that

workers can become stuck in 'dead-end' jobs (ICN, 2006; Muula, 2005). Beyond the actual work environment, personnel may face sub-standard housing, inadequate schools for their children or a lack of employment opportunities for their spouses (ICN, 2006; Hagopian, 2005; Muula, 2005). In addition to these objective factors, Hagopian et al (2005) point out that more subjective cultural factors pressure professionals to leave their home countries. For example, in some African nations, doctors who succeed in emigrating are seen as role models and others are encouraged to follow their example. The dean of a Nigerian medical school elaborates: "We're training people for other places? I never thought of it like that. I feel proud that our students are succeeding in other places. In fact, we boast about it" (Hagopian et al, 2005). In some cases the "foreign-is-better" philosophy is even adopted by African physicians and politicians themselves, who go abroad to seek personal medical care (Hagopian et al, 2005).

Conversely, developed countries like Canada and England have a great deal to offer from a migrant's perspective: high salaries, modern facilities and equipment, and stable and safe working environments (Hagopian et al, 2005; Adkoli, 2006). Opportunities for professional training and promotion may also be available along with their associated prestige (ICN, 2006; Aiken et al 2004; WHO, 2006; Hagopian et al, 2005; Muula, 2005; Adkoli, 2006; Burdick, Morahan, & Norcini, 2006). The distant lure of these 'pull factors' is made personal and attainable by factors Muula (2005) calls 'grab factors': advertising and recruiting

agencies in source countries, and social networks of current or former migrants to provide contacts or help navigate bureaucracy.

## HOW MANY PEOPLE MIGRATE?

The World Health Organization (WHO) estimates that globally, there are 2.4 million too few doctors, nurses, and midwives to provide essential health care (WHO 2006). However, the shortage is not felt equally around the world. While Africa has 2.3 health workers for every thousand people, the Americas region has almost 25, and all regions other than the Americas and Europe must cope with fewer than 6 workers per thousand people (WHO 2006). These numbers are *unequal*, but given the current HIV/AIDS epidemic in sub-Saharan Africa and the generally poorer health status of LMICs compared to European and North American countries, the distribution of health care workers is *inequitable* as well.

Health worker shortages clearly exist, but can these be attributed to out-migration of medical professionals? Each LMIC's case is unique, but for some countries the rate of emigration is extraordinary. On the African continent, at least 16 countries face situations where half or more of nationally-trained physicians reside and work abroad; in Mozambique, a startling 75% of doctors work outside the country (Clemens & Petterson, 2008). In Liberia and Burundi, roughly 80% of nurses live and work elsewhere (Clemens & Petterson, 2008). Though it is possible that these professionals have migrated to neighbouring African countries, a look at census data from 9 developed countries (Canada, Great Britain, the United States, France, Spain, Belgium, Australia, Portugal, and South

Africa) indicates that a large percentage of the African doctors end up in these wealthier nations (Clemens & Petterson, 2008).

The problem is not confined to Africa. Asian countries face similar challenges. One study estimates that there is one Indian doctor in the United States for every 1325 Americans compared to one Indian doctor in India for every 2400 people (Adkoli, 2006). Roughly 30% of doctors employed by Britain's National Health Service are Indian-born, and 56% of graduates from Delhi's All India Institute of Medical Sciences went abroad between 1956 and 1980 (Adkoli, 2006). In Sri Lanka, between 1997 and 2000, 28% of postgraduate medical trainees left the country, and an estimated half of Pakistan's 4000 medical graduates leave for the United States or Great Britain annually (Adkoli, 2006). Even Europe is not immune: with the progressive opening of the European Union, Poland's health workers are being drained westward into countries such as Great Britain and Italy (Lesniowska, 2008).

While this paper focuses primarily on medical immigration and emigration, – that is, cross-border migration – the issue of rural-to-urban migration is relevant too. Rural areas in both LMICs and wealthier countries more often face shortages of health workers than urban centres, (Marchal and Kegels, 2003) which is not surprising since cities often have a wider array of services and training opportunities than do towns and villages. The rural-urban distribution of health workers in rich nations is sometimes used to justify attracting immigrants,

and the same divide in poorer countries causes people living in rural areas to suffer from health worker shortages more than those in better-staffed urban areas.

Statistics describing the immigration and emigration of health care workers might be put into a broader perspective through the use of a 'balance' model (Marchal & Kegels, 2003). The balance is one of inflow and outflow: in a given country, the number of health care workers entering the profession and the number leaving it (Marchal & Kegels, 2003). One might also consider a third element, mobility, which refers to the ease (bureaucratic, financial, geographic) with which workers can move between countries to bring inflow and outflow together. Problems arise when the balance is not struck and source countries lose more workers than they are able to train. Shortages of health workers result in inadequate health care, and ultimately poorer health for the SC population.

# PROPOSED POLICY SOLUTIONS TO BRAIN DRAIN

## Preventive Solutions

Preventive solutions seek to change the underlying causes of brain drain with the primary goal of keeping more health care workers in source countries so as to better provide health services to the people living there. Solutions to the health worker shortage in SCs as proposed in the literature adopt a variety of tactics. Improving work conditions in SCs, creating bonding programs, and being selective about those chosen to train as health care workers are all strategies to retain personnel in underserved areas. Scaling up the number of health care workers trained in destination countries seeks to reduce the demand for immigrants to fill empty positions, assuming that emigration from SCs will be limited by doing so.

### *Improving Working Conditions*

Many doctors and nurses in LMICs face difficult working conditions. Higher salaries in developed countries are attractive lures for poorly paid personnel; raising salaries in the source country might logically lessen the desire to leave. And in practice, this appears to work to some extent. Nigeria and Ghana have both increased doctors' salaries substantially in the past several years, resulting in a small decrease in physician emigration (Hagopian et al, 2006). A Malawian initiative for health worker retention has included (among other

measures) a large salary increase for 11 categories of health worker, especially those in rural areas, which has had a positive impact on retention (WHO, 2006).

Potentially more important even than pay are the working and living conditions of doctors and nurses. Interestingly, once an adequate standard of living is attained, salary top-ups may not matter to health professionals; some nurses, for example, say they value other benefits such as autonomy and schedule flexibility more than monetary bonuses (ICN, 2006). Innovative benefit schemes may also attract workers to undesirable rural postings; for example, a rotating-staff scheme in Malawi has allowed midwives to work in rural areas for short periods when those positions would otherwise remained unfilled (McColl, 2008). Other employment-related benefits such as pension plans and access to loans also have positive impacts on retention (McColl, 2008). Beyond the actual working environment, personnel's concerns for the well-being of their families can be addressed. In Zambia, doctors who signed 3-year contracts to work in rural areas were offered subsidy packages for housing and education (McColl, 2008). Doctors in Ghana are given free housing and the use of a car during their employment (Hagopian et al, 2006). And nursing associations in countries like Swaziland, Malawi and Lesotho are working to establish HIV/AIDS treatment programs for health care nurses and their families in order to lessen the double impact the disease has on health (McColl, 2008).

Finally, opportunities for training and professional development are critical for the retention of health workers (ICN, 2006). On a basic level, allowing staff to work together in mentoring relationships can have a positive impact on worker satisfaction as can the opportunity to ‘climb the ladder’ within one’s profession (ICN, 2006). More formal opportunities like scholarships or bursaries for further study are also valued by doctors and nurses (McColl, 2008). However, at some point, the infrastructure available in LMICs may limit the possibilities for education; many countries simply do not have medical residency programs within certain specialties, for example.

Given that creating a variety of specialty programs within a given LMIC could be financially and organizationally difficult (ICN, 2006; Muula, 2005), one potential solution to this problem could be regional or international cooperation. Different countries might each focus on an area of expertise: for example, Malawi’s medical school could cultivate a surgery program while Ghana focuses on obstetrics and gynecology. Students would then be able to migrate within the pool of LMICs for advanced training, keeping the personnel where they are most needed. Granted, training programs depend on the availability of experienced teachers, and when they are emigrating, developing long-term post-graduate programs is difficult. However, such a strategy would also broaden the pool of teachers to choose from, and might create an incentive for medical educators to remain at home.

### *Bonding*

Another solution proposed to prevent the migration of health workers is that of bonding, mandatory service in one's own country for a certain number of years with some sort of penalty if the service is not completed. There are many permutations of how bonding is and could be organized. In countries that don't charge tuition for medical school, bonding may mean that the doctor is forced to pay compensation to the government for his training if he decides to emigrate before practicing for 5 years in his home country. In countries where tuition is charged, a certain proportion of it may be waived for doctors willing to work in rural areas after graduation. The idea behind bonding is not only to ensure that doctors and nurses will put in their time in their country's health system, but also that spending 3 to 5 years in a place is conducive to people 'putting down roots' there: health workers may form professional and personal relationships that subsequently make them reluctant to leave (Hagopian et al, 2006; Zivotofsky & Zivotofsky, 2009).

Medical migration has the greatest impact on areas where doctors and nurses are least willing to serve, and these tend to be rural areas (Marchal & Kegels, 2003). Finding staff for rural posts is a problem both in developed countries like Canada as well as in LMICs, but the hierarchy works in favour of the wealthier countries: foreign doctors and nurses are often recruited to Canada to take up the positions that Canadians themselves are hesitant to fill. Bonding has the potential to be used in both developed countries and LMICs both to

ensure a supply of doctors and also to mandate them to work in underserved areas. In this way, the demand for foreign doctors to work in rural Canada would be reduced and, at the same time, doctors in LMICs could be spread more evenly (at least during their years of mandatory service).

### *Reorienting Training Programs*

Another education-based strategy would involve choosing ‘the right’ people for medical and nursing schools. Lifestyle, cultural, and linguistic barriers may deter health workers accustomed to city life from working in rural areas, whether in Canada or Kenya (Hagopian et al, 2006). Why not choose more people from rural areas to train as nurses and doctors, or locate training institutions in rural areas so that students there become accustomed to rural life (ICN, 2006). Similarly, “many medical schools in source nations are influenced by the ‘Western aspirations’ of their students so that their training programs are not well aligned with local patterns of disease and levels of technology” (Mullen, 2005). As a result, new graduates may be poorly trained for their own context which could influence their desire to seek employment abroad (Mullen, 2005). Changing the curriculum as well as the geography and criteria for entry to medical schools could be a way to orient health workers towards underserved areas in both source and destination countries. Experience in such communities might make them more likely to remain there on a longer term basis, and even with some workers eventually leaving rural areas, the time students spend in

training in these areas and the associated infrastructure would provide some health-related benefits to the communities.

Steps have been taken in some places to implement rural training programs. In Canada, Ontario's Northern School of Medicine was recently established; graduates will have spent at least 40% of their time studying in Aboriginal, rural, and Northern Ontario communities (Northern Ontario School of Medicine, 2008). Similarly, the University of British Columbia and the University of Northern British Columbia have partnered to train more physicians for Northern and rural practice (UNBC, 2008). Follow-up data on medical students at South Africa's only rural university, the University of Transkei, indicates that a large proportion of graduates are practicing in non-urban settings (Igumbor & Kwizera, 2005).

In other regions, universities have implemented 'locally relevant medical training.' Cuba's Latin American School of Medical Sciences trains doctors with an emphasis on community-based, low-technology medicine, placing students in polyclinics around the country (Eyal & Hurst, 2008). Similar programs exist in Venezuela (with Cuban assistance) (De Vos, De Ceukelaire, Bonet & Van der Stuyft, 2007), and the Gambia, and medical schools in Ethiopia, Cameroon, and Nigeria have also ensured their curricula train doctors with locally-relevant skills (Eyal & Hurst, 2008).

Encouraging health workers to work in rural areas of DCs is important for reducing the demand for workers from SCs, but so is an increase in the number of health workers in general. Presently, Canada does not train enough health workers to meet the needs within its own borders and makes up the difference by recruiting foreigners (Aiken et al, 2004). Especially given that a generation of personnel will soon be retiring, that many health workers today want to work more reasonable hours than their predecessors, and that there is already a Canada-wide nurse shortage (Spurgeon, 2000), the demand to fill these positions will only grow. In order to be able to meet this demand without attracting immigrants to do it, more spots must be opened up in the nursing and medical schools of destination countries.

### *Responsible Recruitment*

Theoretically, even if all necessary health care workers in developed countries could be trained by opening more spots in universities, there would still be a lag time during which countries such as Canada would be recruiting overseas workers to make up the difference. Since recruitment will likely still occur in the interim, however, many argue that it should be 'responsible recruitment'. Namely, this would mean that developed countries do not recruit health care workers from countries themselves facing shortages. For example, the American Nurse Recruitment Code suggests that nurses should not be recruited from countries with fewer than 2.5 health care workers per thousand

people (Task Force on the Ethical Recruitment of Foreign-Educated Nurses, 2007), and the UK Department of Health's Code of Conduct on International recruitment maintains a list of countries that should not be targeted for recruitment (Carlisle, 2004). Beyond limiting where workers should be recruited from, responsible recruitment codes may seek to protect workers in destination countries from racism or exploitation (Commonwealth, 2003). Other codes propose that destination countries must require proof that any form of bonding has been completed in the source country (Commonwealth, 2003), and allow periods for doctors or nurses to return to work in their home country (Task Force, 2007).

The WHO is currently creating a Code of Practice for the International Recruitment of Health Personnel, but the organization itself highlights one drawback to such a code: "the final text will technically be a non-binding international instrument" (Dayrit, Taylor, Yan, Braichet, Zurn & Shainblum, 2008). Voluntary codes already exist, yet recruitment still occurs. For example, in the UK in 2002-3, one in four nurses recruited from overseas was from a source country listed as not to be targeted for recruitment because the code is only followed by the National Health Service within England and not by private enterprises or elsewhere in the UK (Carlisle, 2004). In the United States, the government went beyond indifference and released a statement actually opposing the Nursing Association's Ethical Recruitment Code (Witten, 2008). Despite the lack of commitment to codes for responsible recruitment though, some argue that

merely creating them is a way to foster dialogue and elicit commitment from destination countries (Dayrit et al, 2008).

## **Mitigating Solutions**

The solutions proposed above aim to prevent medical brain drain by addressing the factors influencing health workers' desire to migrate, their ability to move between countries, and the demand for trained personnel in destination countries. Alternative solutions look to reduce the harm to the health of citizens in the source country when migration does occur. Mitigating solutions proposed in the literature include simply training more doctors in the source country, training health care workers to a lower standard than what is accepted in destination countries, promoting the return of overseas workers, and obliging destination countries to reimburse source countries for lost health workers.

### *Training More Health Workers in Source Countries*

The most basic solution proposed to alleviate the shortage of health care workers in source countries is simply to train more. As students, these workers would likely contribute to caring for patients during hours spent training in the hospital, but fundamentally, the idea behind this solution is faulty. It could be likened to pouring water into a leaky bucket – without changing anything else, more health care workers trained equals more emigrants. While alone the act of training more doctors might not be effective, this solution could be useful in combination with others. If workers were encouraged to stay in their home

countries though the use of some of the preventive solutions already mentioned, the hole in the bucket would be plugged, and the level of doctors could then rise, allowing more people in SCs access to health care.

### *“Brain Factories”*

One variation on training more health workers with the goal of keeping them in their home country is the idea of ‘brain factories,’ countries that train health care workers with the *intention* of exporting them (Sriskandarajah, 2006). Brain factory countries would be those with sufficient health workers within their own borders who train and actively export personnel (to DCs) for their own benefit. The Philippines is a prime example: the country is the leading source country for nurses internationally, something which is both planned and promoted by the Filipino government (Aiken et al, 2004). Nursing schools train nurses towards specific educational and language criteria of destination countries (such as the UK, Saudi Arabia and Singapore), and are considered an ‘ethical’ source by many destination countries (Aiken et al, 2004). The Philippines itself benefits from the economic stimulus of the many nursing schools as well as the over \$800 million in remittances sent home annually by nurses abroad (Aiken et al, 2004).

### *Task-Shifting: Community Health Workers*

Another proposed means of coping with the loss of health care workers is task-shifting, the delegation of tasks to health care workers of lower qualification,

often called community health workers (CHWs) (Philips et al, 2008). To some extent, task-shifting could be viewed as a preventive solution (since sub-qualified health workers are unlikely to be recruited by developed countries) as well as a mitigating one (such workers provide some degree of health care in the absence of doctors and nurses). Though not trained to the same degree as doctors or nurses, community health workers are often culturally attuned to the people they work with, and it is relatively easy and inexpensive to train them (IDS, 2008). Studies from Tanzania, Madagascar, Zambia, and South Africa suggest that CHWs can enhance the performance of community health programs (IDS, 2008) when they are properly-paid, and perform clearly-defined tasks (Philips et al, 2008).

### *Training Partnerships*

While there are many factors 'pulling' health workers to work in developed countries, inevitably at least a small proportion eventually return to their home country. Given that many source countries simply do not have many opportunities for professional development, why not allow doctors and nurses to spend some time overseas gaining skills and forging international partnerships but encourage them to return afterwards?

Encouragement to practice in one's home country could take on different forms. The Fogarty Institute, a California-based medical training centre, offers African researchers a top-up package that subsidizes their home country's government salary if they choose to return (Muula, 2005). In addition to

supporting an African research agenda, supporting physicians as they return to their home country might help change a culture where emigration is associated with success.

Another initiative through the International Organization for Migration has paired Ghanaian doctors practicing in the Netherlands with others in Ghana (Kuehn, 2007). After a needs assessment of the Ghanaian system and a skills assessment of the doctors in the Netherlands, exchanges were arranged so that the doctors overseas could share their knowledge and technology with others in Ghana (Kuehn, 2007). Instead of the one-way flow of doctors from LMICs seeking experience in developed countries, twinning programs between universities could allow for the students in each country to work in different settings and create networks for knowledge and technology exchange (ICN, 2006). The Foundation for Advancement of International Medical Education and Research (FAIMER) has also developed programs to address the shortage of medical instructors in LMICs caused by brain drain (Burdick, Morahan & Norcini, 2006). FAIMER's programs offer medical education and management training that include both American and home country components, as well as attention to locally-relevant curricula (Burdick et al, 2006).

### *Reimbursement*

More recently, the idea that destination countries should reimburse source countries is gaining momentum. Financially speaking, since health workers are so costly to train (in the UK, for example, a physician represents £200 000 of investment and five to six years of training), destination countries are gaining an extraordinary amount of human capital while source countries are losing it (Eastwood et al, 2005). However, the workers' value is not quantifiable in financial terms the way other goods or services are since their absence means more than just a loss of a business investment; a loss of doctors results in a loss of health (Snyder, forthcoming).

Some form of compensation is mentioned in many of the international recruitment codes described earlier, including The Commonwealth Code of Practice for the International Recruitment of Health Workers, the UK National Health Service's (NHS) code on ethical recruitment, the Voluntary Code of Ethical Conduct for the Recruitment of Foreign-Educated Nurses to the United States and the World Medical Association Statement on Ethical Guidelines for the International Recruitment of Physicians (Mills, Schabas, Volmink, Walker, Ford, Katabira, Anema, Joffres, Cahn, & Montaner, 2008). Compensation can take many forms: support for repatriation of emigrated workers, training programs or scholarships, 'matching' of émigré remittances (Mills et al, 2008; Task force, 2007), or financial contributions to health ministries or the government. The WHO suggests that 50% of donor funds should be dedicated specifically to the health workforce and the other 50% to health system strengthening (WHO 2006).

Compensation is not without its practical complications. Questions of how much should be paid, and which countries ought to pay (especially in cases where migrants pass through one country before ultimately settling in another) are complex. Despite these difficult considerations, some promising reimbursement initiatives have already begun. Beginning in 2003, the UK established the Emergency Human Resources Programme in Malawi, a country facing an extreme health care worker shortage, and a source of medical professionals for England (Roberts, 2008). Funding of £62 million over 6 years is being devoted to improving working conditions, topping up salaries, and expanding training capacity for Malawian health care workers (Roberts, 2008). Malawi now has 40% more physicians than in 2003 and enrollment in clinical courses is more than twice what it was (Roberts, 2008). Norway too has committed to development assistance for countries from which it recruits health care workers (particularly Malawi and Mozambique) through institutional twinning and the improvement of training capacity in these countries (McColl, 2008; Norwegian Directorate for Health and Social Affairs, 2007).

Given the IMF's opposition to public sector investment in sub-Saharan Africa, it is remarkable these two reimbursement programs have been implemented (Roberts, 2008). Indeed, at a global level, another form of partial reimbursement would involve the elimination of structural adjustment programs

imposed by international monetary institutions in order to free up resources to invest in health care systems of source countries (Tache & Schillinger, 2009).

## **THE PLAYERS: WINNERS, LOSERS, RIGHTS AND RESPONSIBILITIES**

Medical migration itself does not necessarily represent a problem. Migration can provide benefits like remittances, training opportunities, and the formation of professional networks. However, the overriding concern is that when sufficient numbers of health workers leave developing countries, those left behind will have their level of health *care* jeopardized, which presumably also jeopardizes their health. Thus, in any discussion of solutions to the harmful effects of brain drain, the right to health care, acting as a proxy for the right to health itself (Bueno de Mesquita & Gordon, 2005; Muula, 2005) becomes the central issue.

This is a good point to begin introducing the framework to be used for evaluating proposed solutions to medical migration. In the literature, discussions of the ethical dimensions of brain drain often focus on the gain and loss of health care workers in destination countries and source countries, or on which country or migrant is harming whom. However, these perspectives fail to take into account what gain or loss, benefit or harm would mean for a given country; they lack both a context and a goal.

Dwyer (2007) outlines features of social justice which he uses to inform a discussion of medical migration. In Dwyer's opinion, a just society would 1) help people meet basic needs, 2) foster rights and responsibilities, and 3) give some priority to the least advantaged. The first element of the ethical framework I propose involves setting a goal for what a solution ought to achieve, and Dwyer's concept of helping to meet basic needs coincides with my earlier point about the right to health care as a central issue. I propose that the goal of any strategy to address brain drain should be to provide a basic level of health care to all. While Dwyer describes his own concept of a basic need as 'a vague concept' and suggests that 'there is no easy, context-free way to specify basic needs, especially those that concern health care,' I would suggest that the WHO has provided an excellent specification of a basic health care need: it states that 2.5 health care workers per 1000 population is a the minimum level of personnel necessary to meet basic health care needs (Task Force, 2007). So the goal of strategies to tackle brain drain is to ensure that all people have access to this level of health care.

Dwyer's second point suggests that a just society would protect rights and foster responsibilities. Many rights – including the right to health - are enshrined in the 1948 Declaration of Human Rights, and most would argue that these rights are inalienable for all human beings. The right to health is often characterized as 'positive' in a philosophical sense; that is, certain services and conditions must be provided for good health to be attained (Landman, 2004). This makes its

provision a bit more complicated than: everyone has the right to health, but if action must be taken to provide this right, who is responsible? Certain parties must have duties or responsibilities to fulfill so that health care and health itself are available to all. For example, a government may have a responsibility to maintain hospitals so that they can function properly, or a doctor may have a responsibility to treat patients. Responsibilities and rights must be balanced to some extent. Even the Declaration of Human Rights itself recognizes this balance, acknowledging that rights may be limited for the sake of “morality, public order and general welfare” (UN, 1948). The second point, then, in the ethical framework we will use here is not a goal but a condition: rights should be protected and responsibilities fostered in any strategy proposed to address medical migration.

One question arises here: what is the scope of the goal of health care for all and the duties and responsibilities involved in meeting this goal? In other words, does health care for all mean ‘all of the family,’ ‘all of the country,’ or ‘all of the world’? Does a government have a responsibility to help citizens overseas in order to ensure their right to health care, or is their own country’s borders the limit of that responsibility?

Dwyer (2007) characterizes two distinct perspectives. What he calls a ‘political’ approach limits the application of social justice principles to within national boundaries, so that the ethical world consists of a series of countries

connected through a framework of global agreements. Limiting social responsibility to within national borders is a widely-accepted perspective with a strong historical basis (Young, 2006). Dwyer's (2007) 'cosmopolitan' approach, on the other hand, expands social justice to apply globally, drawing on what elsewhere has been termed a 'cosmopolitan-utilitarian model' whereby each person around the world has a responsibility to reduce suffering wherever it exists (Young, 2006). Dwyer's cosmopolitan perspective appears to be a diluted version of the 'cosmopolitan-utilitarian model' since he acknowledges the necessity for a government to prioritize the needs of its citizens to optimize the social good (Dwyer, 2007).

But do either of these models really describe reality? It seems wrong that a government should be allowed to take actions to benefit its own citizens if that action is harming people in another country. It also seems unfair that a struggling single mother should be responsible for the problems of someone halfway around the world while her own child goes hungry. Might there be another model that might more accurately reflect the interconnectedness of today's globalized world and the complexities it presents?

Young's (2006) social connection model provides a way for organizing responsibilities on a global scale, but not at the unrealistically high level that a cosmopolitan-utilitarian perspective might mandate. While maintaining that "in today's world of globalized markets, interdependent states, and rapid and dense

communication, the scope of the actors we implicitly assume in many of our actions is often global,” Young (2006) suggests that societal processes create structures, and that “all persons who participate by their actions in the ongoing schemes of cooperation that constitute these structures are responsible for them, in the sense that they are part of the process that causes them.” In the context of globalization and brain drain, I interpret this idea to mean that everyone - migrants, national governments, global institutions - forms part of a system, and everyone in it has some degree of obligation with respect to others within the system.

Young (2006) explains that the different parties within the system do not have the same degree of responsibility. “Everyone in the system of structural and institutional relations stands in circumstances of justice that give them obligations with respect to all the others, [but] those institutionally and materially situated to be able to do more to affect the conditions of vulnerability have greater obligations”(Young, 2006). Young bases these obligations on relative power, privilege, interest, and collective ability. Adapting these ideas again to apply to the case of medical migration, a hierarchy of responsibility for contributing to the goal of health care for all can be crafted, including international institutions, destination countries, source countries, and migrants, moving from greater to lesser responsibility.

The ethical framework is taking shape then. An ideal solution has the goal of providing a basic level of health care to all. We also want to protect rights and foster responsibilities on a scope that applies globally, but to different degrees for different 'players' based on their power, privilege, interest and collective ability. But before developing the framework any further, let us consider how these points play out with regard to the different parties involved in medical migration. In the literature, the roles of three stakeholders are generally considered: the migrants, the destination community (DC), and the source community (SC). A final stakeholder, the 'global system,' is also discussed (representing the inequitable structures that globalization has created) before I add a final component to the ethical framework.

### *Migrants*

For reasons already discussed, health workers in LMICs may be attracted to practice abroad. Better salaries, working conditions, opportunities for professional advancement, and enhanced status represent personal gains for the migrants. They likely face losses as well. There are losses relative to their previous situation as a health worker in a SC, (for example distance from family and friends, culture shock) as well as losses when comparing their positions to other, native, health workers in the DC (for example, longer hours, less choice of specialty as a foreigner, discrimination, and withholding of official documents to prevent the migrant from changing employers) (UNISON, 2006; Snyder,

forthcoming). Overall, however, migrants are presumably benefitting by migrating or they would not continue to do so.

The migrant's decision to leave his or her home country (one that in this case likely faces a shortage of health care workers) is framed by two opposing sets of rights and responsibilities. On one hand, the migrant has the individual right to economic prosperity and personal development, which may be more easily pursued abroad (Muula, 2005; Bueno de Mesquita & Gordon, 2005). A health worker also has the right to work in a safe environment, under reasonable conditions for himself and his family. And the health worker may have the right to freedom of movement, although this particular right comes with a series of restrictions since immigration laws of course limit how and when people move across borders and what they are permitted to do in other countries (Bueno de Mesquita & Gordon, 2005; Dwyer, 2007).

On the other hand, the migrant has duties to his home community. This duty can have a clear, financial dimension when the government has invested in the health worker through training at a public college or university, especially when no tuition is charged (Snyder, 2009). Even if the education is paid for out-of-pocket though, it can be argued that a doctor has a duty to his home community simply by belonging to that community (Snyder, 2009). This is the concept of "charity begins at home," with one's responsibilities moving outward in hypothetical concentric circles (Zivotofsky & Zivotofsky, 2009). This is both an

intuitive concept and one that makes sense in practical terms since health workers are likely better able to contribute to others' good health in an environment they are familiar with. Furthermore, when that community is a poor one and the migrant is in a position of relative advantage, his responsibilities to that community could be seen as heightened (Snyder, 2009).

Especially in cases where the migrant is not fleeing because his own rights are being violated, leaving the SC can represent a failure to fulfill a duty because it puts the health of those remaining at risk, but it should be noted that the migrant may also be contributing to the SC in some ways. Emigrated health workers send home remittances that benefit their families and social networks - in some cases these remittances exceed official development aid (Adkoli, 2006; UNISON, 2006; Kangasniemi, Winter & Commander, 2007; WHO, 2009). However, these remittances seldom benefit the poorest members of society, and may serve to reinforce inequalities within the SC as it is the wealthy who are migrating and sending money home to their own families (Dwyer, 2007). It can be argued that when professionals emigrate only temporarily, they may return home with new skills or technology as well as professional connections (Adkoli, 2006; Kangasniemi et al, 2007), or even the ability to develop programs to retain health workers at home (Zivotofsky & Zivotofsky, 2009), though one wonders if the skills acquired overseas can balance out the loss of medical care in SCs. It has also been argued that the opportunities for migrating workers may also serve as motivation for others to acquire education (Sriskandarajah, 2006), but that is

equally illogical if the educated continue to leave the country in greater numbers than educated persons who remain. Nevertheless, the skills of workers returning to SCs after time abroad undoubtedly contribute to their personal development and career prospects, a 'brain gain' that India and China are currently experiencing (UNISON, 2006).

### *Source Countries*

The second player involved is the source community or source country (SC). The source country is generally the 'loser' in the system of medical migration (though there are exceptional cases, such as South Africa, which could be considered both a source and destination country, and thus both a winner and a loser). The SC loses because the health of its populations suffers due to a lack of health care workers. The individuals who make up the community have a right to health. Due to a scarcity of health workers and likely also a poor health care system in general, out-migration of doctors and nurses jeopardizes this 'critical basic good' (Snyder, forthcoming). Firstly, out-migration means fewer health professionals: fewer doctors, nurses, and pharmacists to deliver health services to the population. Decreasing the density of physicians and nurses in source regions has resulted in curtailed access to antiretrovirals, and has increased levels of maternal, infant and under-five mortality in some countries (Anand & Barnighausen, 2004). Less obvious but also important are the negative impacts migration has on the health sector's ability to organize and expand (Hagopian et al, 2006). A loss of experienced personnel means a loss of leadership,

managerial skills and organization (Hagopian et al, 2006). When senior doctors or nurses are siphoned off to other countries, medical and nursing schools also face teacher shortages, reducing a country's ability to train additional staff to compensate for those leaving (Adkoli, 2005).

Medical professionals hold an important place in society, as Hagopian (2006) points out. Doctors and nurses may represent the middle class and the associated benefits this group provides for a country: social and economic stability, a market for consumer goods, advocacy for schools and education, and perhaps a pool of public officials 'above corruption' (Hagopian et al, 2006). A mass exodus of talent in a source country could also create a culture of inferiority, where successful professionals aspire to leave, and those who remain at home become dependent on remissions beyond their control. Families are fragmented, and children are raised by only one parent, a social cost not often considered when examining the costs of migration (UNISON, 2006).

If the source country has the right to health by retaining health care workers, this right might be contrasted with the duty to provide decent conditions for those workers (List, 2009). SC governments are responsible for providing health care to their citizens and thus they are responsible for an infrastructure that supports this goal, whether through salaries, working conditions, or training programs. There may be conditions where a government has difficulty fulfilling these responsibilities, however. In a country experiencing civil conflict, it can be

impossible to provide a safe environment for medical personnel. In a more stable country, the government's health ministry may be able to offer higher salaries or better working conditions.

### *Destination Countries*

The destination communities or countries (DCs) are the third stakeholder involved in medical migration. They are the beneficiaries of the arrangement, often at the expense of the source community. They 'win' by gaining health care workers to serve their population, and what's more at a lower cost than if they had trained them at home (Eastwood, Conroy, Naicker, West, Tutt & Plange-Rhule, 2005).

Citizens of the DCs have the right to health too, and this argument could be invoked in defense of recruiting immigrants to serve in rural areas. But in most cases the 'basic level of good' has already been reached and therefore recruiting health workers from countries facing a shortage is attempting to go beyond this basic level while hindering others from attaining it, and is thus inequitable and immoral. Furthermore, health workers within the destination country have the same *duty* to their own community and country as to those in SCs, and if they exercised this duty to serve their own underserved citizens, there would be less demand for health workers from overseas (Dwyer, 2007). Finally, when health workers do migrate, DCs also have a duty to treat them fairly, protecting them

from discrimination and providing them with the rights they provide their own citizens.

### *A Global System, Global Considerations*

Most discussions of brain drain end here, with the three “players” mentioned above. But realistically, individuals and especially countries act within a broader context dictated by a global system including political, economic, and sociocultural power structures. The ‘global system’ does not itself win or lose, but creates a framework for who does. Many LMICs are burdened with a legacy of unfair colonial systems and structural violence, and international lending institutions disproportionately represent the interest of wealthier countries, the result being that weak or corrupt governments seeking debt relief have limited control of their public sector spending (Tache & Schillinger, 2009). Western culture transmitted around the world advertises a lavish lifestyle, luring migrants away from their home countries. Even the scientific literature on the topic of brain drain is dominated by academics from certain parts of the world (Muula, 2005). While the global system is not merely a negative, one-way flow, there is no doubt that the system is asymmetrical, tending to benefit wealthier countries, who also dictate it (Snyder, forthcoming).

In terms of rights and duties, a global system has no rights of its own. However, let us return to the social responsibility model for a moment, which

posits that everyone involved in the global system shares some degree of responsibility for the system, but that some have a greater degree than others (Young, 2006). This is where notions of fairness and equity come into play, and also where we can introduce one final element of the ethical framework. The third feature of social justice that Dwyer (2007) outlines is that some priority should be given to the least advantaged. As Dwyer mentions, it is tempting to sum up brain drain in an additive way, where gains and losses of countries or individuals are simply tallied to determine who wins and loses how much, and accordingly who owes what to whom. But this approach fails to consider the context: the fact that some countries are in a better position to gain or lose in the first place (and why they are in this position of relative disadvantage), and the fact that a loss might be far more crippling for one party than another (Dwyer 2007).

To use a more accessible example, the impact of medical migration will depend on how many doctors a country can 'afford' to lose. Dwyer (2007) explains this point:

"I am troubled by the emigration of 30 percent of Ghana's physicians because life expectancy in Ghana is fifty-seven years. I am less troubled by medical migration out of Ireland. About 40 percent of Irish physicians have emigrated, yet in spite of this high rate, life expectancy in Ireland is about seventy-six years."

Ireland – and other wealthy countries like it – have enough health care workers and health that the emigration of 100 doctors would have a far smaller impact than if those doctors left Ghana. Ireland is also more likely to be able to attract immigrants to make up for its loss than Ghana.

Finally, I would argue that Ireland has a greater degree of power and privilege within the global system than does Ghana and thus the countries have different degrees of responsibility to help others, or claims to receive the help of others. Young's (2006) social connection model is forward-looking, implying that a current situation dictates responsibility for future change, so in this case, Ireland's position of power would mean an enhanced responsibility to help other countries achieve a basic level of health care workers (Young, 2006). One could also use past actions to justify present and future responsibility. It can be argued that the nations that dominate the global order do so precisely because they have limited the ability of others to attain their 'basic good,' they have violated their duty *not to harm* them (Tache & Schillinger, 2009). Countries like Ireland or Canada or the UK have a duty to mitigate harm caused in the past as well as to change the system to prevent further harm (Tache & Schillinger, 2009), targeting the global inequities aggravated by brain drain (Snyder, 2009). While one country's duty to help another is indeed admirable and could be classified as charity, in this case it represents a duty to correct unfair terms of cooperation (Young, 2006) and is better classified as justice. I would argue then, that any real

attempt to actually benefit disadvantaged countries and populations has to go beyond simply mitigating the harm caused by current global arrangements and seek to change the underlying causes of brain drain.

Having added this last point to the ethical framework, what are the questions that can be asked in order to evaluate solutions? Firstly, “Does this solution seek to meet the goal of a basic level of health care for all?” Secondly, “Does this solution strike the right balance between protecting rights and fostering responsibilities?” Thirdly, “Is the level of responsibility required of each player in keeping with the level of power they have within the global system?” And finally, “Are the disadvantaged being prioritized, with an eye to improving their overall situation as opposed to simply mitigating the harm caused to them?”

## **PROPOSED SOLUTIONS: EVALUATING RIGHTS AND RESPONSIBILITIES**

Using these questions to guide us, we can now apply the ethical framework to examine the proposed policy solutions as discussed earlier.

### **Preventive Solutions**

#### *Improving Working Conditions*

This solution aims to retain health workers in SCs, working towards the goal of improving the level of health care there. This strategy also seeks to alter the underlying reasons for brain drain as opposed to simply mitigating the harm the caused by medical migration. The balance and distribution of rights and responsibilities is more complex, and should be considered for each of the different 'players' implicated.

On the level of the migrant, SC health workers have some responsibility to remain within their home communities, even if this might mean worse conditions or lower pay than in a foreign country. Still, one must be careful about blaming a group of people who have chosen a profession devoted to helping others for neglecting to help them *enough* (Zivotofsky & Zivotofsky, 2009). Source country health workers also have the right to be treated fairly and work in a safe

environment, something taken for granted by DC health workers who are less likely to be blamed for shirking responsibilities if they choose not to practice in underserved areas. This balance between duties and rights is difficult to pinpoint, and to some extent it could be affected by the culture ingrained during education. Explanation of one's duties as a health care worker could be included in the curriculum for doctors or nurses (both in SCs and DCs) in order to encourage graduates to practice where they are most needed.

Moving up the hierarchy from individual to country-level, a greater degree of responsibility for working conditions lies with the source country. In SCs, a decent salary and work environment are part of a government's responsibility to provide reasonable remuneration and conditions, and since doing so has been shown to retain workers, it represents an extension of the country's responsibility to provide health to its citizens. While the differences between even *increased* salaries in LMICs and those in developed countries might still remain enormous, as mentioned earlier, many health workers are satisfied with merely an *adequate* standard of living and salary which wouldn't require the government of, say, Zambia, to pay comparable salaries to those in Canada. Similarly, beyond simple spending on salaries, SCs can take other measures to improve health worker job satisfaction. Free housing or school vouchers could be a less expensive way to retain doctors in rural areas, and changing scheduling mechanisms or encouraging mentoring relationships would also be affordable. Indeed, in cases where certain parts of the country – whether a geographical area or social class

– are especially disadvantaged, the government has a special responsibility to ensure the retention of health workers whether by raising salaries or through other means.

Of course, for many LMICs, finding the money to increase health workers' salaries is not easy. The 'global system' has a high degree of responsibility here. The IMF and WB's limiting of social sector spending as a condition of debt payment relief limits the SC's ability to improve conditions for (and thus retain) its health workers (Muula, 2005; Philips, Zachariah & Venis, 2008). This structural injustice highlights both international lending institutions' greater power as well as the historical influence they have had on creating current inequities, so they have a high degree of responsibility towards SCs (Young, 2009; Tache & Schillinger, 2009). This responsibility is enhanced by the poor health status in many LMICs to begin with; that is, indebted nations where the right to health is already going unfulfilled should be specifically targeted for assistance in meeting this need instead prevented from doing so. Such action would go a long way to prioritizing disadvantaged populations instead of penalizing LMICs for trying to meet the needs of their populations.

### *Bonding*

In terms of rights and responsibilities, bonding represents a government's attempt to fulfill its duty to provide health workers and thus ensure its citizens

right to health. At the health worker level, this takes the form of an enforced responsibility instead of one that is fostered, raising concerns about limiting the health worker's right to migration – and concerns about protecting rights as outlined in our ethical framework. Bonding does indeed limit the freedom to migrate. It also reverses the hierarchy of responsibility the framework outlines, placing the onus on individual migrants rather than on governments despite the fact that the latter undoubtedly wield more power. These circumstances are not ideal. However, if the conditions of bonding are clearly outlined to those considering a career in medicine or nursing, and they still have the option to pursue a different line of study which will provide a decent livelihood, then the limitation might be justified for the sake of the improved health of the population. Bonding might be considered an extended contract: instead of agreeing to work for a company for a given period in exchange for a salary, one agrees to stay within the country for a given period in exchange for an educational opportunity.

Similarly, so that bonding is not simply punitive, the government must also address its responsibilities. From the perspective of the worker's rights, decent conditions must also be ensured, improving the SC situation with a longer-term perspective to retaining more workers. To take this logic one step further, the duty codified through bonding cannot trump a much greater violation of rights; for example, given the advent of a civil conflict that jeopardizes the worker's life, the worker would have a legitimate case for abandoning his duties.

Within a country, bonding with financial penalty raises questions about equity and prioritizing the least advantaged. Simply paying a sum of money in order to be able to practice overseas might mean that wealthier students could skirt their obligations to serve at home while the poorer ones stay behind. Essentially the elite would be able to pay for the opportunity to emigrate, while the least advantaged are hindered from attaining a better future (Hagopian et al, 2006). A more equitable form of bonding could replace the threat of financial penalty with that of withholding certification (Hagopian et al, 2006). The service period could occur at the very end of the academic program, but graduation and accreditation would hinge on its completion (Muula, 2005; Hagopian et al, 2006).

Considering the responsibilities fostered through the social connection model, if bonding is to be equitable then it must be implemented in both DCs and SCs, and not SCs alone. Since we know that the demand for workers to fill posts in underserved areas acts as a draw for emigrants from SCs, both countries should be considered as part of the same system. Given the fact that bonding includes an element (albeit a justified one) of coercion, this negative characteristic should be shared between SC and DC so that the responsibility to serve in a less desirable position is not put exclusively on SC health workers, especially given their position of relative disadvantage. If anything, given the DC's position of power and privilege, bonding in wealthy countries should be prioritized, though the interest SCs have in stemming the emigration of health care workers also makes a strong case for them to share responsibility.

### *Reorienting Training*

As in the case of bonding, choosing the ‘right’ students represents an attempt by a government to fulfill our framework’s goal of health care for all by ensuring the presence of health workers. Instead of mandating responsibility to a home community, however, reorienting training programs increases the chance that this responsibility will occur naturally. By training health workers in underserved areas, their sense of responsibility to the community they are trained in develops and increases the chance they will stay and practice there. While such programs might be seen as unfairly favoring students from rural areas for admission, in reality these students are underrepresented compared to their urban counterparts, so what is being applied is a form of equity and not favoritism. Training health workers with skills appropriate to local settings (especially rural ones) also seeks to benefit those in the worst position – patients in underserved areas.

Globally-speaking, creating a more equitable distribution of health workers in DCs decreases the demand for immigrants from SCs, allowing the latter to fulfill its own needs. But in addition to preventing harm, creating rural training programs could also provide a change for the better in the SCs themselves, improving the health of the disadvantaged rural population over the longer term.

### *Responsible Recruitment*

Without a doubt, certain aspects of responsible recruitment are admirable: protecting the rights of migrants in source countries and allowing periods for doctors to return home to serve their source countries are both excellent inclusions. And while the goal of responsible recruitment is ostensibly to help reduce the outflow of workers from SCs, striving for a basic level of health care to be maintained there, the idea of disallowing doctors from migrating is a poor one. On the level of the health worker himself, such codes represent a severe restriction of right to migration. Of course, countries are allowed to decide who to accept as immigrants and do so on a daily basis, which might also be considered a violation of that right. But in this case, the limitation takes on the form of rejecting a person precisely because of the positive contribution he could make – a ‘skill penalty’. Given that a person sought after one year would be rejected the next for precisely the qualities considered valuable before, ‘responsible recruitment’ becomes at best arbitrary, and at worst “compassionate racism”(Sriskandarajah, 2006).

Furthermore, the limitation ignores the inequity underlying the migration - responsible recruitment does not change the push and pull factors at the root of brain drain. The migrant is seeking a better quality of life, but instead of providing it, the code merely puts up a barrier to attaining it, shunting what is the responsibility of more powerful players in a structurally unjust system onto the most vulnerable. Limiting the flow of migrants changes one part of the global

system – the one that allows individuals to seek better lives overseas – but fails to address other parallel parts of the system that create the inequalities motivating migration. In order to get at the real reasons for migration, measures beyond barriers must be implemented: “pressure needs to be maintained, not only to cancel developing countries debt and increase overseas aid, but to replace free trade with fair trade” (UNISON, 2006).

With recruitment codes, while the DC, due to a position of greater relative power, will likely still be able to attract a health worker from another country, the migrant (who is at a relative disadvantage) loses out. While the SC’s citizens may gain to some extent since the loss of a health care worker is prevented, if the working conditions in that country are not improved, the worker may well seek to emigrate elsewhere, and the prevented loss simply becomes a delayed one. In other words, while acknowledging the realities of a global system where the movement of workers is a reality, destination countries have a responsibility to improve the poor conditions that motivate the migration instead of merely blocking it, providing an advantage to the worst off.

Furthermore, while undoubtedly a doctor moving from Malawi to England is to some extent neglecting a duty to his home country, following our framework, this duty should ideally be fostered and not legislated. Bonding (with the stipulation of improved working conditions) represented an exception to this legislation since coercion could be counterbalanced by the benefit to the health

of the population. However in the case of bonding, the country whose population is at risk is the one making decisions about what is acceptable to legislate; in this case, the standards are often being by foreign countries or organizations whose concerns may not be the same as those of the source countries.

Finally, from a practical perspective, recruitment codes may only address immigrants who claim their employment status as a health worker when actually they may begin practicing their chosen profession after a short delay, or they may enter through the private health system but later switch into the public one (Muula, 2005). Alternatively, they may simply hide their qualifications altogether and never practice their valuable skills, resulting in 'brain waste' (Sriskandarajah, 2006; Kuehn, 2007). In the former case, the destination country may still get the workers they need with a clear conscience while the consequences fall on the workers themselves. In the latter case, all parties (migrant, DC, and SC) lose.

### **Mitigating Solutions: Inherently Incomplete**

To reiterate, our framework delineates that solutions should aim to provide a basic level of health care while protecting rights and fostering responsibilities for all parties (with those who exert greater power and privilege having greater responsibility). Solutions also ought to prioritize the disadvantaged, seeking to change some of the inequities underlying brain drain - *not* simply harm them less. Thus the mitigating solutions proposed in the literature necessarily fall short of the ideal since they represent a reduction in harm and not an improvement.

Nevertheless, such solutions may improve health when used in conjunction with other strategies, so they will be considered here briefly.

*'Brain factories'*

Like recruitment codes, instead of ameliorating a situation that disadvantages SCs, 'brain factories' simply exclude them from the whole process. DCs get the workers they want, brain factories benefit from remissions, and presumably SC citizens' benefit since DCs recruiting from 'brain factory' countries are less likely to recruit from SCs where the workers are needed. But again, while this system limits demand, it doesn't alter the situation of relative disadvantage SC health workers face in terms of living and working conditions, and so it might not stop them from trying to emigrate regardless.

An additional concern with 'brain factory' countries is whether they actually have enough health workers to take care of their own needs. Some concerns exist about whether there are too many unfilled nursing positions in the Philippines, for example, threatening the quality of health care at home (Aiken et al, 2004). In countries where the export of health workers is not controlled by the government, there is also the risk of siphoning workers who would potentially work in the public system into the private one. This might create a shortage of workers in the public system, the system that poorer, more rural populations depend on (Dwyer, 2007).

### *Task-shifting: Community Health Workers*

This proposed solution fails the first ‘test’ mandated by our framework: the ultimate goal of ‘solutions’ to brain drain is for all people to be provided with a basic level of health care. CHWs can provide a primary level of care to those who would have no care at all, and thus is admirable in the sense that it targets the least advantaged. However, the basic level of health care set as our goal will necessarily require a certain number of fully-trained doctors and nurses. CHWs bring the level of the basic good of health up a notch, and thus provide a stop-gap measure for when no doctors and nurses are available. But ultimately this ‘notch’ still falls short of a satisfactory level, so other solutions must be used as well so that enough doctors and nurses remain in the country to achieve this level. While task-shifting may be part of the solution to medical brain drain, it cannot make up for a weak health system (Haines, Sanders & Lehmann, 2007).

### *Training Partnerships*

Partnerships involving DCs and SCs allow for the ‘best of both worlds’ in many cases. SC workers receive access to education and technology, but still return home to fulfill a responsibility to provide health care in their country. DCs gain researchers or their workers gain overseas experience, while fulfilling their duty to the disadvantaged. Through the international connections that are created through exchanges and partnerships, concepts of global citizenship and

far-reaching social responsibilities might take root. Students and health workers in DCs are increasingly interested in devoting time to benefit the poor in other parts of the world (Farmer, 2004); exchanges or placements for such people could be promoted in underserved areas of SCs. At a governmental level, establishing training programs and international partnerships to benefit SCs represents taking responsibility for greater privilege within a common system. On an individual level, responsibilities are relatively smaller, but where the desire to help others exists, it could be encouraged. Cubans, for example, have already adopted a high degree of responsibility. The country's social ethic, that "every person has the right and possibility to decent health care" has created programs that export doctors and medical educators to underserved areas internationally (De Vos et al, 2007). Granted, Cuba is unique in many ways, but its responsible attitudes towards health might be fostered in other countries. Partnerships and exchanges could enable long-lasting relationships and a change in the dynamic of a global system that favours destination countries.

### *Reimbursement*

Whether it takes the form of salary top-ups, training partnerships through university twinning, funding for extra spots in medical schools, or direct payment to the health ministry, reimbursement represents a unique solution since it fosters the direct responsibility of the DC to citizens in the SC, which truly is a case of those with greatest power helping the most disadvantaged. Other solutions have focused on the responsibilities of the SC or the migrants themselves, or at most

they have encouraged the DC to alter their demand for health workers. On a practical level, this increase in responsibility might be one reason such a solution is difficult to “sell” to DCs. International markets favour the free movement of goods and labour, and added elements of moral and financial debt do not fit easily into this paradigm. But when considering compensation we are not talking just about global financial debts, but rather restoring the ability of a country to keep its citizens healthy. Reimbursement is not merely charity; it is actually a form of justice. Wealthier countries, having established a global system that has created others’ poverty, have a duty to take on responsibility proportionate to their position of power and privilege so that basic rights – in this case the ‘basic good’ of health care - can be fulfilled. While DCs might frame it that way, reimbursement does not represent a net benefit for SCs. It does not necessarily leave SCs better off than where they stood initially, and thus alone is not sufficient as a solution. However, it could provide an opportunity to improve the health system.

This is where the source country’s duties come into play. When reimbursement does occur, the DC has the duty to communicate with the SC to determine what the latter’s needs are. The SC has the duty to use foreign reimbursement responsibly and specifically with the goal of health in mind. Continuing to train health workers only to have them emigrate does not represent a good investment; however, targeting the reasons these workers are leaving might be a way to effect lasting change.

## **CONCLUSION**

While it may be possible to evaluate each of the proposed solutions to medical migration individually, in reality a variety of solutions will probably be employed, to different degrees, by different countries and organizations. As discussed, some strategies on their own do not fulfill the basic good of a minimum level of health care, or uphold the other principles of respecting rights, fostering responsibilities, and prioritizing the least advantaged with consideration for the social connections of a globalized world. But in combination with other strategies, they may still provide some benefit.

Task-shifting, for example, might be used as an interim measure while more sustainable solutions are implemented. Reimbursement and training partnerships in and of themselves do not tackle the poor working conditions that drive developing country health workers to emigrate. But if the reimbursement is invested in improved salaries and infrastructure, and the partnerships help education programs in source countries, then a net improvement is made and mitigating programs can function together with preventive ones.

Fundamentally, however, changes must be made to address the factors behind brain drain: improving working conditions in source countries, training

medical and nursing students for underserved areas, and (less ideally) bonding, are all potentially valuable solutions. The money and expertise to make these improvements will have to come from many sources: the source country itself, with a commitment to its citizens; foreign aid from destination countries in whatever form it might take, international partnerships and exchanges that benefit both parties, and debt relief from international lending institutions in order to free up funds within source countries for public investment. Wealthier countries and international organizations have an enhanced responsibility to take action because of their power and privilege, something that ought to be kept in mind when the temptation to focus blame on individual migrants arises.

How realistic are these changes? In Dwyer's (2007) words, if we look for a solution that accommodates the present global atmosphere with "low levels of social responsibility (in both source and destination countries), an emphasis on training first-world doctors, policies that restrict the public sector, skewed distributions of health care workers within countries and within specialties, unquestioned assumptions about shortages, a reliance on global labor markets, and international norms that make social justice harder to achieve" then change is not likely. But the fact that brain drain is recognized as a problem for which solutions have already been proposed and international agreements have been drafted, offers some hope that future actions will work towards a goal of health care for all.



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