Free Executive Summary

Healers Abroad: Americans Responding to the Human Resource Crisis in HIV/AIDS

Committee on the Options for Overseas Placement of U.S Health Professionals, Fitzhugh Mullan, Claire Panosian, Patricia Cuff, Editors

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EXECUTIVE SUMMARY

INTRODUCTION

Human beings are the heart of health care. It is their labor and their intellect that translate science and technology into healing and hope. Just as oils and brushes without painters cannot create art, drugs and diagnostics without health workers cannot create health care.

Nowhere is this more evident today than in the fight against global HIV/AIDS, the greatest health crisis of our time. In 2005, close to 40 million people harbor HIV, of whom 95 percent live in resource-poor areas. Even before the pandemic hit, their health systems were weak and understaffed. Since the advent of the disease, the dearth of health workers to treat and care for these HIV-infected individuals has reached crisis proportions.

The few health professionals practicing in many of the countries highly impacted by HIV/AIDS—workers often stressed, ill prepared, and scant in number—must now cope with a staggering, new layer of disease while, at the same time, acquiring the knowledge, skills and technology to deliver lifelong antiretroviral drug regimens, HIV/AIDS clinical and palliative care, and prevention services. Arguably, their task represents the most profound challenge in scaling up health care the world has ever known. They cannot do it alone.

This Institute of Medicine report, *Healers Abroad: Americans Responding to the Human Resource Crisis in HIV/AIDS*, is a fast-track, independent exploration of potential strategies to mobilize U.S. health personnel and technical experts to 15 countries highly affected by HIV/AIDS. Commissioned by the U.S. Department of State as part of an historic global health initiative, the President's Emergency Plan for AIDS Relief (PEPFAR), the Institute of Medicine Committee authoring this report:

- reviewed available data sources to project the desirable size and composition of a U.S. global health professions service program to augment, train and collaborate with the public health and clinical professionals already residing in the host countries;
- assessed the relative strengths and weaknesses of existing or potential organizational models for the global health professions service program that could be rapidly activated or adapted to recruit, train, and place participants in support of the PEPFAR initiative;
- articulated principles for use in evaluating the advantages and disadvantages of the organizational models referenced above; and
- identified other contextual issues bearing upon successful implementation of a U.S. global health professions service program.

The report proposes a set of interconnected workforce enhancement programs intended to augment the fight against HIV/AIDS and other global diseases. Given adequate resources, talent, and political will, these programs will contribute mightily to the eventual control of these human scourges.

HUMAN RESOURCES FOR HEALTH

The health workforce in low-income countries has suffered from years of national and international neglect. This dearth of qualified health care professionals in most low-income countries represents the single greatest obstacle to meeting health care needs (Narasimhan et al., 2004). The WHO Commission on Macroeconomics and Health advocated a greatly increased investment in health, rising in low-income countries to a per capita expenditure of $34 per year, while at the same time stating that the main implementation barrier was not funding, but the capacity of the health sector itself to absorb the increased flow (Habte et al., 2004).

As new resources are being mobilized to fight HIV/AIDS, tuberculosis, malaria and other diseases, it is especially unfortunate that an insufficient workforce is impeding these investments. External grants and funding to address global HIV/AIDS estimated at $5 billion in 2003 could reach $20 billion by 2007 (UNAIDS, 2004a). However, at present, there is simply too little human capacity in many developing countries to absorb, apply, and make efficient use of these new funds and critical health initiatives.

What underlies the health workforce crisis? In many countries, including those with high HIV prevalence, the inability to recruit and retain an effective, well-motivated, appropriately skilled health workers stems not only from HIV/AIDS itself but from other problems, including low pay and morale, poor work conditions, and weak management. Some workers experience a triple bind: understaffed workplaces, low compensation, and civil service or public expenditure reforms preventing recruitment of new staff. In recent years, these factors have fueled a trend for some health professionals to move from public to private sector, migrate internationally in pursuit of more favorable opportunities, or leave their professions altogether.

The problem of insufficient human resources for health is most acute in sub-Saharan Africa which has 25 percent of the world's burden of disease but only 1.3 percent of the world's health workforce. Currently, an estimated 750,000 health workers serve a region of 682 million people in sub-Saharan Africa. By comparison, the ratio of health care workers to population is 10 to 15 times higher in the Organization for Economic Co-operation and Development (OECD) countries (HLF, 2004).

COMPREHENSIVE CARE FOR HIV/AIDS IN DEVELOPING COUNTRIES

The prevention, care, and treatment of HIV/AIDS in developing countries will require unprecedented health systems and human resources to deliver medications and oversee patients for *the rest of their lives.* Ideally, a comprehensive approach to HIV/AIDS includes a range of components, including:

- community and national treatment, care, and prevention guidelines;
- education and awareness programs;
- programs to address stigma and discrimination;
- voluntary counseling and testing with informed consent in health facilities and services targeting vulnerable and difficult to reach populations;
- prevention of mother-to-child transmission;

- prevention and treatment of opportunistic infections and sexually transmitted infections;
- antiretroviral therapy and monitoring, including essential laboratory and clinical back-up and drug management systems;
- embedded operational research programs designed to elucidate the most effective approaches to HIV/AIDS care and delivery in resource-limited settings;
- adherence support;
- social protection, nutrition, and welfare and psychosocial services;
- palliative and home-based care; and
- bereavement support.

In reality, however, models of HIV healthcare delivery must first realistically reflect the capacities of host countries. For example, initiation of antiretroviral therapy should start only if certain minimum conditions are met, including community preparedness, counseling and testing with informed consent, personnel training for antiretroviral (ARV) provision and follow-up, clinical and laboratory monitoring, reliable drug delivery systems, and education to maximize adherence. If these conditions are not met, one of the gravest outcomes could be the emergence and wide-scale spread of antiretroviral drug resistance, an event that would ultimately jeopardize the future treatment of all infected persons and populations. Preventing this catastrophic result will require appropriate training, support, accreditation and quality control of providers in both the public and private sectors during the ARV scale-up effort (WHO, 2003a).

Additional clinical entry points for integrated prevention and care include the following services requiring skilled providers.

Voluntary Counseling and Testing

Voluntary counseling and testing (VCT) with informed consent is the key point at which people learn their HIV status and are offered care services as well as behavioral and preventive advice. Studies have shown that VCT consistently increases safe-sex behaviors (Weinhardt et al., 1999; CDC, 2000; Spielberg, 2003; The Voluntary HIV-1 Counseling and Testing Efficacy Study Group, 2000). Until recently, however, access to VCT in countries most severely affected by HIV has been limited. As a result, there are few developing countries in which more than 10 percent of the adult population has been tested (Fylkesnes and Siziya, 2004). The increasing need for VCT services in developing countries—reaching geographically remote areas as well as community clinics and networks—must parallel the scale-up of other HIV-related services. Otherwise, limited availability of testing and counseling could become a bottleneck to expanded treatment and care (Heiby, 2004).

Maternal-Child Services

Antenatal services provide access to programs to prevent mother-to-child transmission of HIV (PMTCT) and allow HIV-infected women to receive treatment and care during and after pregnancy as well as advice for future pregnancies (WHO, 2003b). As part of worldwide efforts to expand access to PMTCT and antiretroviral therapy (ART), routine testing of pregnant women (with the right to refuse) is recommended in the 2004 joint United Nations and World Health Organization policy statement on HIV testing (UNAIDS, 2004b). Without intervention, 35 to 40 percent of HIV-positive women transmit HIV to their infants; with drug prophylaxis and formula

feeding, transmission is reduced to 5 to 10 percent; and with combination ARV therapy transmission falls below 1 percent (Nolan et al., 2002).

Caregiving and Palliation

Despite new global initiatives, many medically eligible patients in developing countries will not receive ART over the next few years. Caregiving and palliative measures—generally defined as pain and symptom management, advance care planning, prioritization of life goals, and the support of individuals and families throughout the entire continuum of disease—will be essential elements of all comprehensive HIV/AIDS programs. This is a pressing need in Asia (Coughlan, 2003) as well as in Africa (Ramsay, 2003). One survey of 48 palliative care services in Africa for patients with AIDS found that 94 percent had experienced obstacles, especially a lack of trained providers, stigma, and government restrictions limiting access to palliative treatments such as oral morphine. Medically treating and controlling pain and other symptoms in the terminal phases of AIDS allows many patients to stay in their homes without the cost or disruption of transfering to hospitals (Harding et al., 2003).

THE PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF

During his State of the Union address on January 28, 2003, President George W. Bush announced a $15 billion President's Emergency Plan for AIDS Relief (PEPFAR) linked to a series of 5-year goals: (1) providing antiretroviral treatment for 2 million people; (2) preventing 7 million new HIV infections; and (3) providing care to 10 million people infected or affected by HIV/AIDS, including orphans and vulnerable children. In May 2003, the U.S. Congress passed authorizing legislation (*United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003*) fleshing out the President's Emergency Plan. Legislative provisions recommended the following targeted distribution of funds: treatment (55 percent), prevention (20 percent), palliative care (15 percent), and care of orphans and vulnerable persons (10 percent). This unprecedented global health initiative placed the U.S. at the forefront of international efforts targeting HIV/AIDS and today accounts for over 50 percent of annual global funding.

PEPFAR now encompasses HIV/AIDS activities in more than 100 countries but is focused on development of comprehensive and integrated prevention, care and treatment programs in 15 countries: Botswana, Cote d'Ivoire, Ethiopia, Guyana, Haiti, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Zambia and Vietnam. The original 14 countries in Africa and the Caribbean represent 50 percent of the world's HIV/AIDS infections. Vietnam was added to the PEPFAR country list in July, 2004 based on a projected 8-fold rise in HIV infections from 2002 to 2010 (Office of National AIDS Policy, 2004).

INTRODUCTION TO THE STUDY

This study was undertaken to provide a rapid, independent review of mechanisms to mobilize relevant U.S. health personnel and technical experts needed in the 15 African, Caribbean and Southeast Asian countries that currently constitute the nexus of PEPFAR activities. In response to their charge, the Committee on the Options for Overseas Placement of U.S. Health Professionals met, heard testimony, reviewed the literature, and deliberated at length. The report that follows proposes the creation of the Global Health Service (GHS), a new national initiative en-

compassing six interconnected programs to mobilize prepare, send, manage and compensate U.S. health professionals to serve in PEPFAR focus countries. The mission of the GHS is to be flexible and responsive to the human resource for health needs identified by countries whose citizens are most affected by the HIV/AIDS pandemic and other global scourges; to provide expertise in the form of clinicians, technical advisers, trainers and mentors; and to establish enduring relationships among global colleagues. A set of six guiding principles frame the GHS effort. They include:

- country responsiveness;
- interdisciplinary cross-cutting approaches;
- training for self-sufficiency;
- non-depletion;
- multiplier effect;
- sustained involvement and ownership.

The report contains eight recommendations delineating the proposals.

Recommendation 1: ***Create a United States Global Health Service.*** The Committee discussed the importance of establishing a clear identity for programs designed to mobilize health personnel for service in combating HIV/AIDS in highly impacted countries. A well recognized identity—a brand—was felt to be essential to the creation of mission and the promotion of volunteerism. **Therefore the Committee recommends the establishment of a U.S. Global Health Service to serve as the umbrella organization for the initiatives and programs to be proposed in this report.**

The skilled professionals who comprise the GHS are expected to be the moving force for meeting the PEPFAR goals of placing 2 million people on antiretroviral therapy, preventing 7 million infections, and providing care to 10 million orphans and vulnerable children.

Recommendation 1a: ***Mobilize providers and capacity developers.*** The Committee believes that a wide variety of health professionals and other key technical and management personnel will be essential for achieving the PEPFAR goals of treating 2 million HIV-infected people, preventing 7 million new HIV infections, and caring for 10 million HIV-affected individuals and vulnerable children (the 2-7-10 PEPFAR goals) as well as for building the long-term capacity necessary to control HIV/AIDS, tuberculosis, and malaria. **Therefore, the Committee recommends that the programs of the U.S. Global Health Service initially focus on the mobilization of clinicians, technicians, and management personnel in direct response to specified in-country needs to achieve PEPFAR goals. In view of the lack of human resources for health in PEPFAR focus countries and many other developing countries, education, training, and development of new, effective configurations of health care delivery in resource-poor settings will take high priority among the U.S. Global Health Service's activities.**

Unitary Management and Values

As currently envisioned, the Global Health Service encompasses a suite of programs under a single banner. Committee members were in agreement that the parent program should be housed within the U.S. government, although certain activities and functions could be contracted to experienced non–governmental organizations. In general, the Committee believed that a government–based program would enhance the international credibility, transparency, and clarity of purpose of the GHS, position it closer to the federal appropriations process, and also enable certain of its key functions. In addition, a single management structure serves as a focal point for legislation, budget, and administration while allowing the parent office to maximize efficiency and streamline operations. Notwithstanding these conclusions on the importance of the governmental anchor of the GHS, the use of private sector contracts and public–private partnering was judged to be crucial to foster creative solutions, to supplement financing, and/or enhance administrative flexibility. While a variety of programs to mobilize U.S. health professionals for service abroad are already in existence, none encompasses the scope and values of the proposed Global Health Service.

Recommendation 2: ***Manage the Programs of the United States Global Health Service in a Unitary Fashion.*** **The Committee recommends that the programs of the U.S. Global Health Service be managed in a unitary fashion to provide maximum synergy, coordination, and clarity of purpose. Fiscal, administrative, and management matters should be handled by the single organizational entity that would be dedicated to the mission of mobilizing U.S. personnel to work in PEPFAR focus countries. Finally, in order for the U.S. Global Health Service to relate closely to PEPFAR and to participate in the annual federal budget process, the Committee recommends that the U.S. Global Health Service should be a program of the federal government.** In order to be successful, the U.S. Global Health Service needs to collaborate with the private sector, NGO's, and public–private matching programs.

Public input to the management of a high-visibility global program is an important asset for maintaining a balanced view. For this reason, an external advisory committee is important for the GHS. This advisory committee should involve and include individuals from abroad, especially PEPFAR focus nations.

Recommendation 2a: ***Establish an Advisory Committee for the U.S. Global Health Service including International Members.*** The Committee recognizes the fundamental importance of involving partners in the development and ongoing operation of the U.S. Global Health Service. These partners would include colleagues from non-governmental organizations, PEPFAR countries, and other key collaborators from the U.S. and abroad. **The committee recommends the creation of a policy level advisory committee with international colleagues and a commitment to the strategic engagement of public and private partners in the planning, operation, and evaluation of the U.S. Global Health Service.**

The Six Programs of the Global Health Service

In response to their charge for short and long-term options for mobilizing U.S. health professionals to PEPFAR focus countries, the Committee proposes six interconnected programs that would constitute the Global Health Service (GHS). Each program is structured to make a unique contribution to the mission of the GHS and respond to the stated needs of host countries for health workforce to combat HIV/AIDS; to provide clinicians, technicians, and management experts; and to develop capacity building partnerships with host country colleagues. The Committee believes that this package of programs will significantly augment human resource capacity in support of PEPFAR goals. The six specific program areas of the GHS are:

- *Global Health Service Corps*
- *Health Workforce Needs Assessment*
- *Fellowship Program*
- *Loan Repayment Program*
- *Twinning Program*
- *Clearinghouse*

The Global Health Service Corps

Lack of skilled and trained health professionals is one of the principal barriers to the rapid scale up of HIV/AIDS prevention and treatment programs in PEPFAR focus countries (Adano et al., 2004; Wyss, 2004a; Wyss, 2004b). A range of skills is needed particularly at the level of key clinical, managerial, and technical leadership positions essential to build the infrastructure of HIV/AIDS treatment systems (WHO, 2002). Because of the specialized nature of these positions and the long term requirements of the work, volunteer health professionals and those with short term availability will be of limited utility in addressing core country-level needs. It will be the role of the GHS Corps, working with public health leaders in PEPFAR focus countries, to provide specialized health personnel for extended assignments to fill these positions and accelerate program scale-up. These highly skilled professionals will be full-salaried employees working in the 15 focus countries for extended periods; however, the salary and benefits cost of sending them abroad is roughly estimated at only 1 percent of the PEPFAR budget.

Recommendation 3: ***Establish a U.S. Global Health Service Corps to Send Key Health Personnel to PEPFAR Countries on a Full-time/Long-term Basis.*** **The committee recommends the establishment of a full salaried/long-term U.S. Global Health Service Corps for the recruitment, placement, and support of U.S. health, technical, and management professionals in PEPFAR countries. Because of the critical and highly visible nature of this Corps and the necessity that it coordinate closely with PEPFAR, the committee further recommends that it be established and administered as a program of the federal government.** U.S. Global Health Service Corps professionals should be selected and deployed based on the prioritized needs identified by ministries of health in conjunction with in-country PEPFAR teams. Assignments will be made for a minimum of two years with placements in areas and programs where Corps members' presence will have maximum impact on enhancing the human capacity to prevent and treat HIV/AIDS. The committee proposes an initial deployment of 150 U.S. Global Health Service Corps professionals in the 15 PEPFAR countries based on needs assessment, placement development, and the availability of professionals with the required skills.

Health Workforce Needs Assessment

The GHS will be responsible for sending health and other professionals from the U.S. to countries with substantiated needs for specific forms of assistance. Conducting a human capacity development assessment is an essential first step in establishing and verifying such needs (MSH, 2004). Currently, there is no uniformity in how PEPFAR countries collect and analyze their human resource capacity in health. Lack of consistency between countries on the monitoring of health workforce development strategies has also been noted (Diallo et al., 2003). Although all of the focus countries have country strategic plans through USAID, these plans were not designed to address human resource issues and are therefore not useful in this regard. "Country Plans" drafted by U.S. government teams in each PEPFAR country were not available for review at the time this report was being developed.

Recommendation 4: ***Undertake a Uniform Health Workforce Needs Assessment.*** **The Committee recommends that the PEPFAR country teams in collaboration with ministries of health initiate assessments of in-country requirements for health personnel to achieve PEPFAR goals. These assessments should form the basis for national human resource for health plans. These assessments would also generate a valuable baseline inventory for all mobilization programs and subsequent evaluation activities. The data from all countries should be collected in a standardized fashion, up-dated regularly, and maintained in the electronic data base of the U.S. Global Health Service Clearinghouse "Opportunity Bank" available to professionals interested in service in PEPFAR countries.** Timely and accurate information on workforce needs will be essential to maximize the impact of programs designed to mobilize health personal to achieve PEPFAR goals. Current national needs assessments are irregular, non-standardized, and not available at any single site. Local placement strategies and global recruitment efforts would be greatly strengthened by a regularized needs assessment and dissemination initiative.

The Fellowship Program

The GHS Fellowship Program is designed to provide incentives to encourage qualified health personnel wishing to work abroad to serve within the framework of the PEPFAR mission. The structure of the fellowship program will engage professionals by reducing financial and logistical barriers, and will also focus their activities to align with PEPFAR goals. Much like the prestige associated with Fulbright awards, receiving a GHS Fellowship would be an honor that confers professional recognition to its participants.

Recommendation 5: ***Create a U.S. Global Health Service Fellowship Program.*** **The committee recommends the creation of a U.S. Global Health Service Fellowship Program that would provide professional recognition and a $35,000 award to qualified U.S. personnel to enable commitment to programs of service in PEPFAR countries.** This competitive program would fund a prestigious award to individuals willing to make medium term commitments of one year or longer to provide health care, training, and technical assistance in countries in need. It would provide career-long recognition as well as immediate financial assistance.

The Loan Repayment Program

In light of the growing levels of educational debt incurred by today's health professionals, benefits such as loan repayment have the ability to reduce barriers to service. In the academic year 1996–97, medical students borrowed more than $1.11 billion and 83.2 percent of the 1997 graduating class had educational debt (Beran and Lawson, 1998). In 2003–04, tuition and fees at public medical schools averaged $16,153 and private schools reached a staggering $32,588 (Jolly, 2004). This financial burden could potentially leave a young medical professional with a debt ranging from $140,000 to $255,000, making the concept of exchanging debt for service very appealing (Morrison, 2005).

Recommendation 6: ***Establish a U.S. Global Health Service Loan Repayment Program.*** **The Committee recommends the establishment of a U.S. Global Health Service Loan Repayment Program for clinical, managerial, and technical professionals prepared to serve for designated periods in PEPFAR focus countries. This program would provide $25,000 toward scholastic debt reduction for each year of service in PEPFAR focus countries.** Clinical, managerial, and technical professionals graduate from training programs today with substantial debts that limit their ability to consider voluntary or less remunerative work. A loan repayment program would expand the pool of professionals who could consider service abroad and make many more skilled individuals available to address PEPFAR goals.

The Twinning Program

Established overseas twinning partnerships offer the unique advantage of pre-existing infrastructure already prepared to receive partners. This ready-made structure can strengthen host country workforce by allowing the rapid deployment of foreign health professionals to fill personnel voids, to provide relevant side-by-side training with colleagues in their hosts' home environment, and to train trainers that can facilitate expanded knowledge in specific areas such as HIV care and prevention (ICAD and CI, 2002). An ability to quickly mobilize U.S. personnel is critical to short-staffed institutions in PEPFAR focus countries. It can be used to send relief staff in from the U.S. who could temporarily substitute for the regular staff while they travel off-site for much needed training. Twinning can also facilitate skill and leadership development both by in-service training and care provision and by on-site or online teaching, coaching and mentoring.

Recommendation 7: ***Promote Twinning as a mechanism to mobilize health personnel.*** **The committee recommends long-term, targeted funding for innovative, institutional partnerships that mobilize U.S. health personnel to work in PEPFAR countries. Often called "twinning," these bi-directional partnerships (which encompass counterpart organizations ranging from hospitals and universities to NGOs and public health agencies) develop institutional capacities and create a sustainable relationship between the partners that extends beyond the life of the defined project. It is a bilateral arrangement that can develop collaboration in many areas but stands to be a particularly helpful instrument to augment teaching, training, and service capacities in combating HIV/AIDS. Twinning should be supported between a variety of U.S. and PEPFAR country based institutions that are most relevant to meeting PEPFAR tar-**

gets and harmonizing with PEPFAR country operating plans, especially public sector health agencies. Twinning is a mechanism that can move skilled personnel from a sending organization to a host organization to provide support, training, and technical assistance. It provides a ready-made structure in host countries for U.S. health professionals to engage with maximum speed and effectiveness.

The Clearinghouse

Many organizations currently send health professionals to work in PEPFAR focus countries. Given their experience, these groups are well poised to assist in HIV treatment, prevention and care thus helping to meet the PEPFAR goals. The Global Health Service Clearinghouse is designed to assist this community of organizations in mobilizing health personnel to go abroad for HIV/AIDS work. A virtual network of international sending organizations can potentially offer and receive information and regularly reach thousands of volunteers. It is an efficient way to use emerging technology to network people and organizations for the benefit of both.

Recommendation 8: ***Develop a U.S. Global Health Service Clearinghouse.*** **There are many organizations currently mobilizing health personnel to work in PEPFAR countries. These organizations could be powerful allies in meeting PEPFAR goals. Therefore the committee recommends a multifaceted Clearinghouse for the U.S. Global Health Service that would facilitate information exchange, enhance access to program data, and provide opportunity information for interested health professionals. The Clearinghouse would include:**

- **Program Resource Directory and Networks**
  A searchable, web-based directory that would provide screened, reliable links enabling interested volunteers to view sending organizations' web sites thus facilitating organizational recruitment.
- **Opportunity Bank**
  A job bank of available host-country positions that would be a vital tool for identifying vacancies that could be filled by U.S. professionals intending to work in PEPFAR focus countries.
- **Cultural and Strategic Issues Reference Site**
  A virtual warehouse of information pertinent to all health professionals planing to work in PEPFAR focus countries including those seeking GHS Fellowship Awards, Loan Repayments, or GHS Corps assignments.
- **Country Credentials and Travel Guidelines Repository**
  A compendium of updated, virtual information designed to assist prospective volunteers in applying for work in the global arena.

FORWARD PLANNING

The committee finished its work by considering various promising means to enhance and sustain global health workforce in both low and high resource countries.

Long-term health workforce capacity development

The GHS is envisioned as a strategic and humanitarian intervention in settings that currently lack sufficient human resources in health to mount a counterattack on HIV/AIDS. The programs of the GHS are not intended to produce a permanent workforce or to substitute for health personnel capacity development in PEPFAR nations. The long term sustainability of the program must be a priority for both PEPFAR focus countries and the United States. Over time, all PEPFAR countries must develop sufficiently capable and sustainable workforces to continue HIV/AIDS prevention and treatment programs into the foreseeable future. There is a strong rationale for foreign workers, including U.S. health professionals, to help—chief among them U.S. health professionals—to establish self-sufficiency in these countries. A major task contribution of U.S. personnel overseas, however, could be to contribute to national health care capacity-building through training, skill development, partnership and other forms of human resource support.

In the view of the Committee, national capacity development in each PEPFAR focus country should also entail the following steps:

1. Each country should undertake a health workforce needs assessment as part of or complementary to their national plan.
2. National education and training should be accelerated to train and develop human resources to meet the HIV/AIDS epidemic and primary health needs of the country.
3. The work environment for the workforce should ensure staff retention and promote staff performance.
4. Stopping the brain drain can be approached by dampening demand in richer countries that continue to recruit health workers.
5. Where necessary, priority programs and health systems should be harmonized to avoid fragmentation, duplication, and waste.

Although long term health professional capacity development must be a priority for host countries, the Committee concluded there are significant actions the United States can take to assist in stabilizing and promoting the health workforce in PEPFAR nations. Foremost among these is investment in health workforce capacity development. Medical and nursing schools need to be built and staffed. Mid-level provider programs that offer continuing education and advanced training need to be promoted and funded. Community and village health workers need to be trained by the thousands and equipped with standardized basic skills for HIV/AIDS work.

At the same time, the United States has a key role to play in creating stability in the health sector of developing countries by ending the brain drain of physicians, nurses and other skilled health personnel. This out-migration is triggered by the failure of the U.S. and other developed nations to educate sufficient health professionals for their domestic needs (Stilwell et al., 2004). The resultant “pull” and exodus of scarce workforce assets stands as a prominent barrier to build-

ing clinical cadres in PEPFAR focus countries to assume the increased demands of HIV treatment and prevention.

Creative Partnerships

A variety of creative public–private partnerships can assist with the PEPFAR health workforce mission. Increasingly used in comprehensive development frameworks, public–private partnerships have featured prominently in international health in recent years. Last year 91 international partnership arrangements in the health sector qualified as public–private partnerships, of which 76 were dedicated to the control of HIV/AIDS or other infectious diseases. Noteworthy examples include partnerships principally orchestrated by large multinational companies as well as partnerships initiated by non-governmental organizations (NGOs) working with corporations. Individual governments have also formed partnerships with for–profit private entities or NGOs with particular technical or outreach strengths. Focusing on the health workforce mission of PEPFAR, a variety of creative public–private partnerships can be envisioned. The committee felt that GHS–private sector alliances should be supported and encouraged.

E-Health

"E-health" is defined as the use of technology to exchange actionable information over distance to facilitate the delivery of health services. E-health allows health professionals to overcome time and distance barriers, bringing expertise, education and training to remote locations and providing services that poor, isolated communities would otherwise lack. Personal Digital Assistants (PDAs) for ARV management, patient recordkeeping, patient tracking, data collection, and knowledge building are a specific example of an e-health application that could support the scale-up of HIV/AIDS care and treatment in PEPFAR focus countries.

The Committee recognized the great potential for e-health to mitigate the human capacity shortfall by:

1. technologically enabling health care workers to increase their efficiency and effectiveness;
2. linking the health care establishment with electronic and immediate access to experts and expert centers in the U.S. and elsewhere; and
3. providing individual support to overseas professionals that enables and encourages longer deployments.

Global Health Education in the United States

Global health is more than the study of diseases of the developing world; it is a matrix of many converging factors—economic, cultural, historical, political, and environmental—that influence health and disease worldwide. Interest in global health among U.S. medical students and post-graduate residents is currently at a high level with more than 20 percent of students graduating from U.S. medical schools in 2003 spending time abroad compared with just 6 percent of

students in 1984 (AAMC, 1984, 2003). This level of interest suggests that there is sizeable pool of U.S. health professionals open to overseas work opportunities linked to global service in the future. To serve the educational needs of these students and the national interests of the United States, the Committee supported upgraded, multidisciplinary global health curricula and appropriate professional consortia, both within health professional schools and other educational settings.

THE CHOICE TO ACT

Healers Abroad: Americans Responding to the Human Resource Crisis in HIV/AIDS presents a set of ideas with the potential to augment and accelerate the mobilization of U.S. health professionals for the battle against HIV/AIDS. Each of these ideas represents an element, or option, that could be adopted by using the current PEPFAR authority or by initiating new legislative or administrative action. Taken as a whole, however, the idea of a global health service is far more powerful than its individual elements. The human immunodeficiency virus is global, relentless, and troublingly mutable—a truly terrifying adversary. The counter attack against HIV/AIDS must be equally bold and inventive, marshalling science, treasure, and personal commitment. The GHS is proposed as an instrument of counter attack, an organization that will appeal to the heads and hearts of U.S. health professionals and engage growing numbers of them to join the campaign against the global scourge of HIV/AIDS.

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Healers Abroad

Americans Responding to the Human Resource Crisis in HIV/AIDS

Committee on the Options for Overseas Placement of U.S. Health Professionals

Board on Global Health

Fitzhugh Mullan, Claire Panosian, Patricia Cuff, *Editors*

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The serpent has been a symbol of long life, healing, and knowledge among almost all cultures and religions since the beginning of recorded history. The serpent adopted as a logotype by the Institute of Medicine is a relief carving from ancient Greece, now held by the Staatliche Museen in Berlin.

"Knowing is not enough; we must apply.
Willing is not enough; we must do."
—Goethe

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REVIEWERS

This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We wish to thank the following individuals for their review of this report:

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Deborah von Zinkernagel, Pangaea Global AIDS Foundation.

Suwit Wibulpolprasert, Ministry of Public Health, Thailand.

Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations nor did they see the final draft of the report before its release. The review of this report was overseen by **Paul A. Volberding, M.D.**, Professor and Vice-Chair, Department of Medicine, University of California, San Francisco; and **Harold J. Fallon, M.D.**, Dean Emeritus, School of Medicine, University of Alabama at Birmingham. Appointed by the National Research Council and Institute of Medicine, they were responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the authoring committee and the institution.

PREFACE

Today 14,000 human beings will contract HIV and another 8,500 people will die from AIDS. Malaria and tuberculosis (TB) will each claim roughly 3000 more lives, today. These same cruel events will take place tomorrow and the next day and next week and next month. The death toll will only spiral upward as the HIV epidemic continues its global spread.

The terrible pandemic of HIV/AIDS has triggered an extraordinary response – a global counterattack mounted by international organizations, national governments, private philanthropies, pharmaceutical companies, churches, and individuals. The United Nations Global Fund, the World Health Organization's 3 X 5 Initiative, the World Bank, the Bill and Melinda Gates Foundation, national foreign aid programs, numerous faith-based groups, corporations, and non-governmental organizations are committing funds, medications, and personnel to the battle against HIV/AIDS. The United States government joined the battle in earnest when Congress enacted the President George W. Bush's Emergency Plan for AIDS Relief (PEPFAR) and earmarked $15 billion for the campaign. This medley of global commitments has opened a new era of possibility in preventing and treating HIV/AIDS and caring for those affected by the disease.

Campaigning against HIV/AIDS has no precedent. Smallpox was beaten by a globally coordinated search-and-destroy strategy requiring only a single patient encounter to deliver the vaccine. In contrast, the DOTS (directly observed therapy) strategy at the core of modern TB treatment requires daily patient contact over much of the treatment course and therefore a far larger health workforce. Fighting HIV/AIDS will require the daily delivery of medications and the clinical management of patients —*for the rest of their lives*. The sheer volume of health workers—and the systems to support their work— that this fight will demand is well beyond anything ever before required of a public health campaign. The challenge is compounded by a chronic paucity of doctors, nurses, and other health personnel in many of the low income countries targeted by PEPFAR where the epidemic is most fulminant. Sub-Saharan Africa, for instance, has 25 percent of the world's burden of disease but only 1.3 percent of the world's health workforce. There is one physician for every 360 people in the United States as compared to one for every 30,000 in Mozambique; one nurse for every 125 people in the United States but only one for every 5000 in Uganda. There are 11 pharmacists in Rwanda.

Simply put, fighting HIV/AIDS in much of the world means building human health capacity. There can be no meaningful counterattack without an adequate force of qualified health personnel to plan, implement, and sustain the campaign. Recognizing this, the PEPFAR legislation called for a pilot

program to mobilize U.S. health professionals to work overseas in support of the PEPFAR mission. The Office of the Global AIDS Coordinator at the Department of State, in turn, asked the Institute of Medicine to convene a committee to conduct a rapid study of program options and report their recommendations. Motivated by the urgency of the global need and the historic opportunity to contribute to public policy, the committee has worked with intensity, speed, and a sense of mission.

Healers Abroad is the product of their labor. Drawing from the extensive and varied experience of committee members, testimony from health workers in the field, and published literature on global health workforce, the report proposes six program areas that would augment and accelerate the mobilization of U.S. health personnel to PEPFAR focus countries to help strengthen healthcare capacity and develop overseas collaborative partnerships. The report also recommends that these programs to be managed in a closely coordinated fashion as the Global Health Service (GHS). The GHS will symbolize the commitment of the people of the United States *and* catalyze the movement of U.S. health personnel overseas to help in the global counterattack on HIV/AIDS. It will be a program with a human face combining the powerful tradition of people-to-people assistance with the best in contemporary health science and information technology. It will be a program of strategic humanitarianism, providing support to U.S. health professionals to assist people in need and train counterparts abroad while helping to stabilize societies in peril and demonstrating American compassion and civic spirit.

It is the committee's hope that this report will contribute to the success of the PEPFAR program and prove useful to others concerned with building a health workforce sufficient to meet the global HIV/AIDS challenge. It is our further hope that the report will be remembered as an early blueprint contributing to a new, enduring and robust role for U.S. health professionals in improving global health.

Fitzhugh Mullan
Committee Chair

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The Committee recognizes the tremendous efforts of several individuals whose contributions invigorated meeting discussions and enhanced the quality of the report. For their expert advice, opinions and their willingness to assist, the committee thanks its consultants Thomas Denny, Bjorg Palsdottir, Kai Spratt, and its Board on Global Health liaison, Richard Guerrant. Special appreciation goes to our writer and senior consultant, Claire Panosian, whose skill in transforming ideas into words was instrumental in articulating the spirit of this report. The Committee also acknowledges with great thanks the testimony of Barbara Stilwell, Ummuro Adano, James Heiby, Gilbert Kombe, Antoine Augustin, Eric Krakauer, King Holmes, Col Maureen Coleman, Gail Reed, Paul Dirdak, Ky Luu, Brian Palmer, Elise Frederick, Karen Hein, Ronald Campbell, Mike St. Louis, Thurma McCann Goldman, Don Weaver, Jack Hawkins, Nancy Kelly, Holly Burkhalter, Eric Friedman, Fred Valentine, Robert Einterz, Michael Scheld, Daniel Wikler, John Shippee, James Smith, Xingzhu Liu, Holly Ladd and Rebecca Riccio. Additional thanks goes to Stephen Moore, Annalisa Trama, Paul Moffat, Lydia Mungherera and Chuka Anude for their written testimony from the field. Distinctive recognition goes to Michael St. Louis, Estelle Quain, and Michele Moloney-Kitts for their extra efforts and repeated attention to the ongoing information and support of the study.

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The Committee would be remiss if it did not also acknowledge the hard work and dedication of the study staff in the Board on Global Health. Patrick Kelley, the Board Director, was an extremely valuable resource with his extensive knowledge in overseas placement of health professionals. We would also like to thank Patricia Cuff as the Study Director for her energy and commitment to making sure the report was of the highest quality possible given the intense time pressure to complete this project. To Alyson Schwaber, the Research Associate, the committee extends their utmost gratitude for her outstanding ability to critically examine and understand the research material on overseas placement of health professionals. Dianne Stare did a tremendous job as the Research Assistant and Allison Berger performed amazingly well coordinating many of the study logistics.

CONTENTS

LIST OF TABLES, FIGURES, AND BOXES

Tables

Figures

Boxes