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Bold Solutions to Africa's Health Worker Shortage



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This document precedes a longer report which will profile innovative responses to the health workforce crisis. If you would like to learn more about how you could contribute to this effort, please contact Maggie Cooper at Physicians for Human Rights: tel +1 202.728.5335 or mcooper@phrusa.org.

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Cover photo: Leaders of *Students for Equity in Health Care* at Makerere Medical School in Kampala, Uganda, use their voice and expertise to advocate for better training for health workers through innovative programs such as COBES (Community- Based Education and Service program) an innovative program to establish a greater health workforce in rural areas of Uganda.

Physicians for Human Rights

For the past 20 years, Physicians for Human Rights (PHR), based in Boston, MA, has advanced health and dignity by protecting human rights. Health Action AIDS, a project of PHR, mobilizes health professionals to support a comprehensive AIDS strategy and advocates for funds to combat the disease. It develops ways for US health professionals to support colleagues and activists around the world and researches the connection between human rights and HIV/AIDS. As a founding member of the International Campaign to Ban Landmines, PHR shared the 1997 Nobel Peace Prize

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In Africa, a mere 3% of the world's trained health workers struggle to combat 24% of the global disease burden. The World Health Organization estimates that sub-Saharan Africa is suffering a shortage of more than 800,000 doctors, nurses, and midwives, and an overall shortfall of nearly 1.5 million health workers.¹

While the scale of the crisis is huge, solutions do exist. Many countries and communities around the world have begun to develop and implement innovative initiatives to sustain and build the health workforce. Several such examples are highlighted here. They address such issues as retention in rural areas, AIDS treatment for health workers, and the deployment of paraprofessionals to extend health care access deeper into communities. Many of these examples focus on rural areas, which typically have only a fraction of the number of health workers as urban areas due to more difficult living conditions, social and professional isolation, and weaker health infrastructure.

Varied in scale, these initiatives are not a comprehensive catalogue of efforts needed nor a blueprint to follow - though some approaches could be transferred to other settings. Rather, they illustrate the diverse responses by countries and communities to the problem. They may also inspire partners at international, country and local levels - as well as individual health practitioners - to be creative, community-oriented, inclusive and proactive in order to build the human resources needed to fight AIDS and meet other health challenges.

BACKGROUND

Africa's current shortage of over 1 million health workers is one of the key impediments to meeting the global commitment to universal access to HIV/AIDS treatment, care and prevention by 2010, as well as to reaching the health-related Millennium Development Goals. This shortage is partly due to international migration of health workers. African doctors and nurses, in large numbers, have sought improved living and working conditions for themselves and their families in developed countries.

The shortage is also caused by the failure of governments to adequately invest in pre-service training and by the overall underinvestment in and inadequate commitment to well-resourced, functioning health systems.

The exodus of skilled cadres of health workers is also exacerbated by the AIDS pandemic itself. Health workers are vulnerable to the disease, and their illness and deaths place increased demands on remaining health providers, increasing stress and leading to burnout. A 2002 South African study estimated that approximately 16% of health workers there were HIV-positive.² Health workers also perceive themselves to be at high risk of infection at the workplace due to inadequate infection control, which leads to additional departures.

AIDS increases demands for treatment and care, exacerbating already heavy health worker workloads. UNAIDS estimates that patients with HIV-related illnesses occupy more than half of all hospital beds in sub-Saharan Africa.³ Health workers are also drawn away from their professional duties to care for ailing family members.

¹ World Health Organization, *World Health Report 2006: Working Together for Health* (2006), at 8, 12-13. Available through: <http://www.who.int/whr/2006/en/index.html>. Other estimates of the number of additional doctors, nurses, and midwives Africa needs are even higher. See Joint Learning Initiative, *Human Resources for Health: Overcoming the Crisis* (2004), at 28. Available through: <http://www.globalhealthtrust.org/Report.html>.

² Olive Shisana, et al., "HIV/AIDS Prevalence Among South African Health Workers." *South African Medical Journal* (2004) 94(10): 846-50.

³ Joint United Nations Program on HIV/AIDS (UNAIDS), *2006 Report on the Global AIDS Epidemic: A UNAIDS 10th Anniversary Special Edition* (2006), at 95.

The shortages are compounded by weak health infrastructure and a dearth of resources - human, physical and financial - impeding the ability of healthcare workers to provide sufficient care for their patients, and severely undermining morale.

Increased and sustained investment in the health sector by international donors and recipient countries is crucial to building a well-equipped health workforce that can accommodate AIDS prevention, treatment and care, while also tending to other health needs and new, impending health emergencies. An adequate workforce requires resources to improve salaries and working conditions, provide for in-service training and career development, address health worker safety concerns including occupational injuries and general security, facilitate improved health sector management and expand the capacity of academic training centers to graduate students with health-related degrees. These are major undertakings, but they must be met to reach world health targets such as the Millennium Development Goals.

The following seven initiatives emphasize the participation of local communities in health sector decision-making, improved access to underserved rural areas, and opportunities for career development of individual health workers.

1. Scholarships for Rural Students: South Africa

Nestled in the hills of northern KwaZulu-Natal in South Africa, bumping up against the Swaziland border, the rural town of Ingwavuma is characterized by extreme poverty. Many residents do not have access to electricity or running water, and unemployment is high. Chronic malnutrition, tuberculosis and HIV infection are prevalent-- up to 39% of women in antenatal clinics test positive for HIV.⁴

The district hospital located there, Mosvold Hospital, serves a population of more than 110,000 people and covers a catchment area of 2000 square kilometers. In 1998, the hospital had only two doctors. Unable to attract trained health professionals to this rural area, an innovative scheme was developed to provide scholarships exclusively to students from the local area to study health sciences at the tertiary (post-secondary, including university) level. The Friends of Mosvold Scholarship Scheme (FOMSS) was founded on the belief that local students had great potential to become health professionals despite very deprived material circumstances, and were more likely than their urban counterparts to return to practice in the district.

In an interview with the *Daily Mail and Guardian*, Dr. Andrew Ross, then-medical director of Mosvold Hospital who initiated the scholarship in 1998, described the rationale for investing in local students: "The local people - even though there were some promising students - could not study health care because of the high tuition costs. But they would have been ideal because they are attached to the area, they know the people and they are used to the realities of rural life."⁵

A primary aim of the scholarship is to introduce students to health science careers by holding 'open days' for local schools at Mosvold Hospital. Interested students are invited to apply for the scholarship, contingent upon their acceptance into a degree program and completion of two weeks of voluntary work at the hospital. Local community members participate in a selection committee that chooses scholarship recipients. Once awarded the scholarship, each student signs a year-for-year work back contract with the hospital for each year they accept the scholarship.

⁴ Department of Health (South Africa), 2006. *National HIV and Syphilis Antenatal Sero-prevalence Survey in South Africa 2005*, at 11. Available at: <http://www.doh.gov.za/docs/reports-f.html>.

⁵ Niki Moore, "A Beacon of Hope." *Daily Mail & Guardian* (South Africa), October 31, 2001. Available at: <http://www.chico.mweb.co.za/za/archive/2001oct/features/30oct-beacon.html>.

In addition to funding students' books, tuition, accommodation and food, the Mosvold scheme provides for ongoing mentoring relationships with clinicians and trains students to be HIV/AIDS student peer educators in their local communities. Students are expected to work at Mosvold Hospital or an affiliated clinic for four weeks per year during their vacations, for which they receive a stipend.

From the scholarship's inception in 1998 through mid-2005, fourteen students successfully completed a degree program (the scholarship can be applied to a number of health sciences degrees, including physician training, nursing, or pharmacy). All have now returned to their rural district. They are now practicing optometrists, physiotherapists, radiographers and pharmacists at Mosvold Hospital or one of its satellite clinics, bringing many skills that were not available before to the area. This has included opening the hospital's first optometry clinic and dental therapy unit. Another forty-six students were enrolled in degree programs, including medicine, nursing and social work, as of 2005.⁶ Mosvold's success has led to its replication in other areas of South Africa, inspiring a similar program at the University of the Witwatersrand, the Wits Initiative for Rural Health Education (WIRHE). Twenty students from rural communities in North West and Limpopo provinces are receiving scholarship support to study health sciences at Wits Medical School; afterwards, they will return to their rural homes to work in local hospitals.

The success of the Mosvold initiative has also prompted provincial departments of health to disperse scholarship funding at the district level in order to better link recipients with rural health facilities in their own communities.

2. Retaining Doctors in Rural Areas: Haiti

Partners In Health (PIH)/Zanmi Lasante (Friends of Health, in Haitian Creole) has been operating clinics since 1988 in Haiti's Central Plateau, a highly impoverished region characterized by an extreme lack of basic infrastructure like paved roads, electricity, phone service of any kind, and improved water sources. Haiti suffers from some of the worst health indices in the world. Life expectancy is just over 50 years, infant mortality is extremely high at nearly 80 per 1000 births, and 1 in 29 women will die of complications of child birth.⁷ HIV, tuberculosis, malaria, water-borne diseases, and malnutrition are among the leading health problems in Haiti's Central Plateau. PIH now operates seven clinics throughout the region. These offer AIDS prevention and care, including HIV antiretrovirals and a three-drug combination therapy to prevent mother-to-child transmission of HIV; these are the standard of care used in wealthy countries. PIH's AIDS services are integrated into primary health settings.⁸

PIH has received acclaim for its network of *accompagneurs*, community members trained to provide TB and ARV treatment to their neighbors with support and supervision at the clinic level. PIH has also had notable success in retaining doctors at its remote clinic sites. Out of 60 to 70 doctors that PIH employs in Haiti, only a few have moved on within the past two years. According to Dr. Evan Lyon, who divides his time between PIH in Haiti and Brigham and Women's Hospital in Boston, "We've had a very, very high retention level and very few

⁶ Steve Reid and Andrew Ross, "Strategies for Facilitating the Return of Health Science Graduates to Rural and Underserved Areas", June 2005. University of KwaZulu-Natal, Durban. Available at: <http://www.interaction.nu.ac.za/SAARDHE2005/full%20papers/REID%20AND%20ROSS.doc>. See also Andrew Ross and Ian Couper, "Rural Scholarship Schemes: A Solution to the Human Resource Crisis in Rural District Hospitals?" *South African Family Practice* (2004) 46(1): 5-6.

⁷ United Nations Development Program (UNDP), "Country Sheet: Haiti." *Human Development Report 2005: International Cooperation at a Crossroads: Aid, Trade and Security in an Unequal World* (2005). Available at <http://hdr.undp.org/statistics/data/countries.cfm?c=HTI>. See also United Nations Children's Fund (UNICEF), "At a Glance: Haiti - Statistics," (2006). Available at: http://www.unicef.org/infobycountry/haiti_statistics.html.

⁸ Personal communication with Dr. Evan Lyon, July 17, 2006.

departures due to doctors leaving the profession, which is a problem in Haiti, or going into private practice in the city.”

Dr. Lyon attributes high retention in some measure to the reasonable salaries that PIH offers: they are higher than government wages, but far less than doctors make in the private sector. “Salary is part of why people stay, but it isn’t the only answer. We’re in the middle of nowhere and doctors don’t have connections to their friends or family there. So we provide transport back to the city for family visits, we give them a place to stay, food and internet access, so that many of their expenses are covered.”

According to Dr. Lyon, the clinic doctors regularly utilize the internet to maintain contact with family members and with other clinics sites. “This is a big part of the social world here, and a big perk,” he notes. Dr. Lyon also cites the importance of working in well-resourced facilities that offer reliable access to supplies and essential medicines. “[Having] the capacity and tools to do their jobs is also a factor that promotes retention among the doctors here,” he says. PIH’s satellite-based internet system is considered an essential resource for patient care - from improved communication via email and instant messaging, to clinical research and problem solving, to the maintenance of a sophisticated electronic medical record system.

Dr. Lyon also attributes high retention to the career building opportunities afforded by working with an organization such as PIH that has a well supported infrastructure and provides opportunities for staff to work with international colleagues and speak at international forums. Additionally, clinic-based doctors and nurses are charged with much of the Global Fund and PEPFAR grant reporting. “The staff then understands the function of the reporting, the costs, the funding. They enjoy being part of the larger AIDS world.”

Dr. Lyon explains that in spite of their isolated, rural locations, a post at a PIH clinic has become the most sought-after residency site in Haiti, attracting the top medical graduates. “It’s so exciting to watch people become advocates.” He attributes this change to working within a mission-driven organization that seeks to provide high-quality medical and social care in solidarity with poor communities. “We watch as point of view and language change, as consciousness is raised. The dynamics of why people stay are so complex. There are no clubs here, no social life. There’s something much bigger at work here.”

3. On the Front Lines of Health Care: Iran

In Iran, sustained government investment in a primary health care network over the past twenty-five years has led to greatly improved health outcomes for Iran’s rural residents. A World Bank-sponsored study cited a 90% reduction in maternal mortality and a 75% drop in infant mortality in rural areas from 1974 to 2000, attributing such outcomes to the “outstanding efforts”⁹ of Iran’s network of rural health workers and health houses. These health houses form the backbone of Iran’s rural primary health care system and are often the only facilities available to rural populations.

A health house serves an average of 1500 people and is staffed by community health workers called *behvarz*, meaning “someone who does the job well.” Each health house employs one male and at least one female *behvarz*, community members who have completed secondary school and who are selected with input from local residents. This facilitates a culturally-

⁹ Maternal mortality in rural Iran fell from 370 per 100,000 live births in 1974 to 35 per 100,000 live births in 2000, and infant mortality in rural areas dropped from 120 per 1,000 live births in 1974 to 30.2 per 1,000 live births in 2000.

See Amir Mehryar, *Primary Health Care and the Rural Poor in the Islamic Republic of Iran* (2004), at 3, 10. Available at: <http://info.worldbank.org/etools/docs/reducingpoverty/case/22/fullcase/Iran%20Rural%20Healthcare%20Full%20Case.pdf>.

sensitive and interactive approach to providing health care. The male *behvarz* is responsible for conducting much of the outreach and health surveillance, often on foot or on motorbike, while the female *behvarz* sees most of the patients who come to the health house, though each is cross-trained. The *behvarzan* are easily accessible and accountable to their communities; in turn, they are able to successfully promote healthy behavior among local residents.

Every *behvarz* receives two years of free training, including financial support, at a specialized training center that involves both classroom teaching and hands-on field experience alongside experienced *behvarzan*. Once qualified, each *behvarz* is assigned for a minimum of four years to their local health house, which serves one main village and several satellite villages located within an hour's walk. *Behvarzan* are responsible for providing maternal and child health care, family planning, health education, occupational and environmental health services, disease prevention and follow-up, immunizations and limited treatment. They are also accountable for maintaining comprehensive records for all patients under their charge by updating family log books at the health house to reflect medical histories and health conditions of each member. This meticulous record keeping allows for the workers to keep track of individuals in order to proactively provide services. For example, health workers at the health house in Afighe, a village in the mountains outside of Tehran, keep a chart of people under their care who suffer from hypertension, diabetes or mental health problems. These patients are scheduled for regular appointments. If these appointments are missed, *behvarzan* will visit these patients at home, in addition to conducting weekly outreach visits to all satellite villages.¹⁰

Behvarzan are closely linked to higher-level health facilities. They refer complex or emergency cases to rural health centers, each of which is responsible for receiving referrals from five health houses and is staffed by at least one physician as well as several health technicians, nurses and a midwife in those centers that have delivery wards. These doctors support and supervise *behvarzan* by conducting regular visits to health houses, reviewing community health data collected by the health workers and discussing any difficult cases. Health centers in turn refer patients needing specialized care to district health facilities.

The presence of locally-selected *behvarzan* within rural villages in Iran has facilitated much-improved access to health services for residents. *Behvarzan* are well-placed to communicate with community members in a culturally-sensitive way that permits responsiveness to community needs. This close interaction has likely contributed to the narrowing gap in health outcomes between urban and rural populations, reflected by the achievement of near-parity in areas such as child mortality under age five, treatment of childhood illnesses, and immunization coverage.

4. Health Care for Health Workers: Swaziland

HIV/AIDS has had a uniquely detrimental impact on the health workforce in Africa. Health workers are burdened with caring for ever-increasing patient numbers, while coping with the loss of their own colleagues and family members due to sickness and death from AIDS. Health systems in highly AIDS-burdened countries are in danger of collapse. The International Labour Organization estimates that 17 percent of health worker deaths in Botswana between 1999 and 2005 were attributable to HIV/AIDS; the proportion will jump to a staggering 40 percent by 2010 if treatment is not provided.¹¹

Yet serious impediments exist to treating health workers, among them concerns about confidentiality and stigma. Health workers are deterred from receiving AIDS services at the

¹⁰ Ian Couper, "Rural Primary Health Care in Iran." *South African Family Practice* (2004) 46(5):37-39.

¹¹ International Labour Organization, "ILO/WHO to Develop Joint Guidelines on Health Services and HIV/AIDS". April 19, 2005 (ILO/05/19). Available at <http://www.ilo.org/public/english/bureau/inf/pr/2005/19.htm>.

same facilities as their patients, fearing a loss of trust and authority, or even that they will be shunned by patients.¹² Médecins sans Frontières staff at HIV/AIDS project sites in southern Africa have reported stories of “health workers who would rather die than disclose their HIV status to a colleague.”¹³

The difficulty that health workers face in accessing HIV/AIDS services themselves has led to the development of a separate health facility for health workers in Swaziland. The first Wellness Centre of Excellence for Health Care Workers was inaugurated in February 2006.¹⁴ Located in Manzini, the country’s largest urban area, the center is run by the Swaziland Nurses Association, with support from the Danish Nurses Organization and the International Council of Nurses. The Wellness Center is slated to provide a host of services, including HIV counseling, testing and treatment, stress management and psychological support, prevention of mother-to-child transmission of HIV, treatment for TB and occupational injuries, and home-based care, for about 6,000 health workers and their immediate families. The intent of the Wellness Center is both to increase the number of health workers who are accessing HIV services, and to improve retention and morale among workers by demonstrating that they are valued and respected. Providing HIV treatment to health workers and their family member also allows them to continue performing their jobs, which contributes to the overall functioning of health systems. The Manzini center is to serve as a model for development of additional facilities throughout the country as part of the Swazi government’s response to AIDS.

Separate health facilities for health workers, such as Swaziland’s Wellness Center, can contribute to ensuring that health workers’ rights to confidential care, like those of any patient, are respected and enforced. While legitimate concerns exist about the equity of this discrete approach to providing care for health workers, one of missions of the Wellness Center is to work toward de-stigmatizing HIV/AIDS so that health workers can eventually avail themselves of services that are not partitioned in this way.

5. Bringing Healthcare to the People: Ghana

Ghana suffers from an acute shortage of health workers - it is home, for example, to just 0.15 physicians per 100,000 people.¹⁵ This shortage is further amplified in many parts of the country by the concentration of health workers in urban centers. The region surrounding Ghana’s capital, Accra, had 30 times more doctors and four times more nurses, relative to population, than the rural Northern Region.¹⁶ This lopsided arrangement has resulted in very poor health outcomes for rural residents. According to UNICEF, the infant mortality rate in the rural north of the country is twice as high as that in the capital region.¹⁷

To overcome such disparities and extend health care to remote areas of the country, Ghana has adopted an initiative known as the Community-based Health Planning and Services program, or CHPS. Adopted as a national health policy initiative in 1999, CHPS is modeled after a

¹² International Council of Nurses, “Healthy and Valued Health Workers are Essential to Save Health Systems in Sub-Saharan Africa” (Dec. 1, 2005). Available at www.intlnursemigration.org/news.shtml#3. The International Council of Nurses noted that “[standing] in the same queue” with patients is a principal barrier to health workers availing themselves of HIV testing and treatment”.

¹³ Katharina Kober and Wim Van Damme, “Scaling Up Access to Antiretroviral Treatment in southern Africa: Who Will Do the Job?” at 105. *Lancet* (July 3, 2004) 364:103-107.

¹⁴ International Council of Nurses, “First Wellness Centre Opens to Support Swazi Health Workers”. *International Nursing Review* (2006) 53(2), 84-97. See also Phinda Sihlongonyane, “Only SD Has a Wellness Centre for Nurses.” *Times of Swaziland*, February 16, 2006.

¹⁵ World Health Organization, *World Health Report 2006: Working Together for Health* (2006), at 192. Available at: <http://www.who.int/whr/2006/en/index.html>.

¹⁶ Ghana Ministry of Health, [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%20.ppt).

¹⁷ UNICEF, “At a Glance: Ghana - The Big Picture,” (2006). Available at: http://www.unicef.org/infobycountry/ghana_1878.html.

successful project that was undertaken in Navrongo, a town in the northeast of Ghana near the Burkina Faso border.¹⁸ The Navrongo project demonstrated that the location of a mobile health professional at a health center within a rural community greatly increased the uptake of health services, resulting in improved immunization coverage, decreased fertility and other positive health outcomes. CHPS is based upon a three-pronged approach that incorporates community participation, locally-based health professionals and active outreach to surrounding populations.

CHPS has transformed the existing position of the Community Health Nurse (CHN) into the Community Health Officer (CHO). CHOs have additional training and are based in Community Health Compounds, making them more easily accessible by community members than CHNs, who are based in sub-district health centers. This title upgrade is reflective of the additional responsibility placed upon CHOs. It confers a special status on CHOs in recognition of their central role in providing basic health services to communities within their assigned area.¹⁹

CHPS also seeks to utilize social resources within a community to underpin the expansion of health services. Before a CHO is placed in a rural community, traditional leaders and community members must commit to supporting the CHPS structure of care within their community. The active participation by the community is crucial to supporting the CHO in his or her role. This includes formation of a local health committee and selection of volunteers to assist the CHO. It may even involve the use of community labor to build the health compound or grow food for the CHO.

CHOs receive 18 months of training as Community Health Nurses, supplemented by a six-month field internship alongside an experienced CHO. CHO training covers such topics as educating community members on family planning and childhood immunizations; first aid care and management of ailments like malaria, fever, and diarrhea; and detecting and referring more complex cases onwards to health centers.

CHOs provide basic preventive and curative services within a zone that covers about 4,500 people. Based at the Community Health Compound, CHOs also conduct home visits via motorbike. Three volunteers, selected by the health committee, assist each CHO with facility maintenance, patient reception, security, and outreach. In return for their services in remote areas, CHOs receive an additional wage allowance and are eligible to be sponsored for further study, including tuition, room, and board, after three years of service.

By the end of 2004, 310 CHOs were deployed in 53 of Ghana's most deprived regions, providing improved access to health services for approximately 935,000 people. Integrating these health providers into rural communities is having a dramatic impact. CHOs were placed in Birim North, a severely deprived district in Ghana's Eastern Region, in 1999. By 2004, the childhood immunization rate had tripled, maternal and child mortality had fallen significantly, and guinea worm had been almost completely eradicated. The rate of tuberculosis defaulters dropped from 73% in 2001 to 0% by the end of 2004.²⁰

6. Training Dental Clinicians: Kenya

¹⁸ Frank Nyonator, et al., "The Ghana Community-based Health Planning and Services Initiative for Scaling Up Service Delivery Innovation." *Health Policy and Planning* (2005) 20(1):25-34.

¹⁹ Seth Acquah, Graeme Frelick and Richard Matikana, *Community Health Officers and Volunteer Health Workers in Ghana* (February 2006). Draft report by the Capacity Project (<http://www.capacityproject.org>).

²⁰ *Ibid*, at 7, 9.

When other Kenyan dentists visit Dr. Warren Rich's dental clinic and observe eight dental chairs, they are surprised to learn that this bustling clinic requires only one dentist to operate. "Presently, I am the only dentist in an eight surgery dental office. But I am not overly worked as the staff accomplishes much of the work."²¹

Dr. Rich oversees the dental clinic at Kijabe Medical Center, a mission-run hospital complex located at the edge of the Great Rift Valley, about 50 kilometers from Nairobi. The dental clinic operates on a two-tiered basis, providing fee-based services for scheduled patients, mostly missionaries and their families, while also offering minimal cost walk-in services for local residents. These services are greatly needed: in 2002, there were only 761 dentists serving Kenya's population of approximately 30 million people - just 2.6 dentists per 100,000 citizens.²²

Dr. Rich, who is from the US, has been working in Kijabe since 1983, providing dental services to the local community. Realizing that "pulling teeth and making partial acrylic dentures would get boring fast," Dr. Rich sought to expand the services that his clinic offered. "We began training local people to take over first with the smaller jobs and then on to larger responsibilities." Staff were trained to pull teeth and to make full and partial dentures, allowing Dr. Rich to devote additional time to more difficult dental procedures.

As the Kenyan government began to dictate minimal levels of training for certain types of health care providers, Dr. Rich said that those training standards were adopted at his clinic. Additionally, dental staff were sent to government-run programs in order to receive accreditation. "In all cases, we took what they learned and added to it to make them more valuable to our team and to themselves. For instance, we sent the dental laboratory technician whom we trained to the government school to become official. Once graduated, we then added to his training to let him do the clinical aspects as well as the laboratory [services]."

At present, the clinic employs five full-time dental assistants, plus two additional assistants who are cross-trained with other tasks. The dental assistants are responsible for many basic dental procedures such as taking impressions, taking x-rays and doing cleanings. "In general we rely on auxiliary personnel to expand what we can accomplish in a day," Dr. Rich explains. "This improves staff morale and creates a pleasant, efficient environment for work." This utilization of trained, non-professional staff is a very innovative approach to dentistry in Kenya. "This is also a complete paradigm shift from the way most Kenyan dentists practice," notes Dr. Rich. "For them a dental assistant is there only to clean up after them, not to be an integral part of the health delivery team."

7. Community-Savvy Health Professionals: Uganda

In 2003, the medical faculty at Makerere University in Uganda adopted an innovative approach to educating health professional students. Called the "Community Based Education and Service" program, or COBES, the program was intended to prepare future health providers to better meet the needs of the Ugandan people.

According to Dr. Andrew Mwanika, a dental specialist on the faculty of Makerere Medical School and head of COBES, prior to this program, students were not only generally unwilling to serve in rural districts, but once there, were very poorly prepared to handle the work environment. "They were found lacking in people skills, [such as] communication, human rights and cultural

²¹ Personal communication with Dr. Warren Rich, July 21, 2006.

²² Ministry of Health (Kenya), 2004. *The National Health Sector Strategic Plan 2005-2010*, at 4. Available at: <http://www.hsrs.health.go.ke/assets/nhssp2.pdf>.

competence. They were not equipped for community health activities, including community research.”²³

COBES seeks to remedy these deficiencies by enhancing the curriculum in order to produce graduates who are familiar with Uganda’s priority health programs such as HIV/AIDS, tuberculosis, vaccine-preventable childhood illnesses, and malaria, and are appropriately trained and equipped to effectively work in rural districts. Dr. Mwanika emphasizes that principal among the COBES objectives is “the need to acclimatize students to the rural work conditions with the hope that they will be more willing to locate in these stations.”

Through COBES, Makerere students are divided into teams and given four- to six-week placements at rural district health centers, currently totaling 36 separate sites in 26 districts. Dr. Mwanika emphasizes the prominence that COBES has taken within the curriculum. “By next year, we shall be collectively deploying 800 students for a total of 12 to 18 weeks out of the 38 weeks per academic year.” Students drawn from medical, dental, pharmacy, nursing and radiography programs are placed together in mixed groups that have also included participants from US (Wisconsin) and Canadian (Alberta) universities. The goal here, according to Dr. Mwanika, is to encourage team work, cooperative learning and problem-solving.

While on-site, students continue with tutorials. These are conducted by facility-based health workers who are trained to provide tutorial instruction and day-to-day supervision, supplemented by visits from Makerere medical faculty. Students are also expected to self-monitor through keeping log books, providing weekly summaries, and completing group reports.

During their time in the field, students are encouraged to interact closely with local residents by conducting community-based activities, such as providing health education to local residents. Dr. Mwanika emphasizes that COBES is having a tangible impact on both communities and students. “The service coverage at the facilities, home, schools, and communities increases whenever the students are in the districts. The relationship between the students and the communities is excellent - gone are the reservations to learn in rural communities,” he says. The program, however, seeks funding after receiving initial money from large international donors. Dr. Mwanika acknowledged that he is desperately looking for ways to sustain COBES through partnerships with development agencies, NGOs, and individual districts. “The potential of COBES is immense, especially around the issue of partnerships, shaping the attitudes of students for rural practice, and community research and projects,” he says.

Nixon Niyonzima, a second- year medical student at Makerere University has completed two COBES placements. “Working upcountry is a different experience from Mulago [Uganda’s main referral and teaching hospital, located in Kampala],” Niyonzima explains. “In the communities there’s a health worker shortage. People have a delayed time accessing a health worker. For example, at outpatient facilities, there may be 200 patients per day, but perhaps only one health worker and one clinic for 25 kilometers. You may see a doctor or a nurse, but quality of care is unsure. It’s different seeing a patient first thing in the morning versus after many, many patients as judgment may be impaired.”²⁴ [Doctors emphasize that it is the extreme number of patients that impairs their judgment, not that they have multiple patients.]

“The facilities there are not enough,” Niyonzima continues. “There’s a shortage of drugs and equipment; many people can’t afford drugs and treatment. This changes your perspective and makes you think about the health system in Uganda. Seeing this motivates you to change the situation. We - my colleagues and myself - want to do something. We could change a lot if we were properly empowered.”

²³ Personal communication with Dr. Andrew Mwanika, July 24, 2006.

²⁴ Personal communication with Nixon Niyonzima, July 12, 2006.