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Feature

The exodus of health professionals from sub-Saharan Africa: balancing human rights and societal needs in the twenty-first century

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The exodus of health professionals from sub-Saharan Africa: balancing human rights and societal needs in the twenty-first century
Increased international migration of health professionals is weakening healthcare systems in low-income countries, particularly those in sub-Saharan Africa. The migration of nurses, physicians and other health professionals from countries in sub-Saharan Africa poses a major threat to the achievement of health equity in this region. As nurses form the backbone of healthcare systems in many of the affected countries, it is the accelerating migration of nurses that will be most critical over the next few years. In this paper we present a comprehensive analysis of the literature and argue that, from a human rights perspective, there are competing rights in the international migration of health professionals: the right to leave one's country to seek a better life; the right to health of populations in the source and destination countries; labour rights; the right to education; and the right to nondiscrimination and equality. Creative policy approaches are required to balance these rights and to ensure that the individual rights of health professionals do not compromise the societal right to health.

Key words: healthcare systems, health professionals, human rights, international, migration, sub-Saharan Africa.

There is concern that increased international migration of health professionals is exacerbating weaknesses in already strained health systems in poor countries and contributing to collapsing or failing healthcare systems in sub-Saharan Africa (Dovlo 2005a). As health professionals with recent international experience and interest in global health we think it is necessary to open the dialogue on potential relationships among the existing and projected worldwide shortage of skilled health workforces, the international migration of health professionals, and the effects on health systems in sub-Saharan Africa. While international migration is only a part of the complex web of factors leading to the crisis in health-care in low-income countries, the plethora of information generated since the late 1990s highlights the urgency of understanding and addressing what appear to be threats to global health and equity in relation to increased international mobility of nurses, physicians, dentists and pharmacists.

There is consensus in much of the literature that nurses form the backbone of health systems in sub-Saharan Africa and that it is the accelerating migration of nurses that will be most critical in the next few years. This agreement on the centrality of nursing in the current healthcare crisis comes from sources as diverse as the Regional Network for Equity and Health in Southern Africa (EQUINET), Health Systems Trust (South Africa), and MEDACT (UK) (Loewenson and Thompson 2003); MEDACT (Bueno de Mesquita and Gordon 2005; Mensah, Mackintosh and Henry 2005); the United States Agency for International Development (USAID 2003); the International Council of Nurses (Buchan

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and Calman 2004; Buchan, Kingma and Lorenzo 2005; Munjanja, Kibuka and Dovlo 2005); the World Health Organization (Buchan, Parkin and Sochalski 2003; Awases et al. 2004); and Physicians for Human Rights (Friedman 2004). The seriousness of the health workforce crisis is substantiated by the decision to devote the 2006 World Health report to 'Working for health' and to declare 2006–2015 the 'Health workforce decade' (WHO 2006).

While barriers to licensure of immigrant health professionals in Canada and other destination countries are significant and can delay integration and frustrate aspirations, reducing barriers has the potential to severely deplete health human resources in the countries of greatest need. Thoughtful analysis of the issues raises ethical questions about tensions between individual rights and societal needs (Kingma 2001). It also requires us to explore in depth the extent of the health human resource crisis in sub-Saharan Africa and our response as global citizens. We suggest that there are creative policy approaches that can balance individual rights and societal needs in seeking solutions in the twenty-first century.

SETTING THE CONTEXT

There are estimates that Africa has 1.3% of the global health workforce and 25% of the disease burden (WHO 2004). The health worker density (nurses, midwives, physicians) of around 1 : 1000 in Africa, with much lower ratios in the poorest sub-Saharan African countries, falls well below the recommended 2.5 : 1000 required to meet the 'Millennium development goals' (MDGs) (Munjanja, Kibuka and Dovlo 2005), never mind other pressing healthcare needs. Even with the expected infusion of substantial international funding, lack of sufficient health workers makes achievement of targeted MDGs unlikely (Travis et al. 2004; Dovlo 2005a). Three out of eight MDGs are directly related to health: reducing child mortality, improving maternal health, and combating HIV/AIDS, TB, malaria, and other diseases. It is ironic that significant resources for development may be directed to sub-Saharan Africa at a time when the human resources of health professionals needed to implement programs may be in sharp decline.

Just how serious is the problem? In the 1980s there was an average of one doctor per 10 800 persons in sub-Saharan Africa as compared to one doctor per 1400 persons in all developing countries and one doctor per 300 persons in industrialized (high-income) countries (World Bank 1994). For nurses, the respective figures were one nurse to 2100 persons in Africa, one nurse to 1700 persons in all developing countries, and one nurse per 170 persons in high-income countries (World Bank 1994). Table 1 depicts health professional population ratios for physicians, nurses and midwives in 2004 for Malawi, Zimbabwe, Ghana, and South Africa, showing that ratios vary widely even within sub-Saharan Africa. Thirty-seven of 47 sub-Saharan countries do not have the minimum recommended WHO standard of 20 doctors per 100 000 people (Hamilton and Yau 2004).

Table 1 Physician, nurse and midwife availability in Malawi, Zimbabwe, Ghana and South Africa per 1000 population in 2004 (WHO 2006)

Country	Malawi	Zimbabwe	Ghana	South Africa
Physicians	0.02	0.16	0.15	0.77
Nurses	0.59	0.72	0.92	4.08

A study of health professional migration in six sub-Saharan Africa countries conducted in 2001–02 (Awases et al. 2004) suggested that, except for nurses, the number of health professionals in South Africa, Zimbabwe and Ghana increased from 1991 to 2000, although the number of doctors in the public sector in Ghana decreased. Data from the 1990s may no longer be relevant, however, as 68% of Zimbabwean health professionals participating in the study reported the intent to emigrate and, between 2000 and 2003, the nurse workforce in South Africa decreased by almost 12% (Awases et al. 2004). This exodus of health professionals seems to be accelerating over the last few years. Malawi filled only 28% of vacant nursing positions in 2003 and South Africa reported 4000 doctor vacancies and 32 000 nurse vacancies in 2003 (Hamilton and Yau 2004). Physician vacancy rates in the Ministry of Health in Ghana in 2002 were 47%, an increase from 43% in 1998, and nurse vacancy rates increased from 26 to 57% in the same time period (Dovlo 2003).

THE HUMAN RIGHTS PERSPECTIVE

From a human rights perspective, there are competing rights in the international migration of health professionals: the right to health of the populations in the source and destination countries; the right to leave one's country to seek a better life; labour rights including the right to work and the right to just and favourable conditions of work; the right to an adequate standard of living; the right to education; and, cutting across the other rights, rights to nondiscrimination and equality (Hamilton and Yau 2004; Bueno de Mesquita and Gordon 2005; Zard 2005). The right to health is entrenched in international law in the 1966 *International*

Table 2 Comparison of life expectancy, under-5 mortality rate (< 5MR) (WHO 2006) and maternal mortality ratio (MMR) (WHO 2002) for Canada, Ghana, Malawi, South Africa and Zimbabwe

	Canada	Ghana	South Africa	Malawi	Zimbabwe
Life expectancy (years)	78(M)	56(M)	48(M)	41(M)	37(M)
	83(F)	58(F)	50(F)	41(F)	34(F)
< 5MR (probability of dying	6(M)	113(M)	70(M)	179(M)	125(M)
before fifth birthday per 1000)	5(F)	111(F)	61(F)	172(F)	121(F)
MMR (probability of maternal death per 100 000 live births)	5	540	230	1800	1100

MMR from 2000; other statistics from 2004.

covenant on economic, social and cultural rights (Bueno de Mesquita and Gordon 2005).

Inequities in health indicators related to millennium development goals are presented in Table 2. The health disparities provide a clear illustration of the ethical issues related to individual rights of health professionals to seek a better life vs. the societal needs in the countries from which they emigrate. As the health human resource crisis in sub-Saharan Africa is well documented in Malawi, South Africa, Zimbabwe (USAID 2003; Martineau, Decker and Bundred 2004), and Ghana (Dovlo 2003; Dovlo 2005b; Martineau, Decker and Bundred 2004; Mensah, Mackintosh and Henry 2005), we chose those four countries to illustrate the existing health and health workforce disparities. Health indicators from Canada are presented for comparison but vital statistics for other common destination countries for nurses, primarily the UK, USA and Australia, are similar. While the differences cannot be attributed solely to availability of a high quality health workforce, the exodus of health professionals will exacerbate the inequalities.

At an international level there is an ethical issue in terms of recruitment of scarce labour resources by high-income countries to mitigate workforce shortages that may occur partly as a result of underinvestment in training or poor labour practices that undermine retention (Kingma 2001; Kingma 2006). What is currently happening in nursing provides an excellent case study of the interconnected issues. The right to health in source countries is seriously undermined when health professionals, usually educated at substantial public cost, choose to leave. Are current and projected worldwide nursing shortages leading to unethical international nurse recruitment strategies? Do current initiatives to address barriers to credentialing of internationally educated nurses make migration of nurses to economically advantaged countries more attractive and thus contribute to the health human resource crisis in sub-Saharan Africa? Affirmative responses to these questions pose complex ethical dilemmas that nursing as a profession is struggling to address (International Council of Nurses 1999, 2001, 2006).

MIGRATION OF HEALTH PROFESSIONALS FROM SUB-SAHARAN AFRICA

Migration occurs from rural to urban areas within countries, from poorer to richer countries within sub-Saharan Africa, and from sub-Saharan African countries to richer countries outside the African continent (Hamilton and Yau 2004). Colonial ties are important in tracing patterns of migration (Dodani and LaPorte 2005), partly because of language and perhaps because recognition of professional credentials may be easier. For the countries that we have chosen as exemplars, the following patterns emerge: migration from Malawi to Botswana or Swaziland; migration from Botswana or Swaziland to South Africa; migration from South Africa to the UK, USA, Australia and Canada. For Ghana in West Africa, the pattern is different, with most migration to the UK but some directly to the USA. Migration to Canada and Australia may be direct but also through the UK.

One of the challenges of documenting the extent of international migration of health professionals from sub-Saharan Africa is the lack of reliable data (Nygren-Krug 2003; Stilwell et al. 2003; Baumann et al. 2004; Dovlo and Martineau 2004). Nurses are primarily public sector employees and, in most countries, are registered. Intuitively, one would think that the statistics would be easy to compile. Unfortunately, realities in many countries make this difficult. Vacancy rates in government healthcare facilities may reflect international migration or may reflect wastage (Dovlo 2005b) of health professionals through career changes, illness, death, or choices to retire early. Corruption can lead to fictitious or *ghost* employees (USAID 2003; Dovlo 2005b). Resignation of nurses from public service positions is rare. When they leave

Table 3 UK licensure of nurses from South Africa, Zimbabwe, Ghana and Malawi from 1998–99 to 2002–03

Country	1998–99	1999–00	2000–01	2001–02	2002–03
South Africa	599	1460	1086	2114	1480
Zimbabwe	52	221	382	473	493
Ghana	40	74	140	195	255
Malawi	1	15	45	75	57

Adapted from Bach (2003) from UK Nursing and Midwifery Council data.

to work elsewhere, they may apply for long leave (Martineau, Decker and Bundred 2004), giving the impression that they are on vacation. Even where health professional registration is required, it may only occur once on entry into the profession. If there is no requirement for annual or other regular registration, the numbers are not useful for tracking current employment within the country. Even if annual registration is required, health professionals who migrate often maintain registration in the source country in case they decide to return home (Munjanja, Kibuka and Dovlo 2005).

Based on all sources of data, often thought to be underestimates of true nurse and physician mobility, the following picture emerges. Of physicians practicing in the USA, more than 23% received their medical education internationally, with 64% of that group originating from low or middle-income countries. Of the 5334 physicians from sub-Saharan Africa currently practicing in the USA, 86% come from Nigeria, South Africa or Ghana (Hagopian et al. 2004). Between 1986 and 1996, 61% of graduates of one medical school in Ghana left the country (Dovlo 2003). In total, there are more than 10, 936 physicians educated in sub-Saharan Africa practicing in the USA, UK (only post-1992 statistics) and Canada, a representation of at least 12% of African-educated physicians (Hagopian et al. 2004).

In the UK there are statistics on the numbers and source countries of new registrants, a source of data considered more reliable than country of origin information (Bach 2003; Stilwell et al. 2003). The UK General Medical Council reported a 38% increase in overseas-educated doctor registration between 1993 and 2002, and estimates that England alone will need 25, 000 more doctors by 2008 than it did in 1998 (Dovlo 2003). It is not surprising that there are suggestions, generally rejected by health professionals in affected countries, that educating large numbers of physicians (and nurses) to western standards is counterproductive to meeting the health needs in low-income countries (Dovlo 2004). When experienced or specialist physicians leave sub-Saharan African countries, the impact can be devastating. Consequences can include closure of departments or entire health facilities, inadequate faculty to staff medical schools, and decimation of research capacity (Martineau, Decker and Bundred 2004).

The situation with regard to nurses is considered even more critical, with a shortage having the potential to cripple a healthcare system (Aiken et al. 2004; Narasimhan et al. 2004). It is estimated that sub-Saharan Africa will have 600 000 fewer nurses than needed to meet the MDGs (Buchan and Calman 2004). Nurse registration in the UK is centralized nationally, making it easier to track licensure of internationally educated nurses there than it is in Canada, Australia or the USA, where nurse licensure is a provincial or state responsibility. Excluding nurses from the European Union, the UK has reported an annual increase in overseas-trained nurse licensure from 3440 in 1998–99 to 12, 298 in 2002–03 (Bach 2003), more than a tripling within 4 years. While the Philippines accounts for the greatest increase, the numbers from our four countries of interest (Table 3) confirm the acceleration of international nurse migration from sub-Saharan Africa. The leveling off in 2002–03 is likely related to a National Health Service policy to stop active recruitment of health professionals from sub-Saharan countries, although private healthcare service recruitment continues (Rowson 2004; Ross, Polsky and Sochalski 2005).

Malawi has one of the most severe nursing shortages, with almost two-thirds of public sector jobs vacant. More than half of Malawian registered nurses left to work internationally over a 4-year period, leaving only 336 registered nurses to work in public hospitals and clinics for a population of 11.6 million people (Roisin 2004). There are reports that more than 300 nurses leave South Africa for overseas every month (Rowson 2004). The Ghana Nurses' Council verification data suggest that 3087 nurses were seeking employment overseas between 1998 and 2003, while only 1729 graduates of schools of nursing in Ghana requested initial licensure to work in Ghana (Munjanja, Kibuka and Dovlo 2005). This suggests a potential net loss of 1358 nurses over 5 years through international migration alone, although seeking licensure verification does not always translate into

leaving the country. As nurses also retire, become ill, or change careers, the impact of increasing international nurse migration on an already stressed healthcare system is serious. A recent study suggests that approximately 60% of health professionals in Ghana, South Africa and Zimbabwe plan to migrate (Munjanja, Kibuka and Dovlo 2005). Malawi was not included in the sample. While there is evidence that physician migration is falling, nurse migration is increasing (Stilwell et al. 2003; Dovlo and Martineau 2004).

PUSH-PULL FACTORS IN INTERNATIONAL HEALTH PROFESSIONAL MIGRATION

Push-pull factors in international migration are well documented and consistent in much of the literature, including factors of particular significance for health professional migration. Nurses may not wish to migrate, but circumstances may give them little choice. Push factors include poor remuneration, bad working conditions, low job satisfaction, lack of opportunity for advanced education or promotion, oppressive political climate, threat of violence, persecution of intellectuals, and need to ensure the education and future of one's children. Job dissatisfaction related to poor physical and organizational infrastructures should not be minimized as reasons that nurses choose to migrate, leave nursing, move to private sector employment, or to seek positions with nongovernmental organizations. Lack of respect from physicians and barriers to full utilization of specialised nursing knowledge in healthcare settings were articulated as push factors in a recent study in Ghana (Dovlo 2006). Ironically, financial resource shortages or political decisions regarding distribution of available funding may lead to high levels of unemployment in nursing and an inability to absorb new graduates, even when health system needs are great. Microeconomic policies mandated by the World Bank in the 1990s (Bueno de Mesquita and Gordon 2005) reduced public expenditures on health-care and contributed to lack of government positions for nurses in some countries. Pull factors tend to be the opposite to push factors (Kingma 2001, 2006; Pang, Lansang and Haines 2002; Bach 2003; Buchan, Parkin and Sochalski 2003; Dovlo 2003; Kline 2003; Loewenson and Thompson 2003; Nygren-Krug 2003; Awases et al. 2004; Baumann et al. 2004; Buchan and Calman 2004; Dovlo and Martineau 2004; Zurn et al. 2004; Buchan, Kingma and Lorenzo 2005; Dodani and LaPorte 2005; Mensah, Mackintosh and Henry 2005; Munjanja, Kibuka and Dovlo 2005). Two of these factors will be discussed in the current paper. A major push factor for health professionals in sub-Saharan Africa is the HIV/AIDS epidemic. A major pull factor is the existing and projected shortage of healthcare professionals, particularly nurses, in high-income countries.

Just how significant is HIV/AIDS in the health workforce crisis in sub-Saharan Africa? Nurses are particularly stressed by the impact of HIV/AIDS. Their occupation increases vulnerability to infection and their workload expands as the epidemic grows and colleagues become sick, die or migrate (Loewenson and Thompson 2003; Nygren-Krug 2003; Buchan and Calman 2004; Munjanja, Kibuka and Dovlo 2005). Seroprevalence differs across countries, with southern African countries reporting the highest rates. In Malawi, five to sixfold increases in health worker death rates have been reported (Roseberry 1998, cited by Loewenson and Thompson 2003), with death accounting for 43% of the loss of nurses from the health workforce (USAID 2003). There is an estimate that 19–53% of all government employee deaths in Africa may be due to AIDS (Tawfik and Kinoti 2001, cited by Buchan and Calman 2004). In South Africa, there is a projection that increases in AIDS prevalence will increase demand for health services by 40–45% from 2002 to 2007 (Shishana et al. 2003, cited by Buchan and Calman 2004). Approximately 14% of professionally qualified health workers in South Africa are already HIV-positive (Shishana et al. 2003, cited by Buchan and Calman 2004). The HIV/AIDS epidemic cannot be negated as a powerful force for international nurse migration, as well as a reason for decreased availability of health professionals as they become sick, die, retire, or seek alternate careers. Countries in Southern Africa are most affected. As seroprevalence rates for HIV are substantially lower in Ghana than in Malawi, Zimbabwe, or South Africa, fear of HIV infection may not be a significant factor in nurse migration from Ghana.

Concurrent with deteriorating working conditions and increasing personal health threats to nurses in sub-Saharan Africa is the perception of a worldwide shortage of professional nurses. While health workforce projections are difficult and often incorrect (Zurn et al. 2004), estimates of shortfalls of professional nurses range from a low of 40 000 in Australia by 2010 (Australian Health Ministers Conference, cited by Buchan and Calman 2004) to as many as one million in the USA by 2010 (Rowson 2004), with shortages in the UK falling somewhere in between. Predicted shortfalls in Canada are 78 000 by 2011 and 113 000 by 2016 (Canadian Nurses Association 2002). Recruitment of nurses internationally, particularly nurses fluent in English, is accelerating (Aiken et al. 2004). Access to the Internet, even in the absence of active recruitment, makes opportunities known. Nurses from Malawi, Zimbabwe, South Africa and Ghana are likely to be fluent in English and, because of ties to the British Commonwealth (Ross, Polsky and Sochalski 2005), are likely

to be graduates of schools of nursing with curricula that are not substantially different from those in the high-income countries currently seeking nurses.

BRAIN DRAIN, BRAIN GAIN, OR BRAIN CIRCULATION?

While international migration is not the only force in the decreasing health workforce in sub-Saharan Africa, it is having a significant impact and the advantages and disadvantages of health professional mobility merit brief consideration. The discussion of brain drain and brain gain common in the 1970s literature re-emerged in the 1990s, with an increasing focus on brain circulation (Lowell 2003; Adepoju 2004; Rowson 2004; Ankomah 2005; Dodani and LaPorte 2005) as perhaps a more productive way of analyzing the complex dynamics involved in international migration.

There is a growing tendency to frame the migration of highly educated professionals in terms of the positive impacts of international mobility. However, there is an argument in the literature for 'medical exceptionalism', which recognizes the negative impact that health professional migration can have on the health of populations in resource-poor countries (Alkire and Chen 2006). There is a perception that global collaboration and sharing of skills, ideas and technological advances are enhanced, with increased possibilities for gains in source countries from returning or visiting emigrants (Usher 2005). The Internet is an excellent forum for knowledge transfer, as it allows frequent communication and the development and maintenance of health professional networks worldwide (Roisin 2004).

Meleis (2003) suggests that nurse migration can have an empowering influence economically, culturally and professionally on individual nurses, usually women, who migrate. Empowerment potential in a new country may positively impact nurses in the source country through continued communication within transnational nursing networks after migration. Scholars exploring gender and migration issues (Boyd and Grieco 2003; Zlotnik 2003; Adepoju 2004; Asis 2005) might be well advised to take advantage of the current nurse migration phenomenon to explore this possibility. In recent focus group research in Ghana Dovlo (2006) found that, while physicians spoke of permanent migration, nurses tended to perceive migration as temporary. Nurses perceive international migration to be a strategy to accumulate the capital needed to buy a car and house and then perhaps start a business after returning home. In an unpublished survey of 108 postbasic students in Ghana by one of the authors (M. Opare), respondents' reasons why nurses migrate were similar to those reported in the literature. When asked why they personally have stayed in Ghana, the responses were different. Altruism, seen as an opportunity to assist their fellow Ghanaians, and family reasons, such as a reluctance to leave behind husbands and the effects of family separation on children, were the predominate reasons for staying. It is unusual for a husband to migrate in response to a wife's career aspirations. These differences in physician and nurse perceptions of the permanence of migration may relate to the gender differences within the two groups. A gender analysis of both professions in terms of views on international mobility might yield important policy-relevant information.

While these arguments can be persuasive, there is evidence to suggest that, for health professionals in particular, unless migration is temporary, the intellectual and financial capital accrued to sending countries does not balance the detrimental effects of losing a much-needed health workforce (Nygren-Krug 2003; Roisin 2004; Eastwood et al. 2005). Economic advantages in terms of remittances to countries of origin are reported (Stilwell et al. 2003; Roisin 2004), but Newland (2003) argues that such income is seldom used for productive purposes or directed to the poor. The case of the Philippines, where overproduction of nurses for the purposes of export has long been public policy, is an excellent example. For years this policy has brought significant returns that far outweighed the costs. With what is now perceived as an impending worldwide shortage of nurses, and the increased international recruitment of nurses, the Philippines is now experiencing a shortage of healthcare professionals to meet national needs (Kingma 2001, 2006; Hamilton and Yau 2004). There are reports of Filipino physicians entering nursing in order to take advantage of enhanced opportunities to emigrate (Bach 2003). A similar phenomenon of nurse migration leading to domestic health human-resource shortages is reported in India, where overproduction of nurses to meet international needs is also common.

POLICY RESPONSES TO INTERNATIONAL HEALTH PROFESSIONAL MIGRATION

Human rights and ethics need to be re-introduced to the discussion of international policies related to migration. There are five main areas requiring consideration: addressing the roots of health workforce shortages in high-income countries; developing ethical guidelines for international recruitment of scarce health human resources; examining the potential of international agreements to mitigate effects; developing collaborative international partnerships; and rethinking international aid priorities. Each of these approaches has been addressed in recent literature and will be explored, but the focus will be on international strategies.

Health worker shortages in high-income countries suggest a reluctance to invest in education when import of the necessary workforce is possible (Aiken et al. 2004). In 2003 the World Medical Association recommended that all countries work toward educating sufficient physicians to meet their needs and actively pursue retention strategies (Loewenson and Thompson 2003). Nursing, as a gendered profession, has particular challenges, as opportunities for women are expanding globally while working conditions in health systems are deteriorating. Ironically, men and women in low-income countries may enter nursing with the express wish to migrate at a time when attraction and retention of nurses in high-income countries becomes more difficult. Nursing associations and unions worldwide, as well as the International Council of Nurses (ICN), are well aware of the issues but need support in order to address them effectively (ICN 1999, 2001, 2006; Buchan and Calman 2004; American Nurses Association 2005; Buchan, Kingma and Lorenzo 2005; Bueno de Mesquita and Gordon 2005; CNA 2005; Sigma Theta Tau 2005). The creation of an International Centre for Nurse Migration, a joint ICN and USA Commission on Graduates of Foreign Nursing Schools initiative with a mandate to address gaps in policy, research, and information, was announced in May 2005 (Nichols and Oulton 2005).

Development of ethical guidelines for the recruitment of health professionals, particularly nurses, has received increased attention in recent years. Recent ICN position statements related to nurse retention, transfer and migration (ICN 1999) and ethical nurse recruitment (ICN 2001) have been endorsed by the Canadian Nurses Association (CNA 2005), and are attempts to reconcile the rights of individual nurses who choose to migrate with the rights to health of the population in societies left behind. The National Health Service (NHS) in the UK is a world leader in developing a code of practice prohibiting active recruitment of health professionals from low-income countries (Rowson 2004) and is exploring bilateral mobility agreements with Ghana (Mensah, Mackintosh and Henry 2005) that could be used to set caps on the number of health professional visas issued annually (Bach 2003). Unfortunately, there is a large private healthcare sector in the UK that still actively *poaches* health professionals, often providing assistance with visas, relocation expenses, and housing, making regulation of recruitment a more complex approach than may be evident at first glance (Hamilton and Yau 2004; Ross, Polsky and Sochalski 2005). It is interesting to note that the suggestion that barriers to credentialing of internationally educated nurses or other health professionals be raised in receiving countries was not mentioned as a viable solution in any of the literature reviewed. However, the merit of educating a health workforce at a level below international standards did receive some limited attention (Dovlo 2004; Eastwood et al. 2005).

There is also the need to acknowledge the rationality imbedded in nurses' decisions to migrate, particularly when their health may be in jeopardy, working conditions are difficult, remuneration is inadequate, and unemployment within nursing is high. While the focus of the policy discussion in the paper emphasizes existing and potential international responses, there are within-country policies and actions that would increase job satisfaction and retention of nurses in the workforce. While the question of ethical recruitment practices is important, so is the ethical issue restricting international mobility by increasing barriers to international migration of nurses from countries such as South Africa where active recruitment of nurses from less affluent countries is common, or from contexts in which working conditions are poor or even dangerous. For example, the Ghana Nurses and Midwives Council requires 2 years of Ghanaian experience before a certificate will be issued to verify licensure as a nurse in Ghana. This policy, implemented to insure at least some clinical service in Ghana by new graduates, has been less effective than anticipated because of poor compliance on both sides (Bump 2006). There is little discussion in the literature regarding the potential that raising barriers to international migration of health professionals will make nursing as a career less attractive and curtail recruitment of excellent candidates into nursing education.

With respect to international agreements, there is a new convergence of ideas in recent literature that financial restitution (Pang, Lansang and Haines 2002; Loewenson and Thompson 2003; Stilwell et al. 2003; Hongoro and McPake 2004; Rowson 2004) and skill re-circulation (Rowson 2004) through *international partnerships* may be productive ways forward. Each of these approaches will be examined in more detail.

Financial restitution is based on the premise that high-income countries benefit significantly from health professional migration and should recompense sending countries for what is perceived as subsidization of health professional workforces by countries that can least afford the cost. For example, Ghana lost about US$5 960 000 in tuition costs alone when 61% of the graduates of one medical school migrated between 1986 and 1995 (Dovlo 2003). The USA may have saved as much as US$26 billion in tuition costs from the estimated 130 000 internationally educated medical graduates practicing there (Nayak 1996, cited in Dovlo 2003). When health ministers of Commonwealth countries advocated a code of practice for the international recruitment of health professionals (Commonwealth Code of Practice for

the International Recruitment of Health Workers 2003; Martineau, Decker and Bundred 2004), Canada, Australia and the UK refused to sign because of concerns related to the compensation clause (Bach 2003). Calculating what constitutes adequate compensation is difficult, as low-income country losses are experienced in terms of training costs, lost revenue from taxes over a health professional's career, increased mortality and morbidity in the population aggravated by staff shortages or substitution of less qualified staff, and recruitment of expatriates at significant cost to fill vacant posts (Dovlo 2003). From a human rights perspective, restitution that is calculated only on training costs saved in destination countries without accounting for other losses in low-income countries may be considered ethically indefensible (Mensah, Mackintosh and Henry 2005). Closely allied to the notion of financial restitution are calls for agreements that formalize the transfer of money in the form of remittances to family members in source countries. This would be done in such a way that amounts could be tracked and perhaps taxed as a way of capturing some of this revenue for development priorities (Dodani and LaPorte 2005). This whole area of financial restitution and capturing tax revenue from remittances is complex and an in-depth discussion is beyond the scope of this paper.

Where does this leave us? Less prominent in the literature but perhaps a more promising approach is the notion of re-circulation of skills or perhaps, more expansively, a new look at possibilities inherent in a framework of brain circulation and the roles that international development funding agencies and healthcare and educational institutions in high-income countries could assume. Implicit in such initiatives is a more prominent contribution from highly skilled health professionals of the diaspora of source countries (Usher 2005; Bump 2006). In partnership with sending and receiving countries, the International Organization for Migration developed a Migration for Development in Africa initiative in 2002 to facilitate technology and knowledge transfer through Internet communication, and through temporary return of skilled migrants to their countries of origin without the threat of visa status loss in the destination country (Roisin 2004). In Ghana, as an example, the potential to capitalize on skills of Ghanaians living in the diaspora was enhanced by passage of the *Dual Citizenship Act* of 2002. This act enables Ghanaians to work in Ghana or their new country (Bump 2006). Policies supporting such initiatives help actualize some of the perceived knowledge translation benefits of international migration for sending countries.

International partnerships in health system development, health professional education, or health research involving high and low-income countries could provide much-needed health human resource and financial support (Martineau, Decker and Bundred 2004). For this to happen, international aid priorities need to incorporate a human capital agenda along with more recent attention to poverty eradication, environmental infrastructure, and food security agendas that tend to make health system strengthening and health professional education projects less likely to receive funding (Aiken et al. 2004; Eastwood et al. 2005). In what appears to be an oblique criticism of World Bank structural readjustment policies of the 1990s, one recommendation is that international financial institutions and donors 'respect the human rights obligations of countries of origin toward the right to health, and not set ceilings on social sector expenditure which inhibit the ability of states to meet this obligation' (Bueno de Mesquita and Gordon 2005, 64). As frustration from an inability to provide good care due to lack of infrastructure and other resources is an identified reason for health professional migration, policy shifts in the suggested direction would be useful.

Pushing the international partnership notion even further is the suggestion that, with increasing globalization, it may be time to think in terms of integration of health systems, with the UK and Ghana providing a good example (Mensah, Mackintosh and Henry 2005). The point is made that 'the objective of policy toward migration should be, not limitation of mobility, but equity in health care as soon as possible' (4). Increasing migration of healthcare professionals from Ghana to the UK 'can be understood as a further *blurring of the boundaries* between the two health services' (41) and a potent rationale for 'redistribution within the two health services' (64). The idea is radical and not fully developed but it does open space for innovative thinking about addressing global health inequities.

COMING FULL CIRCLE

Our starting point was the statement that increased international migration of health professionals is weakening healthcare systems in low-income countries, particularly in sub-Saharan Africa. We provided evidence to substantiate this claim. We also situated the claim within a human rights framework where the right to health as both an individual issue and a societal issue was pitted against individual rights to mobility, adequate standards of living, education, non-discrimination, and equality. The possibility of restricting mobility, raised in only one paper, was not considered a viable option either ethically or practically. Decisions to migrate are personal and rational responses to life aspirations and circumstances. What we hope to have achieved in this analysis is an increased appreciation of the complexity

of the issues and an understanding that, with creativity, perseverance and good will, these rights may not, in reality, be as oppositional as they appear.

There appear to be three major gaps in understanding of the health workforce crisis in sub-Saharan Africa. More evidence is needed on the impact of the dearth of health professionals on health outcome indicators, workforce data systems need more specificity to allow better tracking of what is really happening (Buchan and Sochalski 2004), and policies and practices that enhance attraction and retention of health professionals in all contexts need to be documented. Without such information, meaningful solutions will be difficult to plan, implement, evaluate, or share. Finally, as a gendered profession, perhaps nurse and other health professional migration would be better understood through research that includes a feminist theoretical perspective as a framework or an analysis of findings through a gender lens. Knowledge generated may lead to innovative policies and actions both within countries and in the global context.

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