Primer on Brain Drain

Overview of Physicians for Human Rights Report: "An Action Plan to Prevent Brain Drain: Building Equitable Health Systems in Africa"

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I. Introduction

In recent years, global organizations and individual countries have increasingly set ambitious health and development goals, especially those directed at countering the burgeoning HIV epidemic that is devastating many parts of the world. Much will be required for these goals to be reached. In addition to financial resources, there will be an increased need for human resources – the doctors, nurses and other health care workers that provide the health services to meet these goals. Without attention to meeting human resource needs, the lofty goals will almost certainly not be met.

Unfortunately, meeting human resource needs in the health sector will prove quite difficult for many of the countries in sub-Saharan Africa, the focus of this report, that are experiencing severe shortages of health workers. There are many causes, which vary by country, of this shortage but one of the most important factors is brain drain. Brain drain is defined in this report as the exodus of health care workers from developing nations to wealthier countries of the North. The scope of the brain drain is vast and its impact severely limits the prospects of improving the health sector for many African countries. This problem is especially grave given the growing HIV epidemic in sub-Saharan Africa and the increase strain it places on already overburdened health care systems.

This report begins by discussing the scope of brain drain and impact that the resulting human resource crisis has on health care systems in African countries. The causes of the brain drain, including push and pull factors, are then discussed and recommendations for the plan of action to end brain drain are made for all the contributing factors mentioned.

II. The Scope and Impact of Brain Drain

- **Scope**

Very few countries in sub-Saharan Africa have enough health workers to meet even the basic health needs of their citizens. Thirty-eight of the forty-seven countries in sub-Saharan Africa do not meet the WHO recommended 20 physicians per 100,000 population[i]. In fact, 13 of these countries have 5 or fewer physicians per 100,000[ii]. WHO recommends at least 100 nurses per 100,000 population, but 17 sub-Saharan African countries have 50 or fewer[iii]. These figures are worse still in rural and poorer regions within sub-Saharan African countries. In a 1981 study, the WHO observed that, "In many countries, there are ten times as many people per doctor in rural areas as there are in metropolitan areas[iv].

One of the most important factors, and in some places the single greatest contributor, to health worker shortage is brain drain. Many countries lose more than half their medical staff to brain drain. In Ghana, 50% of medical school graduates leave within 4.5 and 75% within 9 years. Furthermore, this problem is getting worse. In the United Kingdom,

for example, the number of nurses from outside the EU grew from fewer than 2,000 in 1994/5 to more than 15,000 in 2001/2002[v].

- **Impact**

The shortage of health workers directly results in widespread closure of health facilities. In 2001, over 57% of Mali's newly opened health posts closed due to insufficient personnel[vi]. A report on emigration of nurses from South Africa found that over 60% of health facilities surveyed had trouble replacing the nurses that they lost to developing countries[vii]. As a result of understaffing, medical personnel are often unqualified for the tasks they are forced to carry out. In Mali, for example, under-trained staff have been called on to deliver babies, and ward attendants have had to perform the work of nurses[viii]. Even when patients are able to see qualified physicians and other health professionals, they are at risk for receiving inadequate care because medical staff is so overworked, which leads to fatigue and increased rate of mistakes, misdiagnosis and insufficient time spent with patients[ix].

There is also great financial loss for countries as a result of the brain drain. In sub-Saharan Africa, the majority of medical students are trained at public facilities funded by the federal government. It is estimated that these governments spend $500 million annually on health professionals that migrate to developed countries[x]. The loss of medical school graduates to other countries represents a direct loss of precious government resources that could have been directed to other under-funded areas.

III. Causes of the Brain Drain

There are both push and pull factors that contribute to the brain drain and resulting human resource crisis. Push factors encourage health professionals to leave their countries and include need for increased salaries, safer working conditions, better human resources for health management policies, improved health care infrastructure, and enhanced professional development opportunities. Pull factors draw health professionals to other countries, and include the shortages of health professionals in and their recruitment to high-income countries. In order to better address the dearth of healthcare professionals in developing countries, additional steps are necessary. Human resource planning and enhancement of management capacity must occur. More health workers, including a mid-level cadre of workers, must be trained and training institutions must be supported. Rural areas, which suffer disproportionately from the brain drain, require special support. Finally, economic policies that result in limits on the number and salaries of health care workers must be reevaluated to prevent further loss of health professionals. This section will outline the issues and summarize recommendations pertinent to both redressing the push and pull factors as well as promoting the implementation of the additional steps listed above.

PUSH FACTORS

Salaries and Benefits

Low salaries is one of the most significant push factors driving health professionals to high-income countries. Also, low salaries in the public sector are the most important reason that health workers leave the public sector for the private sector. Often, salaries are so low as to deny health professionals even a basic living wage[xi]. As a

result, underpaid staff spend a considerable amount of time outside of their formal jobs trying to make ends meet, which detracts from both the quantity and quality of their work in the public sector.

Recommendations

Donors should assist African countries to increase salary and benefits for health professionals. Along with keeping health professionals in the country, improved salary and benefits for public sector health workers should encourage them to remain in the public sector. The increase in remuneration should be distributed evenly among all cadres of health workers so as not to drive some (usually the more highly trained and specialized) away in order to retain others (the mid-low skill level workers). The US (and other donor countries) should remove unnecessary regulatory hurtles in foreign aid legislation so that more funding can be allocated to increasing remuneration. Because it has explicitly outlined commitment to improving human resources for scaling up interventions for AIDS, the Global Fund to Fight AIDS, Tuberculosis and Malaria should be considered an important potential source of funding for increasing salaries and benefits.

Health worker safety and well-being

Fear of occupational infection is another significant reason that health care workers are emigrating, leaving the profession altogether, or avoiding the field in the first place. A survey of Malawian nurses who had left the country found that lack of protective gear was the third most cited reason for their departure[xii]. At a workshop of Ugandan health professionals organized by Physicians for Human Rights, the lack of protective gear was one of the chief concerns voiced.

Recommendations

Countries in Africa should develop policies that will ensure that health facilities have adequate levels of essentials supplies for infection prevention and control. One promising strategy is to include protective gear on national essential medicine lists. The US and other donor countries should help ensure that occupational infection is decreased by providing funds and logistical support, such as product procurement, inventory management and distribution, to low-income African countries. Concurrently African countries can assume responsibility to ensure adequate supplies by conducting assessments to determine the precise gaps in infection prevention and control. Furthermore, these countries should incorporate infection prevention and control into pre-service training curricula. Countries can take a number of measures to help ensure that their health professionals are compelled to continue to work if they are infected. Post-exposure prophylaxis should be available to all, and HIV-positive staff should receive preventative therapy against TB and other opportunistic infections. Flexible and adaptable work schedules should be adopted to accommodate employee needs. Finally, countries that adopt such measures should conduct outreach to health workers to ensure that they are aware of and able to access these programs.

Occupational Stress

In addition to fearing for their own occupational safety, health workers face seeing their patients die in large numbers. They must deal with the reality that, due to the nature of the HIV epidemic and the largely inadequate resources available to them, health professionals are not able to help their patients despite their best efforts. At the same time, health workers have to cope with an increasing number of deaths and illnesses of

their relatives, friends, and colleague due to AIDS. Thus, severe staff shortages and the high demands that HIV/AIDS places on the health systems further increase the stress of being a health worker[xiii].

Recommendations

African and donor countries must work together to ensure that health workers have psychosocial support. This support could take various forms and be offered by a variety of professional associations. Voluntary testing and counseling services should be offered to health professionals but housed away from the health facilities in order to prevent stigma in the working environment.

Physical health infrastructure and health systems management

Lack of medicine, equipment and supplies for treatment contribute to the brain drain as health professionals grow frustrated and demoralized with their inability to help their patients with potentially remediable problems. A survey in Zimbabwe found that physicians' number one reason for leaving the public sector was that they did not have the equipment supplies and drugs to offer effective care for their patients[xiv]. Part of the response to the brain drain, therefore, intersects with the broader agenda of ensuring that the physical infrastructure and logistical information and other systems are in place to enable health systems to function.

Recommendations

The United States and other donor countries should assist African countries to rehabilitate health facilities in need of repair and upgrade as well as to ensure that facilities have the necessary drugs, supplies and equipment. Donor countries should also provide funds, training and technical assistance to help African countries improve health information management, drug distribution systems, stock management systems, and communication and referral systems. This donor country support should also include consistent, quality supervision and monitoring of improved health systems.

Pre-service training

Health professionals in African countries are most often trained in the most up to date, tertiary-level medicine. This results in a disconnect between the curricula of many health training institutions in Africa and actual practice conditions, which may leave health workers unequipped to practice medicine in the way they were trained. Such a disconnect might drive health workers to seek an environment more consistent with what they experienced during training, such as the private sector or high-income countries.

Recommendations

African health training institutions should adjust their curricula to include an emphasis on primary health care, which is more consistent with the type of practice that most public health sector facilities practice. Furthermore, these institutions should incorporate or expand their training in the area of AIDS care and treatment. These measures would help medical students feel more prepared to handle the problems they will find in the public health sector.

Research and graduate training opportunities

Because many African medical professionals, including researchers, are trained in resource-rich settings abroad, their first exposure to the profession is inconsistent with the environment that they face upon returning to their country of origin. Lack of access to essential resources that they grew accustomed to during training may be demoralizing

and incite medical professionals to move to the private sector or return to the high-income countries in which they were trained.

Recommendations

African health ministries, in conjunction with technical and financial assistance from donor countries, should improve the quality of existing medical graduate training programs, continuing education programs and expand the opportunity for research. The US and other donor countries should assist African countries in improving health facilities' computer and internet access, providing up-to-date materials in libraries and offering free access to health-related journals. Nation-wide or facility-based committees, which include students and resident physicians, should be established to review the quality of graduate training in order to address concerns of students and residents.

Medical School Culture

Many medical schools in Africa have a culture of migration that encourages graduates to practice outside of Africa. Student's role models are physicians and medical school faulty who boast about their experiences and training abroad, and make students aware of the benefits, both tangible and intangible, of education and practice in resource-rich environments.

Recommendations

It is understandable that medical school faculty would measure program success, in part, by the ability of graduates to obtain good overseas jobs. However, in light of the human resource shortage in African countries, medical schools, NGOs, and African governments should collaborate in efforts to try to change faculties' views of success so that students are encouraged to remain in their home country rather than practice abroad. Because professors' opinions will be difficult to change, training facilities should also offer programs that encourage mentorship between students and professors who already value careers based in the home country, especially those that include public service.

PULL FACTORS

Shortage of health professionals in developed countries

Shortages of health professionals in high income countries, due to changing demographic and economic conditions, drives these countries to look abroad to meet their health personnel needs. This is a faster and less expensive way of remedying the lack of health professionals than training citizens domestically.

Recommendations

The US and other wealthy nations should minimize reliance on foreign health professionals by addressing domestic health personnel shortages through strategies that seek to: place more doctors and nurses in rural and underserved areas, provide health care workers with decent wages and working conditions, and provide flexible working arrangements. Furthermore, these nations should increase graduates from nurse training institutions as well as other health training institutions in order to meet their own health worker shortages.

Recruitment of health professionals from Africa

There is a growing trend of active recruitment of nurses from developing countries by some developed countries[xv]. Professional agencies help medical facilities in developed countries recruit medical professionals from African and other developing

countries through print-ads, the internet, referrals, job fairs, etc., and may even help recruits with the immigration and relocation processes[xvi].

Recommendations

Developing countries and organizations in developing countries should explore possibilities of limiting recruitment from abroad by restricting advertisements and number of foreign recruiting agencies. Because of the widespread availability of information about health careers abroad, especially through the internet, efforts by developing countries to diminish recruitment will be limited. Therefore, the United States and other recruiting countries should end active recruitment of health professionals from developing countries, absent agreement with those countries, including reviewing their immigration policies to determine whether they contribute to brain drain by facilitating the immigration process for medical school graduates and other health workers. Furthermore, an international strategy on ethical international recruitment of health professionals, grounded in human rights principles, must be developed and adopted at the national level. Finally, because immigration is inevitable, even if active recruitment stops, high-income countries that host health professional migrants from low-income countries should develop strategies to help ensure that these workers' experiences contribute to their ability to provide high-quality care when and if they return to their countries of origin.

Reimbursement

Recently, at the 57th World Health Assembly in May 2004, wealthy nations agreed to compensate members of the African Union for health professionals lost to these nations[xvii]. How and to what degree this measure should be enforced has yet to be seen.

Recommendations

Wealthy nations should reimburse developing countries in a way that reflects the training costs as well as the health impact of loosing their health professionals to migration. One measure of reimbursement would be to translate the health impact into economic terms through calculating the loss of productivity due to death and disability as a result of migrating health professionals. Whatever the reimbursement mechanism, the full amount of reimbursement funds should be put back into the health system.

MEDIATION OF PUSH AND PULL FACTORS

Having discussed the push and pull factors that contribute to the brain drain of African health professionals, the following section will briefly discuss broader factors that could be altered to diminish the negative impact of these push and pull factors on the health systems of low-income African countries.

Human resources planning and management

A. Planning

In order to better retain personnel, it is necessary to know the current status of all health facilities, including their conditions, needs, staffing capacities and the loss/gain of staff. Nevertheless, there is very little information available on human resource needs in health facilities in Africa. Indeed, few areas are more in need of better data than human resources for health[xviii].

Recommendations

African countries should develop or revise national plans on human resources for health so as to produce and retain the numbers of personnel, in the appropriate skill-mix,

required to meet the health needs of the population. As part of this national plan, African countries should undertake comprehensive surveys of their health infrastructure to better understand what needs exist and how to best meet them. Surveys could identify gaps in health infrastructure and enable resources to be directed to those gaps. Surveying and responding to health infrastructure needs could also be useful as a means of empowering health workers to advocate for themselves and, consequently, improve morale. Additionally, African countries should develop national maps and databases of their health workers in order to plan better use of personnel by redeploying them to help equalize their distribution. Such a database should also include information on why health workers leave their jobs so that low-income countries can study what health workers require to keep them in the country and public sector, and develop policies and incentives accordingly.

B. Management

Good human resources management has the potential to significantly increase staff morale, and so encourage health professionals to remain in the country and in the public health sector. One way this can occur is through the establishment of well-defined career paths that reduce the incentive for health workers to migrate. Human resource management can also help mitigate the inadequate supervision and high workloads that contribute to health professionals' decisions to emigrate or leave the public sector.

Recommendations

Health ministries, with help from international donors, should train current and new health resource managers in order to ensure that they have the tools, authority, finances, supporting staff and information to do their job. Issues in human resources should be incorporated into pre-service curricula for health professionals. African health ministries should improve their human resource policies to offer better salary and benefits packages, make sure that health workers have clear job descriptions, receive annual performance reviews and are regularly informed of changes in health policy. Finally, whenever possible, health facilities in Africa should employ managers trained in human resource management to ensure that health workers are paid on time and have someone to advocate on their behalf both within the facility and to higher authorities.

Sources for more health care workers

The shortage of health workers cannot be solved only by retaining more health professionals. Additionally, sources for producing more health workers need to be supported and increased. This is especially pertinent in light of the growing demand on health workers as a result of the burgeoning HIV/AIDS epidemic and treatment scale-ups.

A. Supporting health training institutions

Support of health training institutions is needed both to increase the capacity of the schools so that they can train more health professionals and to improve the quality and relevance of the training students receive.

Recommendations

The United States and other donors should provide funding to promote recruitment and retention of health trainers, improve institutional facilities and build new facilities where necessary so that more students graduate annually. Furthermore, a portion of the donor funding for in-service training, which is already significant, should be shifted to pre-service training, which is more sustainable, inclusive and cost-effective.

The US and other donor countries can also support African health training institutions by loaning professors and offering study abroad programs. Finally, African countries themselves can support their health education centers by reaching out to retired and inactive health professionals to assist in any way possible.

B. Increasing roles of nurses, mid-level cadres, and community health workers

Because the shortage of health professionals is greatest at the highest level of training, it maybe necessary for health workers at lower levels to expand their repertoire of duties.

Recommendations

Many services now performed by nurses and physicians could potentially be performed by mid-level cadres of health workers. Health ministries should consider reclassifying health workers and assigning increased responsibility and tasks to the extent possible so as to relieve the burden on physicians. This may include, for example, promoting advanced practice roles for nurses, including the ability to prescribe and dispense some medications. It might also include training community health workers to carry out tasks that are especially in demand, such as supporting the provision of anti-retroviral therapy.

C. Foreign health professionals

In some African countries, foreign health professionals make up a significant portion of physicians, with their services particularly important in rural areas. While domestic physicians are ideal, foreign doctors have much to contribute to African health care systems.

Recommendations

High-income countries should develop strategies to send their health professionals to low-income countries. These programs would meet needs in a two-fold manner. First, foreign health professionals may be involved in direct service provision in areas that have the most acute personnel deficits. Second, foreign health professionals can enhance local capacity by providing training in areas such as HIV/AIDS treatment and related conditions. The need for this type of assistance is especially great with the increasing roll-out of antiretroviral therapy programs. In order to procure more foreign assistance of this nature, African countries should minimize immigration restrictions placed on these workers.

Increase number of rural health workers

In addition to the efforts to increase the numbers of health workers in African countries in general, special measures should be implemented to focus on the extreme dearth of rural health care workers in much of Africa.

Recommendations

African countries, with assistance from donor countries, should provide extra salaries and benefits to health workers who take posts in rural or other underserved areas. These countries should also consider policies, such as a community service requirement, that will encourage health students and recent graduates to practice in rural and other underserved areas. This should be done carefully so as not to incite more to migrate in order to avoid required service duties. In addition to community service requirements, training institutions should offer programs to encourage students to practice in rural areas. Because studies have consistently found that they are more likely to work in rural areas[xix], training institutions should make special efforts to recruit students from rural and

other underserved backgrounds and donor countries should assist by offering scholarships for these students. Finally, African countries and donors should focus resources on physical infrastructure and other forms of health system development in rural and other underserved areas in order to make them more attractive to health professionals considering working there.

African Health Professional Diaspora

The effects of the brain drain on African health care systems can be further mediated if African countries incentivize health professionals who have migrated to return to work in their country of origin or otherwise contribute to the country's health system in whatever capacity possible.

Recommendations

African countries should permit dual citizenship to health professionals wishing to return to work in their country of origin. At the same time, the United States, and other migration destinations, should enact special provisions in immigration law to permit health professionals from countries suffering from brain drain to return to the health sector in their native countries without losing their residency status or otherwise having the time spent away prejudice them in the naturalization process. African governments could go one step farther than allowing dual citizenship in helping members of the African health professional Diaspora return through assisting with administrative challenges such as finding housing and transferring funds. Because the lack of knowledge of job opportunities is one of the greatest obstacles to African professionals returning from high-income countries, a database should be maintained that lists job openings that could be filled by members returning from abroad.

Macroeconomic Policies

Policies driven by macroeconomic concerns are increasingly conflicting with African countries' ability to improve their health systems. International organizations, such as the IMF and the World Bank put restrictions, such as overall budget ceilings, on loans to developing countries in an attempt to promote macroeconomic stability through maintenance of low budget deficits, low inflation and stable exchange rates with the intent of spurring development. For example, the IMF may refuse to offer financial support unless countries comply with IMF budgetary spending ceilings and restrictions on how much spending in the public sector can occur. While, in theory, these are beneficial policies aimed at promoting economic growth and development, they can have serious negative effects on the health system in two important ways: first, these policies limit the ability of African and low-income countries to spend their own resources on the health sector, including but not limited to spending on health personnel; second, they prevent or risk preventing countries from accepting foreign assistance for health, particularly that which had not been anticipated.

Not only are these macroeconomic policies interfering with the right to health care for the poor, but they may also be counterproductive. Jeffery Sachs has observed, "I don't know of a single country case where increased donor-financed health spending to respond to epidemics such as HIV/AIDS has been a trigger for macroeconomic instability. On the contrary, there is real and shocking macroeconomic instability caused by the failure to respond to such epidemics, since these epidemics result in a cascading destruction of families, communities, and businesses"[xx]. A growing body of evidence indicates that additional spending on health and other social sectors, including through

foreign assistance, promotes the very growth that the macroeconomic policies seek to protect. Healthier and better-educated citizens are better equipped to contribute to the economic growth and development of a country. Therefore, aid that is aimed at promoting health and education will increase productivity, not hinder it.

Recommendations

In light of the fact that macroeconomic policies detract from the health systems of developing countries and may even be bad for overall growth and development, The IMF and the World Bank should not penalize countries that break overall spending ceilings because of increased spending in health, education and other sectors and activities needed to promote human development. Restrictions on health and other social sectors spending, including through the receipt of donor funding, must be eliminated or at least greatly restructured so that countries can use their own and foreign resources to better their health sector. In order to achieve this goal, WHO and the World Bank should educate finance ministries on the economic benefits of investing in health because this will make them more receptive to eliminating spending restrictions and budgetary ceiling. Also, to this end, the World Bank and IMF should make transparent how economic restraints negatively impact the health and education sectors. Finally, the US and other donor countries can help by investigating and advocating changes in the macroeconomic policies that harm the health sector.

IV. Conclusion

Brain drain of African medical professionals is happening, and for nurses, who comprise the backbone of the sub-Saharan African countries' health care systems, it is accelerating. In addition, the distribution of health personnel within African countries is highly inequitable, with rural areas suffering more than urban ones. The effects of this human resource crisis are already being felt throughout Africa and as more countries seek to scale up AIDS treatment services in response to the growing epidemic, they will find, as they already have in many cases, that human resources are the major barrier to accomplishing this goal.

The basic action guidelines for how African countries can build human resources for health are well-known. They include increased salaries and investment in physical health infrastructure and infection control, an end to ceilings on health sectors spending and efforts by high-income countries to meet their health needs through domestically trained health workers. These measures, and the many others discussed in this report, would go a long way to meeting Africa's health personnel shortages and helping African countries meet their goals of improved health and development. Indeed, if these countries are to combat the HIV epidemic and generally improve the state of their health care systems many, if not all, of these measures must be implemented.

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[i] United Nations Development Programme, ***Human Development Report 2003*** (2003), at 254-257. Available at: http://www.undp.org/hdr2003/indicator/indic_56_1_1.html (38 countries); World Bank, ***The World Bank in Africa***, http://www.worldbank.org/afr/. Accessed June 12, 2004. (47 countries); Regional Network for Equity in Health in Southern Africa (EQUINET), Health Systems Trust (South Africa) & MEDACT (UK), ***Health Personnel in Southern Africa: Confronting maldistribution and brain drain*** (2003), at 6. Available at: http://www.equinetafrica.org/bibl/docs/healthpersonnel.pdf (WHO standard of minimum 20 physicians per 100,000 population).

[ii] United Nations Development Programme, ***Human Development Report 2003*** (2003), at 254-257. Available at: http://www.undp.org/ hdr2003/indicator/indic_56_1_1.html; ***Malawi Poverty Reduction Strategy Paper*** (April 2002), at 58-59. Available at: http://www.imf.org/external/np/prsp/2002/mwi/01/043002.pdf.

[iii] Ndioro Ndiaye, ***Statement by the Deputy Director General, International Organization for Migration***, presentation at 52nd Session of the WHO Committee Meeting for Africa, Harare, Zambia, Oct. 8-12,2002. Available at: http://www.iom.int/en/archive/DDG_WHO_081002_eng.shtml (target of one nurse per 1,000 population). William Meeus & David Sanders, ***Pull Factors in International Migration of Health Professionals*** (March 2003), at slide 4. Available at: http://www.hst.org.za/conf03/presentations/L0080.ppt (17 countries).

[iv] World Health Organization, ***Global Strategy for Health for All by the Year 2000*** (1981), at 23. Available at: http://whqlibdoc.who .int/publications/9241800038.pdf.

[v] James Buchan, Tina Parkin & Julie Sochalski, International Nurse Mobility: Trends and Policy Implications (2003), at 37. Available at: http://www.rcn.org.uk/downloads/InternationalNurseMobility- April162003.doc. The Philippines has been the single most important source of nurses for the United Kingdom, at least in the later years. ***Id***.

[vi] USAID, Bureau for Africa, ***The Health Sector Human Resource Crisis in Africa: An Issues Paper*** (Feb. 2003), at 5. Available at: http://www.aed.org/publications/HealthSector.pdf.

[vii] James Buchin, Tina Parkin & Julie Solchalski International Nurse Mobility: trends and Implications (2003), at 48. Available at: www.rcn.org/uk/downloads/InternationalNurseMobility-April162003.doc

[viii] ***See*** Regional Network for Equity in Health in Southern Africa (EQUINET) and Oxfam (Great Britain) (Jean-Marion Aitken & Julia Kemp), ***HIV/AIDS, Equity and Health Sector Personnel in Southern Africa*** (Sept. 2003), at 16. Available at: http://www.equinetafrica.org/bibl/docs/hivpersonnel.pdf.

[ix] ***See*** "The Brain Drain in Healthcare in Ghana: An Interview." ***U.N. Integrated Regional Information Networks (IRIN)***, Oct. 6, 2003. Available at: http://www.cbcfhealth.org/content/contentID/2264.

[x] Regional Network for Equity in Health in Southern Africa (EQUINET), Health Systems Trust (South Africa) & MEDACT (UK), ***Health Personnel in Southern Africa: Confronting maldistribution and brain drain*** (2003), at 10. Available at: http://www.equinetafrica.org/ bibl/docs/healthpersonnel.pdf. The training costs of all foreign professionals(not just health professionals) who emigrate from Africa has been estimated at $4 billion per year. "Brain drain reportedly costing$4 billion a year." ***U.N. Integrated Regional Information Networks (IRIN)***, April 30, 2002. Available at: http://www.irinnews.org/ report.asp?ReportID=27536. African countries spend about the same amount, $4 billion, on salaries of foreign experts to build or replace lost capacity and provide technical assistance. David Sanders & Wilma Meeus, ***A critique on NEPAD's health sector plan of action*** (August 2002), at 19. Available at: http://www.spheru.ca/PDF%20Files/NEPAD%20report%20card%20project%20report.PDF.

[xi] ***See*** World Bank, ***Better Health in Africa***, 1994, at 89. Available at: http://www.worldbank.org/afr/pubs/bhaen.pdf. A study of health care workers' salaries in 15 African countries found that their 1985 levels were only 40-53% of their 1975, depending on civil service grade. Entry level salaries in Madagascar in 1988 were only 20-25% of their 1975 levels, and in the half decade from 1981 to 1987, public sector health care worker salaries in Tanzania fell by 56-75%. ***Id***.

[xii] ***See*** Regional Network for Equity in Health in Southern Africa (EQUINET) and Oxfam (Great Britain) (Jean-Marion Aitken & Julia Kemp), ***HIV/AIDS, Equity and Health Sector Personnel in Southern Africa*** (Sept. 2003), at 23. Available at: http://www.equinetafrica.org/bibl/docs/hivpersonnel.pdf.

[xiii] The second most cited reason in the survey of Malawi nurses who had left the country was a high workload. ***See*** Regional Network for Equity in Health in Southern Africa (EQUINET) and Oxfam (Great Britain) (Jean-Marion Aitken & Julia Kemp), ***HIV/AIDS, Equity and Health Sector Personnel in Southern Africa*** (Sept. 2003), at 23. Available at: http://www.equinetafrica.org/bibl/docs/hivpersonnel.pdf.

[xiv] ***See*** Regional Network for Equity in Health in Southern Africa (EQUINET) and Oxfam (Great Britain) (Jean-Marion Aitken & Julia Kemp), ***HIV/AIDS, Equity and Health Sector Personnel in Southern Africa*** (Sept. 2003), at 9. Available at: http://www.equinetafrica.org/bibl/docs/hivpersonnel.pdf.

[xv] James Buchan, Tina Parkin & Julie Sochalski, International Nurse Mobility: Trends and Policy Implications (2003), at 55. Available at: http://www.rcn.org.uk/downloads/InternationalNurseMobility- April162003.doc.

[xvi] Private communication, Paul J. Fitzpatrick, President & CEO, Imedical Staffing, Inc., Jan. 9, 11, 2004. This is not to say all recruiters follow this approach. "Recruitment agencies are of different types . . . and also function in different ways." James Buchan, Tina Parkin & Julie Sochalski, International Nurse Mobility: Trends and Policy Implications (2003), at 71. Available at: http://www.rcn.org.uk/downloads/InternationalNurseMobility-April162003.doc.

[xvii] ***See*** Paul Udoto, "Poor Countries to Be Paid for Brain Drain." ***Nation*** (Kenya), May 28, 2004.

[xviii] ***See*** USAID, Bureau for Africa, ***The Health Sector Human Resource Crisis in Africa: An Issues Paper*** (Feb. 2003), at 21. Available at: http://www.aed.org/publications/HealthSector.pdf ("A reflection of the inadequate attention given to HR issues is the poor state of personnel information systems, including availability and easy retrieval of such data as the total number of employed staff by category, grade, and location. In most sub-Saharan African countries, these pieces of information are extremely difficult to obtain. The government payroll is a possible source, but it often does not distinguish the categories of staff (they are often employed on grades that are inclusive of several different professions), and it may not be cleaned of ghost workers").

[xix] ***See*** Elma de Vries & Steven Reid, ***Do South African Rural Origin Medical Students Return to Rural Practice?*** (May 2003). Available at: ftp://ftp.hst.org.za/pubs/research/ruralorigin.pdf. ***See also*** Jay Greene, "Rural Doctors Often Born and Raised, Not Recruited." ***AMNews***, Oct. 1, 2001. Available at: http://www.ama-assn.org/amednews/ 2001/10/01/prsa1001.htm ("[P]lace of birth appears to be the best predictor of whether a medical student chooses to practice in a rural area or small town, according to a new [US] study. But a consistent mentoring program during medical school and family practice preceptorships are also key").

[xx] Open letter from Professor Jeffrey D. Sachs, Chair, WHO Commission on Macroeconomics and Health, to Members of the Government of Uganda, May 17, 2002.