

## **Human Resources for Health and the Global HIV/AIDS Pandemic**

Testimony of Holly J. Burkhalter  
Physicians for Human Rights

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Chairman Hyde, Representative Lantos, and Members of the Committee: Thank you for inviting me to testify at today's hearing on the HIV/AIDS and the U.S. Response. I am honored to be here. My name is Holly Burkhalter and I represent Physicians for Human Rights, a US nongovernmental organization that employs the skills and the voice of the medical and scientific profession in the service of international health and human rights. I am grateful for the assistance of my colleague, Eric Friedman of Physicians for Human Rights, in the preparation of this testimony.

Just a few years ago the concept of providing antiretroviral drugs, which at the time cost more per capita per day than poor governments spent on health per capita in a year, was largely a fantasy. But the drop in the price of antiretroviral drugs and development of generic medicines of the past five years, the extraordinary commitment of resources by President Bush and the United States Congress, and the creation of a major new international financing mechanism to confront the pandemic, the Global Fund to Fight AIDS, Tuberculosis, and Malaria, have transformed HIV/AIDS for some in sub-Saharan Africa, Asia, and the Caribbean into a manageable disease.

If access to treatment had been withheld from poor countries until they secured the health infrastructure they needed to provide basic primary health care to all, as well as manage an immense HIV/AIDS case load with medicines largely unknown to them, those countries would be waiting for antiretrovirals to this day. Fortunately, the vision of treatment activists and now major donors as well has been to "build it as we go." Accordingly, the President's Emergency Plan for AIDS Relief (PEPFAR) has provided technical assistance, supplies, training, drugs, laboratory equipment, and other resources to countless hospitals and clinics in the fifteen focus countries to create capacity to scale up prevention and care, and graft antiretroviral therapy onto existing health services.

That approach has helped enlarge the number of people receiving anti-retroviral treatment in sub-Saharan Africa from 50,000 in the end of 2002 to 310,000 in December 2004.<sup>1</sup> But it has become increasingly clear that donors and national governments must simultaneously confront, ameliorate, and eventually remedy Africa's disastrous shortage of trained health care workers. As Ambassador Tobias indicated in his first report to Congress in August of 2004, "Without a large increase in trained health workers, the human capacity to deliver ART [anti-retroviral therapy] and other therapies will simply be absent."<sup>2</sup>

While the dearth of health workers is undermining the huge scale up of HIV/AIDS prevention, care, and treatment that Africa needs so desperately, conversely the emphasis on HIV/AIDS services is drawing resources away from other vital health services that are also in short supply. For example, at the 970-bed the Lilongwe Central Hospital in Malawi, only 169 nurses were practicing in mid-2004, compared to the 520 nurses whom the hospital was authorized to employ. The hospital's former staff of 38 laboratory technicians had fallen to only six. The nurses and laboratory technicians were moving to HIV/AIDS programs sponsored by NGOs and overseas universities, precipitating a staffing crisis at this major national referral hospital.<sup>3</sup>

The health worker shortage may be newly visible to HIV/AIDS activists like me, but it is far from a new problem. Funding for public health in Africa by national governments has been largely stagnant for decades, and "brain drain" of doctors and nurses who migrate to the West has in some countries approached the number of new health worker graduates. Today, Africa faces one of the greatest threats to health and survival in human history - the HIV/AIDS pandemic - but it is in a poor position to confront it. Adding new duties such as AIDS counseling, testing, and treatment to an overburdened health work force without a commitment to dramatically enlarge their numbers will not only undermine new AIDS treatments initiatives, it has the potential to weaken fragile public health systems and erode other primary health activities.

Physicians for Human Rights and the many activist organizations with whom we collaborate want PEPFAR to succeed. Accordingly, we are calling for a second Presidential initiative for health in Africa to accelerate the recruitment, retention, training, and rational deployment of skilled health workers while simultaneously continuing to scale up prevention, care, and treatment of HIV/AIDS so as to meet and exceed the President's 2-7-10 goals and other health goals. We appeal to President Bush and Congress, who have made PEPFAR a reality, to take the fight against HIV/AIDS and other infectious diseases to the next level. We challenge you to develop and fund a "Global Health Workforce Initiative" to help AIDS-burdened countries recruit, retain, and support large numbers of African health professionals, and link them to a trained and supported network of community health workers and home health care givers.

Africa's health worker shortage requires Congress and the executive branch to accelerate and scale up current health systems initiatives and to envision and administer new ones. The crisis requires strategic planning in collaboration with national governments, international organizations, and other donors. American leadership will be needed to permit a loosening of acroeconomic constraints on governments' ability to spend their own and donors' contributions on health and health worker salaries. New programs should specifically invest in public health systems, and plans must be made to "Africanization" PEPFAR-funded treatment, care and prevention initiatives. Durable solutions to the health worker shortage must include investing in African health professionals and giving them incentives to stay home where they are needed most. It means empowering African medical and nursing schools to recruit, train, and provide

continuing education. And it will require that the U.S. and other Western countries that recruit African health workers adopt an ethical approach to the brain drain.

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#### Background: Africa's Health Worker Shortage:

Last spring my colleague Eric Friedman visited Rietvlei District Hospital in the Eastern Cape, which is South Africa's most rural province. The hospital superintendent told him that without more doctors, the hospital would be unable to provide anti-retroviral therapy on any significant scale, even though the government had designated the hospital as the AIDS treatment center for its district of 180,000 people. Eric learned first-hand that without a significant increase in African health workers, ART capacity simply cannot be managed by some of the poorest clinics and hospitals.<sup>4</sup>

The health worker shortage in Africa that is now in the public eye because of the AIDS pandemic has also been a key factor in other health emergencies, including the continent's tragically high rate of maternal mortality. In sub-Saharan Africa, a woman's lifetime risk of maternal death is 1 in 16, compared to 1 in 2,800 in rich countries.<sup>5</sup> According to the *World Health Report 2005 – Make Every Child and Mother Count*, "Putting in place the health workforce needed for scaling up maternal, newborn and child health services towards universal access is the first and most pressing task."<sup>6</sup>

The United Kingdom's Commission for Africa, noting this disparity in its recent report, recommends that African countries and donors unite to add 1 million health care workers to Africa within a decade, nearly tripling Africa's health workforce.<sup>7</sup> The Commission estimates that Africa requires an immediate annual increase of \$10 billion, rising to at least \$20 billion, in donor assistance to the health sector, including health worker specific needs such as pre-service training and salary.<sup>8</sup>

The health worker shortage has multiple origins, including massive under-investment in health systems, inadequate attention to human resource policies, the death of health workers and enormous burden of care created by the HIV/AIDS pandemic, and deficits in the health worker education system. These problems, in turn, underlie the large-scale migration of health professionals from Africa to wealthier countries, such as the United States and United Kingdom. In some countries, the majority of physicians are leaving, and the number of nurses emigrating has skyrocketed in the past decade.

In the absence of comprehensive data, country examples and anecdotes highlight the scope of this "brain drain." As of 2001, only 360 of the 1200 physicians trained in Zimbabwe during the 1990s were still practicing in the country.<sup>9</sup> In 2002/2003, more than 3,000 nurses trained in South Africa, Zimbabwe, Nigeria, Ghana, Zambia, and Kenya registered in the United Kingdom.<sup>10</sup> In 1999, about as many nurses left Ghana as were trained there.<sup>11</sup> It is frequently stated that more Malawian doctors practice in Manchester, England, than in all of Malawi.<sup>12</sup> Brain drain is accelerated as wealthy

nations, facing shortages in their own health workforces, actively and aggressively recruit health professionals from some of the countries that can least afford to lose them.

This migration, or brain drain, is part of a more complex flow of health workers from poorer to wealthier developing countries, from the public sector to the private sector, including for-profits as well as NGOs and vertical AIDS programs, and from rural to urban areas. This last flow creates disparities within countries that in some cases are so great that they mirror the global disparities. For example, two regions in Ghana have only 34 nurses per 100,000 population, whereas another region has 120 nurses per 100,000 population. The physician disparity is greater still. One region in Ghana has only one physician per 100,000 population, while another region has 30 physicians per 100,000 population.<sup>13</sup>

Health workers are leaving, in large part, because they are unable to meet their own needs or those of their patients. Their wages are inadequate, sometimes not even enough to cover their basic living expenses. They have few opportunities to develop themselves professionally, and fear contracting HIV and other infections on the job, especially because they often lack the gloves and other protective gear. Poor management and planning, leading to including inadequate supervision, enormous workloads, late paychecks, and inadequate training, further harms health worker morale. Health workers are trained to heal, but because they lack sufficient medicines, supplies, and equipment, all too often they can do little more than minister to death.

A key factor in the continent's brain drain of skilled health workers is the fact that hospitals and clinics in much of sub-Saharan Africa lack basic infection control, sanitation, and occupational safety.<sup>14</sup> A survey by Physicians for Human Rights of more than 1,000 health workers in Nigeria suggested that fear of occupational exposure to HIV/AIDS contributes to stigma and discrimination against people with AIDS because health workers are afraid they will contract the virus from them. Even in Free State, South Africa, a recent survey conducted at children and maternity units, including labor and pediatric wards, in 30 hospitals found that 49% of health workers reported shortages of protective gear at some point during the course of the year. In Uganda, the Mulago Hospital – the country's major referral hospital – did not launch a comprehensive program of universal post-exposure prophylaxis until last month, and other Ugandan government hospitals have yet to do so.

### Responding to the Shortage: Training Health Professionals Is Not Enough

Ambassador Tobias and his associates are attempting to address the health worker shortage and have made some innovative grants, such as supporting a Zambian scheme to offer incentives for urban doctors to relocate to underserved rural areas. But to the best of our knowledge, the American contribution to the African health work force has largely been limited to the training of health workers. The \$150 million “twinning center” managed by HRSA, for example, is aimed at linking U.S. and African institutions for purpose of training. And the Institute of Medicine's soon-to-be-released report on the overseas placement of US health professionals recommends that a global health service

be principally for the purpose of training African counterparts. Numerous contracts and grants have been made to train doctors and nurses in the use of antiretroviral therapy.

But training alone is not the answer to the health work force crisis in Africa; indeed, it may even accelerate health worker flight. If working conditions, salaries, benefits, management and opportunities for health workers in their own countries are not also addressed, additional training simply makes it more likely that the newly skilled nurse or doctor will be recruited or seek out a job in the U.S., Canada, or Europe at a vastly higher salary. As Dr. Elizabeth Madraa, who organizes anti-retroviral therapy training for health workers in Uganda, stated, “We keep training and they go to NGOs (nongovernmental organizations) or abroad where they can get better money, then we have to train [more people] again.”<sup>15</sup>

To recruit the vast numbers of students to nursing and medical school and prevent new graduates from leaving, national governments, donors, and international institutions must join forces to eliminate the “push factors” that discourage trained workers from staying home – the unsafe working conditions, low pay, poor supervision, absence of benefits, staggering work loads, and dearth of supplies, medicines, and equipment that sabotages worker satisfaction and patient health.

Even with substantial investments, the recruitment and retention of hundreds of thousands of nurses, pharmacists, technicians and doctors is at best a multi-year project, and poor people need health services today. We urge the Administration and Congress to make the training of and assistance not only to skilled health professionals but also to community health workers and home care givers an essential component of a Global Health Workforce Initiative.

Malawi’s experience of HIV/AIDS initiatives draining workers away from other life-saving health interventions is a sobering check on AIDS treatment activists’ conviction that if health services are equipped to deliver antiretroviral drugs they will be able to handle virtually anything. In fact, assistance to Africa to confront HIV/AIDS has not had the desired impact of “lifting all the boats” because health worker scarcity is so great that the current workforce cannot necessarily absorb new duties, patients, and activities. But investing directly in health worker recruitment and retention, training and rational deployment required for HIV could also have that positive impact on public health generally.

### Investing in Communities

In the absence of sufficient numbers of skilled health workers, some countries and communities with severe skilled health worker shortages rely heavily upon volunteers, family members, and community health workers in the fight against the pandemic. Other countries and communities may include community health workers as a planned and important component of their health systems. Indeed, part of WHO’s strategy for achieving its 3 by 5 initiative of 3 million people in developing countries on AIDS

treatment by 2005 has been providing training 100,000 people, about half of whom WHO has expected would be community health workers providing treatment support.<sup>16</sup>

Both caregivers and community health workers can contribute to the health of their communities. An August 2004 study of family and volunteer caregivers in Uganda and South Africa contracted by USAID noted that "... home care programmes, if properly planned, can relieve the pressure that the care of HIV/AIDS patients has on formal health care facilities...there is also evidence to suggest that such programmes have clear health, social and economic benefits for the patients, families and communities."<sup>17</sup> Community health workers have a central part of the success of the AIDS treatment program being implemented by Partners in Health in a remote, rural area of Haiti, where community health workers observe patients taking their medication, respond to concerns of patients and their families, and provide moral support.<sup>18</sup>

At the same time that both community health workers and family and volunteer caregivers can provide important health services, both community health workers and caregivers require significant support structures. The study on Uganda and South Africa warned that without substantial investment in the home-based care, the approach could exacerbate gender and poverty inequalities among families and communities.<sup>19</sup> Providing stipends, micro-credit or salaries to women engaged in this work would help them, and offering them training, supplies, and drugs will help the adults and children with AIDS who rely on them. Compensation is also important to maintaining the motivation of community health workers, who are also likely to be poor and require financial or material support.

Along with compensation and training, community care-givers and those in their care would also benefit greatly if the community care-giving structure is linked to supervision and support from, and a referral network of, health professionals and care-giving organizations. Supervision and training are also key elements of the success of community health workers. A career structure, a possibility for increased responsibilities and compensation, always with adequate supervision and support, can also enhance the success of community health workers.

### The Challenge

Mitigation and eventual resolution of Africa's health worker shortage is long overdue, and harder today than it ever was given the West's insatiable appetite for foreign nurses and the untold attrition of health workers, particularly nurses, due to illness, care giving at home, and death from HIV/AIDS. HIV prevalence in health workers is typically similar to that in the general population. In Malawi, 3% of health workers were dying annually by 1997, a fatality rate six times higher than it had been before the AIDS pandemic. In Lusaka, Zambia, in 1991-1992, the HIV-prevalence rate among midwives was 39%, and among nurses, 44%.<sup>20</sup> Much as Malawi, HIV/AIDS has caused illness and death rates of Zambia's health workers to increase five- to six-fold.<sup>21</sup> Resolving it requires an unprecedented degree of strategic planning and cooperation between national governments, international agencies, and other donors.

## Recommendations: The Next Phase of US Support for Health in Africa

Greatly increased spending by national governments and by foreign donors and international organizations is required to enable countries to meet AIDS prevention, care, and especially treatment targets and to sustain a high level of coverage for these interventions. These systemic improvements to what is typically the weakest part of health systems in Africa - personnel - will greatly enhance countries' capacity to improve health in all areas, from combating other major diseases such as tuberculosis and malaria to improving child survival and driving down unspeakable levels of maternal mortality that plague much of Africa.

We envision an initiative with four main pillars:

First, the United States should provide technical assistance to countries in assessing their current health workforce situations, in determining their health workforce needs to achieve health targets, such as the Millennium Development Goals, and in developing strategies to achieve those goals.

The strategies should be linked to overall health system development strategies so that health worker strengthening occurs in concert with the other aspects of health system strengthening require to achieve Millennium Development. So as to guide both national budgets and donor assistance, the strategies should include costing estimates. The strategies should also include coordination among donors and the national government to ensure that the full cost of implementing these strategies is covered.

While the national government will determine the strategic process, the United States should encourage broad participation, including by health workers themselves and leaders of rural communities. This will help ensure both that the strategy is consistent with and informed by health workers' needs and the needs of communities, especially those in rural areas who presently have the least access to health services. The United States can also promote, or at least ensure that countries seriously consider, other examples of good practice, such as closing the gap between the pay for physicians and other health workers,<sup>22</sup> promoting equity in the international distribution of health workers, and incorporating all sectors – public, non-for-profit private, NGO, faith-based, and for-profit private – in planning processes.

Second, the United States should help fund the implementation of these strategies. The activities funded should be determined by national strategies, by the needs as expressed by the people of those countries. Based on strategies that countries have already begun to implement, as well the needs common to the region that will determine the strategies, elements that will likely be in most or all of these strategies include:

- Higher salaries for health workers
- Incentives for health workers to serve in rural areas

- Improved health worker safety, including full implementation of universal safety precautions, post-exposure prophylaxis for health workers potentially exposed to HIV, tuberculosis infection control, and hepatitis B vaccination
- Improved human resource management, including improving human resource policies and enhancing management skills of local health managers
- Increased capacity of health training institutions, such as medical, nursing, and pharmacy schools
- Providing continuous learning opportunities to health workers
- Support for community health workers, including compensation, training, supervision, supplies, and linkages to health professional support and referral systems. Training, supporting and deploying people living with AIDS as counselors, prevention advocates, and care givers should be a priority.
- Re-hiring and rational deployment of retired or unemployed health professionals
- Health system improvements not specifically related to human resources for health, such as assuring adequate and dependable provision of supplies and essential drugs.

Third, while it is necessary for countries to have human resources for health strategies, enough is known about what is needed to begin funding many interventions immediately, and indeed, the urgency of the crisis demands this. There is no need to wait for fully formed strategies for the United States to begin to provide financial and technical support that will actually begin to help retain health workers, train new ones, and increase health services in rural areas. Much of what is needed, such as ensuring health worker safety and improved human resource management, will be part of any comprehensive strategy on strengthening the health workforce. All health workers need the gloves and other gear to keep them safe. All human resource systems will have to provide health workers with sound supervision, career structures, clear job descriptions, and on-time pay. And all countries will need to have the capacity to know who their health workers are and where they are, which will require computerized databases of their health workforce.

Furthermore, even where a complex strategy may be required, as for determining exact training needs or salary structures, pressing needs in such areas as training and salary support may be ripe for immediate funding, even before the strategies are fully established. For example, the nursing school that is part of the Harare Central Hospital in Zimbabwe had only three nurse tutors (professors) in the beginning of 2004, though the school officials say that at least fifteen are required.<sup>23</sup> These posts need to be filled. As of 2003, Kenya had 4,000 nurses, 1,000 clinical officers, 2,000 laboratory staff, and 160 pharmacists or pharmacy technicians who were unemployed not because they were not needed, but because the government could not afford to pay them.<sup>24</sup> These workers need to be hired.

Fourth, the United States should support efforts by the World Health Organization and others to collect and disseminate country lessons and experiences in human resource policies and efforts to recruit, retain, and equitably deploy their health workers. Information of both successful and unsuccessful practices should be widely available so countries learn both from the experiences of other countries, adopting successes to their own circumstances and avoiding other countries' mistakes. One way that the United States do this is by supporting a regional observatory on human resources for health at WHO's African region headquarters. This observatory would promote evidence-based human resource policymaking, share experiences with human resources reforms among regional policymakers, and increase human resource policymaking capacity.

Along with learning from experiences elsewhere, countries should also learn from their own experiences, and adjust their strategies based on those experiences. The United States should therefore help countries develop strong monitoring and evaluation capacities.

Fortunately, this Administration and this Congress have shown that they are up to the task. The two major new foreign aid initiatives of the past several years, PEPFAR and the Millennium Challenge Account, both represent new ways of doing business. The adoption of the U.S. Leadership Against HIV/AIDS, TB, and Malaria Act of 2003 represents the vision of Members and Senators from across the political spectrum. It was the high-water mark of legislative and executive branch cooperation, and it made possible an unprecedented contribution to health in some of the poorest countries in the world. We believe that with the leadership of the President and this Committee, you can make a new and desperately needed contribution in the form of direct support of African health workers that will sustain and broaden the programs you launched in 2003. We stand ready to work with you to reach that noble goal.

Thank you.

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<sup>1</sup> Office of the US Global AIDS Coordinator, *Engendering Bold Leadership: The President's Emergency Plan for AIDS Relief: First Annual Report to Congress* (March 2005), at 35. Available at: <http://www.state.gov/documents/organization/43885.pdf>; World Health Organization, "3 by 5" *Progress Report: December 2004* (2005) at 11. Available at:

<http://www.who.int/3by5/publications/en/progressreportfinal.pdf>.

<sup>2</sup> Office of the Global AIDS Coordinator, *Bringing Hope and Saving Lives: Building Sustainable HIV/AIDS Treatment* (August 2004), at 12. Available at: <http://www.state.gov/documents/organization/36287.pdf>.

<sup>3</sup> Adam L. Kushner, Steven J. Mannion & Arturo P. Muyco, "Secondary Crisis in African Health Care," letter. *Lancet* (May 1, 2004) 363: 1478. Kenya's health ministry has expressed concern that donor focus on HIV/AIDS has left other health priorities, such as malaria and reproductive health, receiving little attention, reducing Kenya's prospects of achieving the Millennium Development Goals. "HIV/Aids Hogs Cash As Other Sectors Suffer," *East African Standard (Nairobi, Kenya)*, March 30, 2005.

<sup>4</sup> Holly Burkhalter & Eric A. Friedman, *Physicians for Human Rights Testimony on "AIDS Corps": HRH/HIV Opportunities: Equity and Sustainability* (Dec. 2, 2004), at 1-2. Available at: [http://www.phrusa.org/campaigns/aids/pdf/testimony\\_aids-corps.pdf](http://www.phrusa.org/campaigns/aids/pdf/testimony_aids-corps.pdf).

<sup>5</sup> World Health Organization, *World Health Report 2005 – Make Every Child and Mother Count* (2005), at 11. Available at: <http://www.who.int/whr/2005/en/index.html>.

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<sup>6</sup> World Health Organization, *World Health Report 2005 – Make Every Child and Mother Count* (2005), at overview 7. Available at: <http://www.who.int/whr/2005/en/index.html>.

<sup>7</sup> Commission for Africa, *Our Common Interest: Report of the Commission for Africa* (March 2005), at 188. Available at: <http://www.commissionforafrica.org/english/report/thereport/13chap6.pdf>. The recommendation is based on the November 2004 report of the Joint Learning Initiative, a collection of more than 100 global health experts who spent two years studying the global health worker shortage. Joint Learning Initiative on Human Resources for Health and Development, *Human Resources for Health: Overcoming the Crisis* (2004), at 33-34. Available at: <http://www.globalhealthtrust.org/Report.html>.

<sup>8</sup> Commission for Africa, *Our Common Interest: Report of the Commission for Africa* (March 2005), at 188. Available at: <http://www.commissionforafrica.org/english/report/thereport/13chap6.pdf>.

<sup>9</sup> 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 15. Available at: <http://www.equinafrica.org/bibl/docs/healthpersonnel.pdf>.

<sup>10</sup> DFID Health Systems Resource Centre (James Buchan & Delanyo Dovlo), *International Recruitment of Health Workers to the UK: A Report for DFID* (Feb. 2004), at 8. Available at: [http://www.healthsystemsresource.org/publications/reports/int\\_rec/int-rec-main.pdf](http://www.healthsystemsresource.org/publications/reports/int_rec/int-rec-main.pdf).

<sup>11</sup> 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 16. Available at: <http://www.equinafrica.org/bibl/docs/healthpersonnel.pdf>.

<sup>12</sup> Clare Nullis-Kapp, “Health worker shortage could derail development goals,” *Bulletin of the World Health Organization* (Jan. 2005) 83(1): 5-6. This anecdote provides a sense of the migration of Malawian doctors to Manchester, England, though the accuracy of this anecdote does not appear to have been definitively documented.

<sup>13</sup> Ghana Ministry of Health, presented at the Oslo Consultation on Human Resources for Health, Oslo, Norway, February 24-25, 2005. Available at: [http://www.norad.no/default.asp?FILE=items/3070/108/Oslo presentation 2.ppt](http://www.norad.no/default.asp?FILE=items/3070/108/Oslo%20presentation%202.ppt).

<sup>14</sup> Physicians for Human Rights, *An Action Plan to Prevent Brain Drain: Building Equitable Health Systems in Africa* (June 2005), at 40-43. Available at: <http://www.phrusa.org/campaigns/aids/pdf/braindrain.pdf>; Physicians for Human Rights, *HIV Transmission in Health Care Settings: A White Paper by Physicians for Human Rights* (March 2003), at 37-38. Available at: [http://www.phrusa.org/campaigns/aids/who\\_031303/workers.html](http://www.phrusa.org/campaigns/aids/who_031303/workers.html).

<sup>15</sup> Charles Wendo, “Uganda leads way in innovative HIV/AIDS treatment,” *Bulletin of the World Health Organization* (April 2005) 83(4): 244-245, at 244. Available at: <http://www.who.int/bulletin/volumes/83/4/en/infocus.pdf>.

<sup>16</sup> World Health Organization, *Mobilizing Communities to Achieve 3 by 5* (2003). Available at: <http://www.who.int/3by5/publications/briefs/communities/en/>.

<sup>17</sup> Olagoke Akintola (Health Economics and HIV/AIDS Research Division), *A Gendered Analysis of the Burden of Care on Family and Volunteer Caregivers in Uganda and South Africa* (August 2004), at 6. Available at:

<http://www.ukzn.ac.za/heard/research/ResearchReports/2004/Gendered%20Analysis%20of%20Burden%20of%20Care%20-%20Uganda%20%20SA.pdf>.

<sup>18</sup> Paul Farmer et al., “Community-Based Approaches to HIV Treatment in Resource-Poor Settings.” *Lancet* (Aug. 4, 2001) 358: 404-409, at 405.

<sup>19</sup> Olagoke Akintola (Health Economics and HIV/AIDS Research Division), *A Gendered Analysis of the Burden of Care on Family and Volunteer Caregivers in Uganda and South Africa* (August 2004), at 4. Available at:

<http://www.ukzn.ac.za/heard/research/ResearchReports/2004/Gendered%20Analysis%20of%20Burden%20of%20Care%20-%20Uganda%20%20SA.pdf>.

<sup>20</sup> Alan Whiteside, “Chapter 4: HIV/AIDS, Health, and Education” in International AIDS Economics Network (Steve Forsythe, ed.), *State of the Art: AIDS and Economics* (July 2002), at 25. Available at: <http://www.iaen.org/library/statepidemic/chapter4.pdf>.

<sup>21</sup> Avert.org, *The Impact of HIV & AIDS on Africa*. Available at: <http://www.avert.org/aidsimpact.htm> Accessed April 12, 2005.

<sup>22</sup> In Ghana, on top of their salaries both doctors and nurses receive extra compensation through the Additional Duty Hours Allowance (ADHA). Doctors, however, have received far greater allowances than

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nurses. This caused frustration among nurses, who felt that they were not appreciated. Since the introduction of the ADHA several years ago, nurse emigration from Ghana has increased significantly. DFID Health Systems Resource Centre (James Buchan & Delanyo Dovlo), *International Recruitment of Health Workers to the UK: A Report for DFID* (Feb. 2004), at 21, 23. Available at: [http://www.dfidhealthrc.org/shared/publications/reports/int\\_rec/int-rec-main.pdf](http://www.dfidhealthrc.org/shared/publications/reports/int_rec/int-rec-main.pdf).

<sup>23</sup> IRIN, "Health set to worsen," *IRINnews.org*, Jan. 9, 2004. Available at: [http://www.irinnews.org/report.asp?ReportID=38835&SelectRegion=Southern\\_Africa&SelectCountry=ZIMBABWE](http://www.irinnews.org/report.asp?ReportID=38835&SelectRegion=Southern_Africa&SelectCountry=ZIMBABWE)

<sup>24</sup> Jong-wook Lee, "Global health improvement and WHO: shaping the future." *Lancet* (2003) 362: 2083-88. Available at: [http://www.who.int/whr/2003/media\\_centre/lee\\_article/en/index4.html](http://www.who.int/whr/2003/media_centre/lee_article/en/index4.html); Jongwook Lee, *Meeting of Interested Parties: Opening Session*, Geneva, Switzerland, Nov. 3, 2003. Available at: [http://www.who.int/dg/lee/speeches/2003/MIP\\_Openingsession/en/](http://www.who.int/dg/lee/speeches/2003/MIP_Openingsession/en/).