

Using Facts to Improve Health Worker Allocation in Côte d'Ivoire

Events of the past two decades have dramatically disrupted the Côte d'Ivoire health care system, particularly in terms of availability and quality of human resources for health (HRH):

We need planning based on facts to address our human resource needs...
Ivorian physician

- Declining government revenues and economic adjustment programs had detrimental effects on wages (public sector health worker salaries, although low per worker, in total consume at least a third of the health budget in most years) and on health sector investments like infrastructure, training, and modernization of human resource management information systems (HRIS). Private sector health services were similarly affected.
- Civil unrest starting in the late 1990s created unsecure working conditions in northern, central, and western regions.

This made it unsafe for health workers to go to work and led to a health worker exodus to the southeast of the country. The World Health Organization (WHO) estimated that in 2004, 70 percent of health facilities across

the country were not functioning, and the public sector had lost one fifth of its medical doctors and one quarter of its nurses. In addition, several training institutions in conflict-affected zones closed.

- HIV/AIDS has had a devastating impact exacerbated by the aforementioned health system problems (and, conversely, created need for additional HRH). According to UNICEF, Côte d'Ivoire is one of the West African countries most affected by HIV, with a current estimated adult prevalence of 4.7 percent.

An agreement ended the politico-military conflict in 2007, and the government of Côte d'Ivoire is now instituting health system reforms to improve effectiveness, efficiency, quality, and equal access to health care. Reforms include decentralization, strengthening community

Kylie Ingerson/Côte d'Ivoire



Nurses use newly stocked INFAS reference library.

participation, implementing cost-sharing schemes, and improving supplies of drugs and equipment for priority services, especially for HIV/AIDS, tuberculosis (TB), and malaria. Closing the HRH gap – in terms of retraining of health workers, redeploying and retaining them in the underserved regions, and developing a system to track HRH – is central to success of the reforms.

With funding from the President's Emergency Plan to Fight AIDS (PEPFAR) and support of the United States Agency for International Development (USAID), the Health Systems 20/20 project is working with the Ivorian Ministry of Health and Public Hygiene (MOH) to build HRH numbers and management at all levels of the health care system.

DEVELOPING EMPIRICAL EVIDENCE TO REBUILD HRH

Before the HRH situation could be addressed, it had to be measured. While it was long apparent that

A shortage of human resources has replaced financial issues as the most serious obstacle to implementing national treatment plans ...WHO, Working Together for Health, 2006

HRH availability, quality, and management needed to be improved, data to determine staffing needs and guide staff training and allocation were lacking. Districts submitted paper

reports, but without computerization, aggregation and analysis of data was impossible, leaving the central level to make tradition-based, not evidence-based, staffing policy.

Between 2006 and 2008, the MOH and Health Systems 20/20 collaborated on three studies (Hatt et al. 2008, Kombe et al. 2008, Lee et al. 2006) that provided a comprehensive assessment of HIV services and HRH in both the public and private sectors, in particular to identify institutional capacities

needed to expand HIV services. The assessments asked the following questions:

- How big is the issue of HRH across the country?
- How many of the various types of health workers are available, how are they distributed, and what proportion of them should work on HIV/AIDS, TB, and malaria?
- How much would it cost to intervene and can the Ivorian government alone address the issue?
- What are the system-wide effects of the HRH crisis?

Assessment teams gleaned information from the limited available published and unpublished documents and other data; interviewed officials at the Ministries of Health and Education, development partners, and other stakeholders; and did facility surveys of HRH in 301 public and 279 private health facilities at the village, primary, secondary, and tertiary levels.

The assessments estimated total HRH in Côte d'Ivoire at 11,749, for a population of 18.7 million (2004); 58 percent were nurses, 18 percent midwives, and 14 percent doctors. Tables 1-3 summarize selected study findings, including low rates of public facility and health worker coverage of the population, high vacancy rates in health worker positions, and limited uptake of

TABLE 1. HEALTH COVERAGE PER INHABITANT

1998	1999	2000
1 PHC per 13,516	1 PHC per 12,112	1 PHC per 12,257
1 public hospital per 225,979	1 public hospital per 237,185	1 public hospital per 230,983
1 bed per 2,643	1 bed per 2,691	1 bed per 2,890

Note: PHC-public health center

TABLE 2. HRH VACANCY RATES, BY CADRE

Cadre	2001			2004		
	Posts	Filled	Vacancy (%)	Posts	Filled	Vacancy (%)
Doctors	160	119	24.7	247	117	52.7
Pharmacists	70	22	68.6	11	32	+90
Dental Surgeons	25	20	20	16	15	6.25
Nurses	1300	377	71	949	305	67.9
Midwives	500	173	65.4	473	196	64.3
Special Health Technicians	227	219	3.5	211	187	11.4

medical graduates into the public sector – despite need for their services, the government could not afford to hire many. The assessments also documented high attrition rates among health workers (Figure 1).

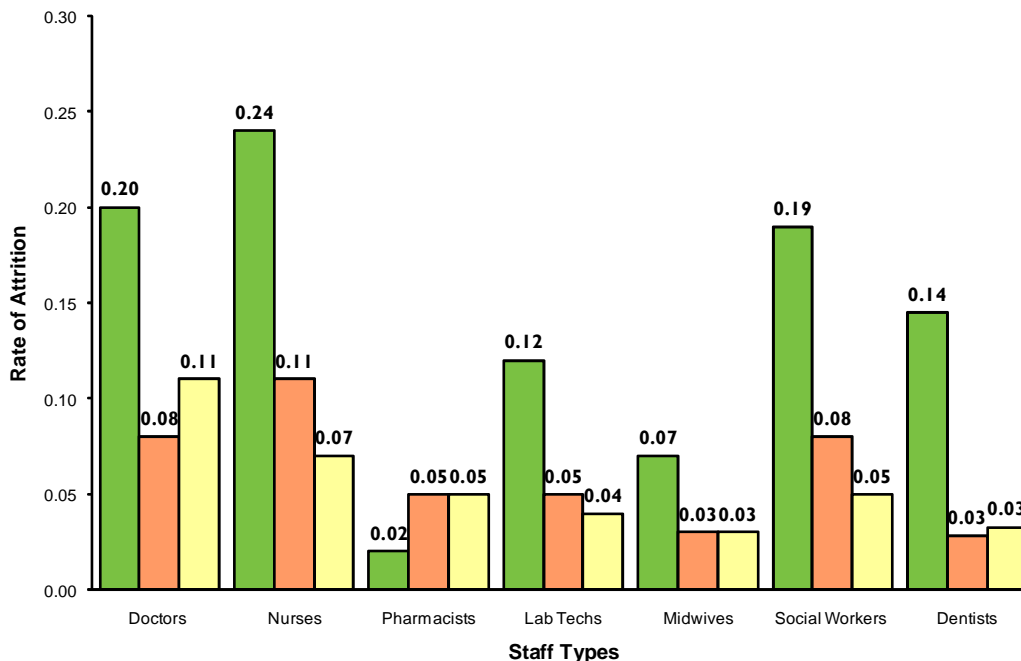
In the private sector, the number of health workers grew between 2004 and 2006, but an increasing proportion of them were part time (nearly half, 1,077 out of 2,327, of private sector HRH in 2006).

TABLE 3. EMPLOYMENT OF UFR GRADUATES BY PUBLIC SECTOR

Staff Type	UFR Graduates in 2004	# Hired by the Public Sector	Unemployed or Hired in Other Sectors
Doctors	312	117	195
Pharmacists	96	32	64
Dental Surgeon	26	15	11

Medical graduates of the Unite de Formation et de Recherche des Sciences Medicales de l'Université de Cocody

FIGURE 1. ANNUAL ATTRITION RATES AMONG PUBLIC HEALTH WORKERS



USING EMPIRICAL EVIDENCE TO REBUILD HRH

Health Systems 20/20 develops or adapts tools from its wide-ranging inventory of health systems strengthening tools (see below) to gain the empirical evidence from which the project and its country counterparts can tailor the most appropriate strategies for meeting health system challenges.

Students are happy to have some guidance at last... they are eager to learn.

Mr. Boni Martial, an INFAS instructor brought out of retirement

In Côte d'Ivoire, the findings of the MOH/Health System 20/20 assessments, with their framework for improving HRH availability and quality, are already producing results in terms of health care policy, management, and provision in many parts of the country – and contributing to health nationwide.

CREATING A NEW HRH STRATEGY TO GUIDE REFORM ACTIVITIES

The first MOH/Health System 20/20 response to assessment findings was the development of a costed, five-year HRH strategy – recently approved by the Minister of Health – that targets short- and long-term improvements in the availability, efficient use, and distribution of HRH. Various MOH departments and other ministries (AIDS, Public Service and Employment, and Women, Family and Social Affairs) participated in the steering committee and working groups that formulated the interacting operational, financial, and customer components of the strategy, the approaches it would take to achieve both short- and long-term goals, and indicators to measure progress.

HIRING INSTRUCTORS TO IMPROVE HEALTH WORKER TRAINING

At the National Health Worker Training Institute (INFAS) in 2006, 88 instructors were training 2,200 nursing, lab technician, and physician assistant students; in the following year, 3,418 were being trained. This unwieldy 1:39 teacher-to-student ratio prevented adequate supervision of students' in-service training and limited INFAS' ability to sufficiently prepare students for the workforce.

To meet the HRH strategy's long-term goal of improving numbers and quality of health workers, USAID through Health Systems 20/20 supported the emergency hiring of 35 instructors for three INFAS campuses. Twenty are new instructors who reinforce pre-service training; the 15 others have returned from retirement to supervise in-service training, alleviating the burden on busy hospital staff mentoring the students, and to identify best practices and areas for training improvement. Midwives at the Abobo-North hospital have complimented the "know-how" of their in-service students.

Related to improving instruction, Health Systems 20/20 is assisting INFAS to strengthen its reference library, which lacks, for example, up-to-date professional journals and other materials on HIV management, and information and communication technology (ICT) infrastructure to access publicly available information.



INFAS library director (center) with Health Systems 20/20 staff members in front of newly stocked INFAS library.

Kylie Ingerson/Côte d'Ivoire

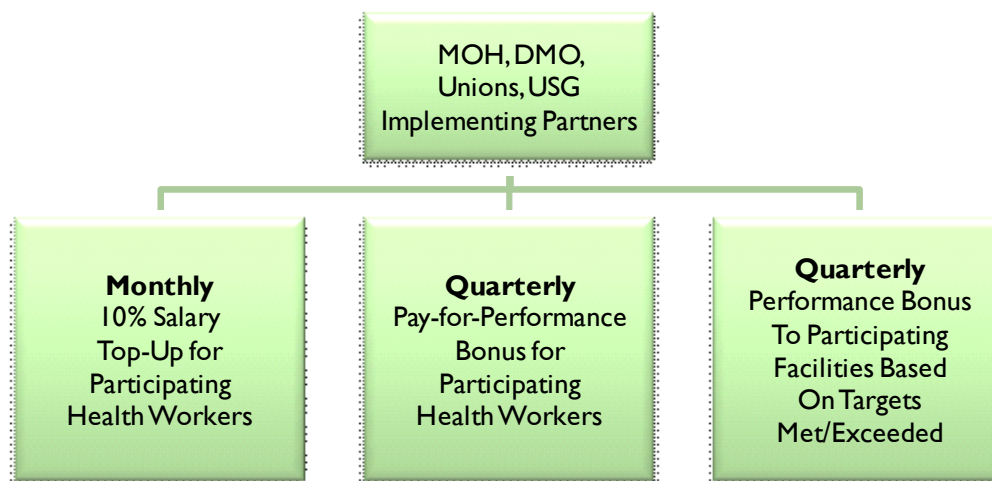
PILOTING PAY FOR PERFORMANCE

To resume provision of basic health services¹ and institute HIV-related services in regions and districts where the health system had practically ceased to function, a one-year pilot scheme to test the viability and efficacy of performance-based approaches began on January 1, 2009, in the northern district of Ferkessedougou (Savanes region), where HIV prevalence is nearly 17 percent and infant mortality 127 per 1,000.² A wide range of stakeholders participated in the incentive scheme design – 19 labor unions alone had to sign off on it. The scheme incorporates fairness (a reasonable salary increase); equity (all staff in a participating facility are covered); sustainability (salary increases are sustainable, capped in accordance with those of local NGOs); and scale-ability (expansion to other regions will be manageable). "Hardship" salary increases of 20 percent are paid to all staff at participating facilities; other incentive payments are based on achievement of performance-specific indicators on HIV counselling and testing and prevention of mother-to-child transmission services; award payments go both to individuals and to facility upgrades.

STRENGTHENING MANAGEMENT OF HIV SERVICES

Good management is integral to good service delivery. To strengthen the Ivorian health system and ensure that facilities effectively deliver and monitor HIV and other priority services, Health Systems 20/20 provided eight five-day trainings in management and leadership to 184 district and regional HIV/AIDS managers across 19 health districts in the regions of Aboisso, Daoukro, and Yamoussoukro. To institutionalize the training program, Health Systems 20/20 trained 16 individuals from the Ministries of Health, Family and Social Affairs, and the Fight against AIDS as management trainers with an emphasis on facilitation and team-building skills. Pre- and post-workshop evaluations consistently indicated that participants expanded their understanding of each of the core management competencies (planning, coordination, strategic thinking, and rational use of resources, especially in the context of existing regulations, financing, and availability of skilled workers). A follow-up evaluation, now under development, will revisit participants to measure how knowledge acquired is being used, and how they are disseminating the knowledge to coworkers.

ELEMENTS OF THE CÔTE D'IVOIRE PERFORMANCE-BASED PAYMENT INCENTIVES



¹The Elizabeth Glaser Pediatric AIDS Foundation is doing clinical training of staff.

² Compare with nationwide AIDS prevalence of 4.7 percent and infant mortality of 90 per 1,000 (UNICEF 2006).

TAILORING AN ELECTRONIC HRIS TO IMPROVE MANAGEMENT OF THE HEALTH WORKFORCE

Given that 15,000 persons work for the government health sector, paper-based HRH management systems severely limit the ability of the government to effectively manage human resources. Such systems make it impossible for ministries to track and monitor personnel. Furthermore, decisions tend to be based in tradition, rather than evidence. To address this issue, Health Systems 20/20 collaborated with the Ministry of Finance to install an electronic HRIS in the MOH. Rather than implement a parallel system, Health Systems 20/20 opted to leverage and strengthen an application (the *Système de Gestion du Personnel*, or GESPER) that the Ivorian government had purchased, and collaboratively tailor the tool for MOH needs. A primary task is to streamline information flows. To this end, a short survey asked central, regional, and district personnel to identify bottlenecks, and a gap analysis revealed issues such as insufficient worker training on software, insufficient data entry stations, and lack of ICT infrastructure at the decentralized level. Health Systems 20/20 is working with the MOH Department of Human Resources (DRH) and Ministry of Finance to develop a GESPER implementation support plan; train DRH staff, including a group of master trainers, on GESPER; deploy GESPER in five districts prior to national implementation; and develop information products from the HRH data. Already, over 60 percent of health worker personnel records have been captured from paper forms and are managed with the system.



Service Provision Assessment data collectors from the National Institute of Public Health.

Christine Ortiz/Côte d'Ivoire

REFERENCES

This brief draws on the following Health Systems 20/20 assessment reports, presentations, and briefs, available at www.HealthSystems2020.org.

Hatt, Laurel, Christine Ortiz, Desiré Boko, et al. July 2008. *Coûts de la Prise en Charge Médicale du VIH/ SIDA par les Services de Santé Publique en Côte d'Ivoire*. Bethesda, MD: Health Systems 20/20 Project, Abt Associates Inc.

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Kombe, Gilbert. *From Health Labor Market Analysis to Results-based Financing: Insights from a Post-conflict Country (Côte d'Ivoire)*. 2009. Presentation at World Bank, Washington, DC, January 14.

Lee, Won Chan, Gilbert Kombe, Suzanne D. Diarra, et al. November 2006. *Human Resources for Health in the Private Sector: Understanding the Capacity, Motivation and Skills Mix in Côte d'Ivoire*. Bethesda, MD: Health Systems 20/20 Project. Funded by Private Sector Partnerships for Better Health, Abt Associates Inc.

Scaling up Human Resources to Deliver HIV/AIDS Services in a Decentralized System: Lessons from Côte d'Ivoire. Brief. Bethesda, MD: Health Systems 20/20 Project, Abt Associates Inc.

Strengthening Human Resources for Health to Deliver HIV/AIDS and Other Priority Services in Côte d'Ivoire. Brief. Bethesda, MD: Health Systems 20/20 Project, Abt Associates Inc.

HEALTH SYSTEMS 20/20 TOOLS

All tools are available at www.HealthSystems2020.org.

Paying for Performance in Health: Guide to Developing the Blueprint, Dec 2008

Toolkit for Using Round 9 of the Global Fund for Health Systems Strengthening, Oct 2008

Guidelines for Assessing the Management and Organizational Capacity of National Malaria Control Programs, Jun 2008

Human Resources for Health Assessment: Data Collection Training, Trainer's Manual, May 2008

Human Resources for Health Assessment: Data Collection Training, Participant's Manual, May 2008

Voluntary Counseling and Testing Events: A Toolkit for Implementers, Mar 2008

Health Systems Assessment Approach: A How-To Manual, Feb 2007

Health Systems Database

Health Systems 20/20 is a five-year (2006-2011) cooperative agreement (No. GHS-A-00-06-00010-00) funded by the U.S. Agency for International Development (USAID). The project addresses the financing, governance, operational, and capacity-building constraints that block access to and use of priority population, health, and nutrition services by people in developing countries. Health Systems 20/20 offers global leadership, technical assistance, training, grants, research, and information dissemination.

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