



# Issue Brief: Confronting HIV/AIDS, TB and Malaria

## Summary of Findings

- ▲ The need for human resources for health in Kenya is a major challenge to scaling up services to prevent and treat HIV/AIDS, malaria, and TB; promoting maternal and child health; and maintaining all other health services.
- ▲ As in many countries, the geographical distribution of skilled health personnel in Kenya is heavily skewed toward urban areas.
- ▲ Substantial annual growth rates across all staff categories are necessary to meet health targets between now and 2015. The largest gaps are for pharmacy and lab specialists in the public and faith-based organization sectors.
- ▲ A public-sector hiring freeze, increased demand due to reemergence of infectious diseases, demand for health workers abroad, and lack of in-service training constrain the system's capacity to meet minimum Ministry of Health staffing requirements.
- ▲ A mix of short- and medium-term options can address the labor requirements estimated in this study: drawing on a large pool of unemployed health professionals and providing them in-service training, assessing training institutions and the number of graduates in the pipeline, examining potential for collaboration between public and private health sectors, developing with international donor support a comprehensive incentive plan to attract and retain health workers.

## Stepping Up Health Worker Capacity to Scale Up Services in Kenya

### Human Resources Strategy Critical to Achievement of Millennium Development and PEPFAR Goals

Alarming reversals in health gains in Kenya are emerging in the population overall, but especially among mothers and children and those afflicted with HIV/AIDS, tuberculosis (TB), and malaria. A joint Ministry of Health (MOH) and Partners for Health Reform *plus* assessment (PHR *plus*), funded by USAID, systematically documents a major reason for the decline in health status: critical shortages of medical professionals and health system workers.

The Kenya assessment is part of a multi-country initiative to provide data and options to policymakers and donors amidst calls from the World Health Organization (WHO), the Joint Learning Initiative (JLI), and most recently the G-8 for "building the capacity of health care systems in low resource countries through recruitment, training, and deployment of public and private health workers." The assessments look at how human resource (HR) policy and workload planning can address personnel shortages, specifically, gross imbalances across urban and rural areas and among personnel categories, including doctors, nurses, pharmacists, and lab technicians.

Studies cite that as the number of health workers declines, health outcomes decline proportionately. The ability of

international initiatives, such as the Global Alliance for Vaccines and Immunization (GAVI), the Global Fund to Fight HIV/AIDS, TB and Malaria, the US President's Emergency Plan for AIDS Relief (PEPFAR), and the Millennium Development Goals (MDG), to achieve their targets for scaling up and delivering vaccines and drugs, and increasing funding to combat HIV/AIDS, TB, and malaria hinges on the availability and capacity of health workers. Paradoxically, health systems chronically underinvest in the workforce; this, the JLI warns, is one of "the most important systemic barriers to progress."

### Health Goals

Through PEPFAR, Kenya plans to support 250,000 antiretroviral therapy (ART) patients, reach nearly 3 million voluntary counseling and testing (VCT) clients, and avert 37,500 infections through the prevention of mother-to-child transmission (PMTCT) to 529,286 clients by 2008.

National MDG targets for 2015 are to first halt and then begin to reverse HIV/AIDS, TB, and malaria through increased coverage and treatment, to halve malnutrition rates in children under 5 years old, and to reduce under-5 mortality by two-thirds (to 33 per 1,000) and maternal mortality by three-quarters (to 147/100,000) by increasing the number of immunizations and deliveries attended by skilled personnel.



### Immediate Health and HR Challenges

Kenya's health gains of the 1980s and 1990s have begun to reverse due to poverty, rapid population growth, and, more specifically, child nutrition problems, HIV/AIDS, acute respiratory infections, malaria, diarrhea, re-emergence of infectious diseases such as TB and malaria, and poor-quality health facilities and services. Since 2000, deaths in children under 5 have increased, the number of births attended by skilled professionals has dropped, immunizations rates are declining, and TB incidence is rising. Kenya's ranking on the UNDP Human Development Index has fallen from 134 out of 173 countries in 2002 to 154 out of 177 in 2005. Potential health threats include avian influenza. These health challenges have increased the demand for health services.

More recently, financial resources from the Global Fund and other international donors have increased the availability of medicines and supplies for HIV/AIDS and other target diseases, but Kenya's ability to absorb this will be constrained by the lack of adequate *human* resources. For example, with nearly half of all hospital beds occupied by AIDS patients, significant numbers of health care personnel will be needed to provide ART and other AIDS-related medical services.

Three main challenges have led the Kenya MOH to declare HR a top priority:

1. Loss of public-sector skilled health workers to better pay and opportunities in the private sector and abroad as well as to attrition (from retirement, sickness or death). Public-sector hiring freezes compound the strain.
2. Shortage of health workers overall. For example, in 2004, Kenya had only three doctors for every 100,000 people and 49 nurses per 100,000. Nearly half the dispensaries (47 percent) have only one community nurse qualified to administer drugs. In-service training is inadequate or non-existent.
3. Imbalance in distribution of available health workers. Half of all health personnel and 80 percent of doctors are urban based and nurses exceed what is needed in district and provincial hospitals. Conversely, many health centers and dispensaries are acutely understaffed.

### Estimating Needs for Skilled Health Personnel

A survey of 88 MOH facilities and 16 facilities run by faith-based organizations (FBO) at all levels of the health system in Kenya's eight provinces focused on those providing services related to HIV/AIDS, TB, malaria, and maternal and child health as shown in Table 1. A MOH HR mapping exercise showed that Kenya had a total of 42,390 health workers in 2005.

**Table 1. Distribution of Health Facilities in the Sample (October-November 2005)**

Province	Provincial Hospitals	District Hospitals	Health Centers	Dispensaries	Total
Central	1	4	7	3	15
Coast	1	3	9	3	16
Eastern	1	2	6	1	10
Nairobi	1	1	6	1	9
North Eastern	1	0	2	1	4
Nyanza	1	2	8	3	14
Rift Valley	2*	2	11	4	20
Western	1	2	9	2	15
<b>Total</b>	<b>9</b>	<b>16</b>	<b>58</b>	<b>19</b>	<b>102</b>

\* includes the Moi Referral and Teaching Hospital

Assessment findings reveal that shortages are greatest among pharmacy and lab specialists. Rural areas suffer the most acute shortages. For example, 42 percent of doctors and 30 percent of nurses are located in the Nairobi and Rift Valley provinces.

To meet the three previously cited PEPFAR targets for VCT, ART, and PMTCT, the public sector needs an additional 55 doctors, 87 clinical officers, 137 nurses,

158 VCT counselors, 262 lab specialists (a 15-percent increase over 2005), and 219 pharmacy specialists (a 50-percent increase). Needs in the FBO sector also are highest in these last two categories: an additional 115 lab and 73 pharmacy specialists are needed. (See Table 2.)

**Table 2. Number of Additional Staff Required to Meet PEPFAR Targets 2007 - 2008**

	Public Sector	FBO Sector	Total
Doctors	43	15	58
Clinical Officers	68	23	91
Nurses	107	35	142
Pharmacy Specialists	167	56	223
Lab Specialists	167	72	239
Nutritionists	22	7	29

To meet all the health-related MDG targets for 2015, the public sector will need to increase staff levels by 2010 as illustrated in Table 3 – while maintaining the current level of other health services.

**Table 3. Number of staff available for all services in 2005, and number of staff required in the public sector in 2010 and 2015**

Staff Category	Public Sector			FBO Sector		
	2005	2010	2015	2005	2010	2015
Doctors	1,297	1,531	1,635	220	266	288
Clinical Officers	2,341	2,897	3,103	219	318	350
Nurses	16,439	19,827	21,596	3,107	3,493	3,775
Pharmacy specialists	433	750	961	209	304	379
Lab specialists	1,689	2,476	2,700	544	767	839
Radiographers	287	338	355	—	10	10
Counselors	120*	290	311	—	148	159
Nutritionists	327	561	541	—	78	67

\* The number of counselors is for 2004, as no information was available to estimate their number in 2005.

The table shows a substantial percentage increase across all staff categories is required in the public sector:

- ▲ 73 percent for pharmacy specialists
- ▲ 71 percent for nutritionists
- ▲ 47 percent for lab specialists
- ▲ 24 percent for clinical officers
- ▲ 21 percent for nurses
- ▲ 18 percent for doctors.

In addition, the number of VCT counselors needs to increase by 2.5 times over the same time period. It is important to note that this requirement assumes that counselors comprise the only staff category providing VCT. If VCT training of other staff categories (such as nurses) is scaled up, then fewer counselors (but more nurses) will be required to reach VCT targets.

Similarly, in the FBO sector, the table shows increases in staff numbers are required in 2005-2010 by the following percentages:

- ▲ 45 percent for pharmacy specialists,
- ▲ 41 percent for clinical officers
- ▲ 41 percent for lab specialists,
- ▲ 21 percent for doctors
- ▲ 12 percent for nurses.

Assuming that both sectors achieve the above HR targets for 2010, staff growth needed in the 2010-2015 period will be much less, with the exception of pharmacy specialists – their number needs to further increase by 28 percent in the public sector, and by 25 percent in the FBO sector, to 961 and 379, respectively.

## Meeting Workforce Needs in Kenya's Health Sector: Options for Policy Action

- ▲ Utilize large pool of unemployed health professionals and provide in-service training, particularly in ART and PMTCT.
- ▲ Assess HRH in the private sector and the possibility of expanding services through the private sector
- ▲ Develop a medium to long term strategy for hiring, deployment, and retention with appropriate incentives to attract and retain health workers, and particularly, to increase coverage in underserved rural areas. This involves a taskforce of national leaders and policymakers in health, education, labor, and finance and donor support. Types of incentives to consider may include:
  - △ Housing
  - △ Refresher training and career development opportunities
  - △ School fees
  - △ Transportation
  - △ Internet access
  - △ Salary raises
  - △ Hardship pay for rural and underserved areas
- ▲ International donors direct more, steady funding to explicitly address health human resource gaps for HIV/AIDS, Malaria, and TB, and the health MDGs, recognizing that the effectiveness of investments and advances in drugs, technology, and infrastructure relies heavily on the competence and quality of care delivered by pharmacists, laboratory technicians, nurses and doctors.▲

## Disclaimer

This publication was produced for review by the United States Agency for International Development (USAID). The author's views expressed in this publication do not necessarily reflect the views of the USAID or the US Government.

## Selected Background Resources

- Government of Kenya, UNDP Kenya, and Government of Finland. 2005. *MDG Status Report for Kenya 2005*.
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## Acknowledgements

Kenya Ministry of Health: directors and staff of Moi Referral and Teaching Hospital, Machakos General Hospital, provincial general Hospitals: sampled districts and facilities in 8 provinces; and USAID/Kenya.▲

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**Partners for Health Reformplus** (PHRplus) is funded by USAID under contract no. HRN-C-00-00-00019-00 and implemented by Abt Associates Inc. and partners Development Associates, Inc.; Emory University Rollins School of Public Health; PATH; Social Sectors Development Strategies, Inc.; Training Resources Group; Tulane University School of Public Health and Tropical Medicine; and University Research Co., LLC.



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## Estimating Human Resources for Health Requirements

Estimating health staff availability and requirements to reach health-related targets is based on a model developed specifically for Kenya, using a combination of staffing models commonly used for HRH needs projections.

HR numbers are measured in full-time equivalent (FTE) staff units.

A FTE staff member for a given service (e.g. ART) is a health professional who spends all his/her working time on patient visits to provide that service.

For example, a doctor has 220 working days per year and is assumed to spend 6.5 hours each working day attending to patients. If a doctor spends, on average, 24 minutes per ART patient-visit and each ART patient sees a doctor 4 times a year, then a FTE doctor for ART can see 894 ART patients per year.

FTE staff requirements are calculated for the following categories:

- ▲ Doctors
- ▲ Clinical officers
- ▲ Nurses (registered and enrolled nurses)
- ▲ Pharmacy specialists (pharmacists and pharmaceutical technologists)
- ▲ Laboratory specialists (laboratory technicians and technologists)
- ▲ Radiographers
- ▲ Nutritionists
- ▲ Counselors

For more information on the methodology and data used to calculate HRH requirements for Kenya see: PHRplus and Ministry of Health, Republic of Kenya. 2006. *Rising to the Challenges of Human Resources for Health in Kenya: Developing Empirical Evidence for Policy Making*. Bethesda, MD: Abt Associates Inc.▲