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Human Development

76181

Toward Interventions in Human Resources for Health in Ghana

Evidence for Health Workforce Planning and Results

Ebenezer Appiah-Denkyira, Christopher H. Herbst,
Agnes Soucat, Christophe Lemièr, and Karima Saleh,
Editors



THE WORLD BANK

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THE WORLD BANK
Washington, D.C.



REPUBLIC OF GHANA
MINISTRY OF HEALTH

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ISBN (paper): 978-0-8213-9667-4

ISBN (electronic): 978-0-8213-9668-1

DOI: 10.1596/978-0-8213-9667-4

Cover image: A mother and child take part in a prenatal care project at the Diocesan Health Service-Goaso in Ghana. © Cordaid.

Cover design: Naylor Design, Inc.

Library of Congress Cataloging-in-Publication Data

Toward interventions in HRH in Ghana : evidence for health workforce planning and results / Ebenezer Appiah-Denkyira ... [et al.], editors.

p. ; cm.

Toward interventions in human resources for health in Ghana

Includes bibliographical references.

ISBN 978-0-8213-9667-4 — ISBN 978-0-8213-9668-1 (electronic)

I. Appiah-Denkyira, Ebenezer. II. World Bank. III. Ghana. Ministry of Health. IV. Title: Toward interventions in human resources for health in Ghana.

[DNLM: 1. Health Manpower—Ghana. 2. Health Care Rationing—Ghana. 3. Health Planning—Ghana. W 76]

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Foreword

The Government of Ghana

Ghana has made great strides in improving health outcomes and reducing poverty. Today we rank among the highest in health outcomes within West Africa, as well as among the Anglophone Sub-Saharan countries. Health improvements have gone hand in hand with economic growth and poverty reduction.

At the same time, we know that more has to be done. Malaria continues to kill many children, and too many mothers still give birth without professional assistance. Providing adequate health services is particularly challenging with too few appropriately skilled health workers, especially in the more remote areas of the country where health outcomes remain most problematic. The Ministry of Health and its agencies are committed to addressing these remaining health concerns. The information in this book will help us further develop and more specifically target interventions where they are needed most.

Recently we drew on the background materials presented in this book to develop the health sector Medium Term Development Plan (2012–15). This plan emphasizes the importance of human resources for health (HRH) and calls for further improvements, particularly in the distribution of health workers across the country. Today we are using the evidence from this book to develop a new Human Resources for Health

Strategic Plan (2012–15), which will outline and guide our strategic priorities on HRH in even more detail.

A sound, evidence-based HRH strategy makes a stronger case for the necessary funding and improves our ability to implement its critical elements. This will be a challenge in light of the fiscal constraints we Ghanaians face in health, education, and other critical sectors, and in light of competing demands for domestic and external resources.

We hope, however, that having this solid analytical work in hand will help mobilize financial and political support to address remaining HRH and health needs, and will help those inside and outside the country to recognize the benefits of supporting a well-articulated and effectively implemented strategy. I look forward to the fruits of these labors, and express our gratitude to the World Bank and all our partners for joining us in this effort.

Dr. Sylvester Anemana
Permanent Secretary
Ministry of Health
Ghana

Foreword

The World Bank

Since the early 1990s, political and economic conditions have changed significantly in Ghana.

Democracy has taken root firmly in the country, as evidenced by successive competitive elections, a free press and a growing civil society, and the devolution of power and responsibilities to elected district assemblies, along with impressive economic growth and poverty reduction. This combination of social, political, and economic progress has meant that citizens are now asking more of their government and its institutions, with profound implications for the health sector.

Ghana's health indicators rank among the highest in West Africa. Core health challenges nevertheless exist, particularly in some parts of the country. Child mortality has dropped most in the Western, Volta, Ashanti, and Upper West regions, but it has remained stagnant in the Northern and Central regions. Malaria continues to be the leading contributor to morbidity and death across all age groups, including that of children under five years. And although maternal mortality rates have improved, more intensive efforts are required.

A robust health system must have enough skilled workers to make health services available, especially in those regions and income quintiles with the greatest unmet needs. The correlation among the number, quality, and location of skilled health workers and health outcomes in

Africa is widely recognized. This book aims to provide a better understanding of health workforce issues with a view to helping improve the stock, distribution, and performance of health workers across Ghana.

Developing policies and programs on human resources for health (HRH) is not easy. Health coverage needs and health sector costs and resources must be balanced with competing demands for public and private sector financial and human resources. However, with the recognition that an innovatively trained, retained, and incentivized health workforce will contribute to meeting Ghana's goals of well-being for all its citizens, this can be achieved.

We hope this book will benefit all those seeking to further improve health outcomes in Ghana. The data and findings are the result of close and extended collaboration between the Ghana Ministry of Health and technical staff in the World Bank's Africa Region. The World Bank is delighted to have been engaged in this process, and stands ready to work with Ghana on HRH in the future.

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Acknowledgments

The production of this report was led jointly by Ebenezer Appiah-Denkyira, Director General of the Ghana Health Service, and former Director for Human Resources for Health at the Ministry of Health in Ghana, and Christopher H. Herbst, Health Specialist at the World Bank. Close collaborators were Christophe Lemiere, Agnes Soucat, and Karima Saleh from the World Bank. The specific chapters were prepared by, or in collaboration with, individuals from the Ghana Ministry of Health, the World Bank, and external agencies and organizations.

The content of this report was developed, discussed, and validated by means of extensive consultations with the Technical Working Group on Human Resources for Health (HRH) in Ghana. The group is led by the Ministry of Health's HRH Director, and comprises stakeholders in HRH from various government agencies, including the Ministry of Health, the Ministry of Education, the Ghana Health Service, various medical schools, the Christian Health Association of Ghana, and development partners, including academic research centers. The authors are grateful to all of them for their insights and for making this report happen.

The authors would also like to thank individuals outside the technical working group for their inputs, comments, or support toward this document, in particular, Jean J. De St. Antoine, Akiko Maeda, Edson Correia

Araujo, Richard Seifman, Maureen Lewis, Christopher Lovelace, Kate Tulenko, Laura Rose, Bahie Rassekh, Richard Scheffler, Gilles Dussault, Mario Dal Poz, Ok Pannenberg, Dieter Gijsbrechts, Shaun Noronha, Atef El Maghraby, and David Gwatkin.

Finally, the authors are grateful to the Government of Norway, which is funding the World Bank's Africa Region HRH Program, and without which this effort could not have been supported or completed.



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Editors

Ebenezer Appiah-Denkyira was appointed director general of the Ghana Health Service in September 2012. From June 2008 until that appointment, he was the director of the Human Resources for Health Department of the Ministry of Health, Ghana. He is a medical officer with a Master in Public Health (Leeds University) and an Executive Master in Leadership and Governance (Ghana Institute of Management and Public Administration). He is also a Foundation Fellow of the Ghana College of Physicians and Surgeons and has served as the secretary to the Public Health Faculty. He has been a regional director of the Ghana Health Service for 17 years in three regions (Upper West, Ashanti, and Eastern), and has wide experience in planning, piloting programs, and initiating systems for monitoring and evaluation. He is a national asset and has been involved in consultancies such as developing the country's human resource and transport policies as well as its health insurance, strategic, national ambulance, and poverty reduction plans because he initiated these plans in his region and also because of his positive ideas.

When he was the regional director of the Upper West Region, Appiah-Denkyira was concurrently appointed the project manager of a US\$11 million Danish International Development Agency (DANIDA)-sponsored

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Christopher H. Herbst works as a health specialist in the Africa Region Health, Nutrition and Population unit of the World Bank. He has over seven years of experience at the World Bank, working in more than 15 countries in the Africa Region, supporting governments to strengthen their health systems in the areas of human resources for health, community-based financing schemes, health insurance, and pharmaceutical supply chains. He currently coordinates the Africa Region Human Resources for Health program, which assists governments in developing and implementing their human resources for health programs and strategies. He also works to support health systems by strengthening lending operations in the Africa Region. Prior to joining the World Bank, Herbst held brief stints at the Washington, DC, Department of Health and the U.K. Parliament. He holds undergraduate and graduate degrees from King's College London and the London School of Economics, respectively.

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Agnes Soucat is the director for Human Development at the African Development Bank, where she is responsible for health, education, and social protection for 53 countries in Africa, including Sub-Saharan Africa and the Maghreb. Previously, she has variously served as lead economist and adviser for Human Development for Africa for the World Bank. She has been leading the Health Systems for Outcomes program of the World Bank, a program focused on health systems' strengthening and reaching the Millennium Development Goals (MDGs). She has over 25 years of experience in international health directly covering more than 30 countries in Africa, Asia, and Europe.

Soucat holds an MD and Master degree in Nutrition from the University of Nancy in France, as well as a Master of Public Health and a PhD in Health Economics from the Johns Hopkins University. She is a public sector and public finance specialist and has worked extensively on designing and implementing community-based financing programs, poverty reduction strategies, social services decentralization, and performance-based financing. She has been responsible for multisectoral and results-based budget support programs covering sectors such as agriculture, education, health, water, and energy, and focusing on reaching the MDGs in several countries, particularly Rwanda. She was a coauthor of the Poverty Reduction Strategy Paper (PRSP) toolkit and the *World Development Report 2004: Making Services Work for Poor People*, as well as a main author of the background reports to the High Level Task Force on Innovative Financing. She was also a member of the Global Expert Team on Health Systems of the World Bank. She has worked for the Joint United Nations Programme on HIV/AIDS, the United Nations Children's Fund, and the European Commission.

Contributors

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Seth Ayettey has occupied the positions of dean of the University of Ghana Medical School and provost of the College of Health Sciences at

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Preker has published extensively, having written many scientific articles and more than 15 books. He is a member of the editorial board for the World Bank's External Operations Publication Department and editor-in-chief of World Bank Business of Health Publications. In addition to his academic activities at the Columbia University Business School, Preker is an adjunct professor of Public Administration and Health at the Wagner Graduate School of Public Service at New York University. He is a member of the teaching faculty for the Berkeley/Cambridge Health Leadership Forum and teaches periodically at International Masters for Health Leadership, McGill University, in Montreal. His training includes a PhD in Economics from the London School of Economics and Political Science, a Fellowship in Medicine from University College London, a Diploma in Medical Law and Ethics from King's College London, and an MD from the University of British Columbia/McGill.

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Abbreviations

AHWO	African Health Workforce Observatory
AMA	American Medical Association
BMCs	Budget Management Centers
CHAG	Christian Health Association of Ghana
CHHAS	community health and health assistant schools
CHPS	Community-based Health Planning and Services
CSR	Country Status Report
DHA	District Health Administration
EPD	equivalent patient day
GHC	Ghanaian cedi
GHS	Ghana Health Service
GHWO	Ghana Health Workforce Observatory
GMC	General Medical Council (United Kingdom)
GMDC	Ghana Medical and Dental Council
GSPA	Ghana Service Provision Assessment
HRH	human resources for health
ICT	information and communication technology
IPPD	Integrated Personnel Payroll Database
KNUST	Kwame Nkrumah University of Science and Technology
MDGs	Millennium Development Goals
MDS	medical and dental schools

NMC	Nurses and Midwives Council
NMS	nursing and midwifery schools
POW	Program of Work
RCHST	Regional Colleges of Health Sciences and Technologies
RHA	Regional Health Administration
SHS	schools of health science
UDS	University of Development Studies
UST	University of Science and Technology
WHO	World Health Organization
¢	Ghanaian cedi

PART I

Introduction and Overview

CHAPTER 1

Toward Evidence-Based Interventions for HRH

**Ebenezer Appiah-Denkyira and
Christopher H. Herbst**

Health workers, or human resources for health (HRH), are the cornerstone and drivers of any health system. Yet many countries in Africa face serious HRH challenges. Insufficient numbers of adequately performing health workers, particularly in marginalized regions, have been identified as one of the most critical constraints to the achievement of health and development goals. The “HRH crisis,” as often evident to various degrees across the continent, impairs the provision of essential, life-saving interventions such as childhood immunization; safe pregnancy and delivery of services for mothers; and access to treatment for diseases, including malaria, HIV AIDS, and tuberculosis.

This book, a collaborative effort between the government of Ghana and the World Bank, was developed to assist the Ministry of Health to obtain an overview of the unique HRH challenges that Ghana faces. Evidence on the stock, distribution, and performance of health workers in Ghana, as well as on some of the underlying determinants of these HRH outcomes, will help support the government’s resolve to develop strategies and interventions to address HRH concerns and ultimately strengthen its health system.

This chapter is an overview to guide the reader through the structure of the book and provide a brief summary of the findings presented in the chapters that follow. Starting with health outcomes in Ghana and the recognition that HRH are critical to providing access to health services, the chapter briefly describes the objective and conceptual framework of this book before summarizing its findings. Many such findings (some already disseminated in the form of background papers) have already helped shape Ghana's national policy cycle and dialogue on HRH, including the Ministry of Health's Program of Work (POW) and the national strategy on HRH. This book can be used as a basis for further deliberations and policy on HRH.

Health Outcomes and HRH

Ghana has made significant progress in health outcomes, although a great deal more needs to be done. Several key health outcomes remain problematic. Infant mortality has been reduced (from 77 per 1,000 live births in 1988 to 50 in 2008), and fertility rates have fallen (from 6.4 in 1988 to 4.0 in 2008). Under-five child mortality rates have also significantly improved in Ghana; nevertheless, 8 in 100 children still die before the age of five. Targeted efforts are required to improve maternal health outcomes: maternal mortality remains high and has declined more slowly over the past two decades, dropping from 740 per 100,000 live births in 1990 to 451 in 2008. Although antenatal care is on the rise, supervised deliveries and postnatal care is low. And most health indicators tend to be worse in rural than in urban regions and locations (CSR-Health Ghana 2011).

Improving these outcomes means addressing the remaining challenges related to accessing quality care. Evidence shows that the poor, and those in rural areas, have disproportionately less access to health services. This unequal access is largely a reflection of remaining weaknesses in the health system, including those relating to pharmaceutical supply chain systems, health financing and insurance options, and remaining limitations linked to governance and infrastructure (CSR-Health Ghana 2011). Perhaps most important, however, it is the lack of skilled service providers, or HRH—particularly in rural areas—that prevents critical health services from being accessed and adequately delivered to those who need them most.

The health workforce plays a key role in facilitating access to health services for the population. The number of skilled providers is associated

with assisted delivery coverage in the developing world, with a correlation found between the number of assisted deliveries and numbers of doctors, nurses, and midwives (Anand and Barnighausen 2004; Chen et al. 2004; Joint Learning Initiative 2004; WHO 2006). The government of Ghana acknowledges that in order to reach the Millennium Development Goals (MDGs), particularly the targets set out in MDG 5 to improve maternal health, continued efforts must be made—alongside other health system inputs—to improve Ghana’s stock, distribution, and performance of health workers.

Objective and Organization of This Book

A response to HRH challenges in Ghana was envisaged by the government’s Human Resources for Health Strategic Plan 2007–11. This plan identifies key HRH concerns and lays out a framework for interventions intended to strengthen and develop an appropriately skilled, motivated, and equitably distributed health workforce. Fitting into the broader health sector plan, which prioritizes health systems strengthening, the plan is also consistent with the government’s vision of bringing the country to middle-income status by 2015—a goal that requires a healthy population. By 2011, some progress had been made in implementing sections of the plan, but remaining gaps in evidence and financing, as well as conflicting political interests, have all contributed to preventing the Ministry of Health from implementing more concrete, targeted, and evidence-based policy and reform efforts.

The information presented in this book was primarily obtained to inform the content of a new HRH strategic plan (2012–15) as well as its subsequent implementation. As such, the book first focuses on the “what,” as in “What is the situation on HRH?” and the “how,” as in “How is this situation explained?” (chapters 2–4). It addresses the knowledge gap on HRH by consolidating select data and findings from new and older studies on HRH (box 1.1) to paint a coherent and more complete picture of the current state of HRH. To inform the development or implementation of interventions in HRH, the book provides an overview of the key agencies and their responsibilities in managing HRH in Ghana (chapter 5), and then lists some of the possible HRH policy options that could be adopted by the government to address any observed shortcomings (chapter 6). In doing so, the book stresses the importance of taking into account the existing picture on financing for HRH (chapter 7) as well as the political economy of HRH policy making in Ghana (chapter 8).

Box 1.1

Data Featured in This Book

Some of the data and information in the chapters of this book were obtained from background studies funded by the World Bank with support from the government of Norway. These studies were produced jointly with the Ghana Ministry of Health and carried out by a team of World Bank staff, academics, and international consultants. Some of the core background studies that aided the production of this book are Antwi and Phillips (2012); Beciu et al. (2009); Blanchet (2009); and Lievens et al. (2011).

The book also relies on recent evidence and data obtained in studies produced and funded by agencies and individuals outside the World Bank. Such studies include research conducted by the University of Michigan in collaboration with the government of Ghana, notably qualitative studies of doctors' and nurses' attitudes toward rural service (Kwansah et al. 2012; Snow et al. 2011), survey-based analyses of motivations for rural service among final-year nursing and medical students (Agyei-Baffour et al. 2011; Johnson et al. 2011), and a discrete-choice experiment of medical students in Ghana (Kruk et al. 2010).

Where necessary, the chapter authors analyzed government data and obtained information from structured interviews with local government officials. The analysis of stock- and distribution-related HRH data comes primarily from the Integrated Payroll Personnel Database system, the district health information management system, nurse associations, and interviews with key persons on HRH.

Throughout, the different chapters rely on more detailed analyses of a number of key, cross-cutting HRH issues: (1) the different levels of decision-making powers by different agencies at various levels of the health system (appendix A); (2) the physical, technical, and organizational capacity of health-training institutions (appendix B); and (3) the compensation of health workers before and after recent reform initiatives (appendix C).

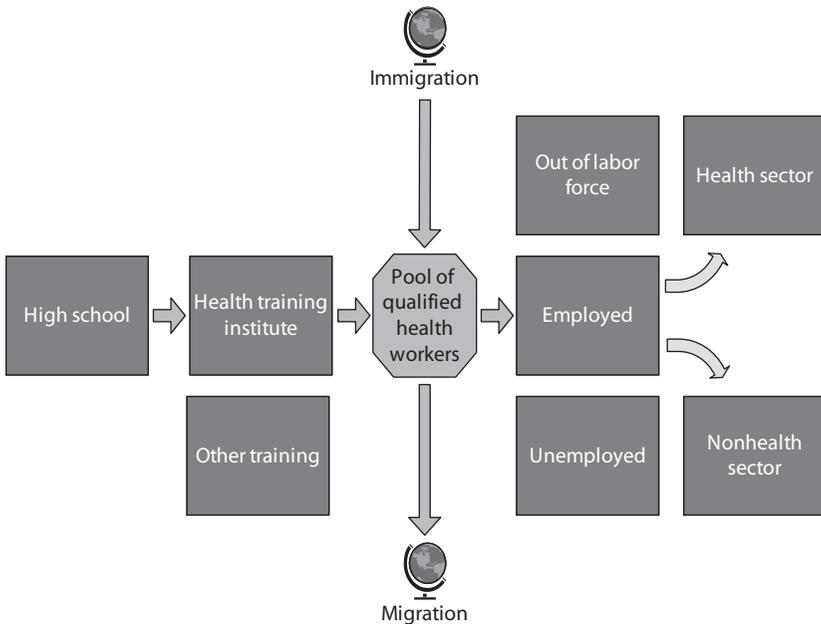
Conceptual Framework

The book takes the stance that the situation on the stock, distribution, and performance of health workers (all three are referred to as *HRH*

outcomes) is largely determined by core characteristics and dynamics linked to (1) the extent to which health workers are produced; (2) the extent to which health workers are subsequently absorbed into a particular labor market (public/private, rural/urban, national/international); (3) the extent to which health workers are competent, able, and willing to deliver health services within the labor market; and (4) the extent to which health workers leave a particular labor market (because of death, retirement, migration, or change into public/private, urban/rural, health/nonhealth sector). A simplistic illustration of the flow of health workers into, within, and out of the health labor market is illustrated in figure 1.1.

A number of different factors determine the flow of health workers into and out of the health labor market. Production output is largely determined by the physical, technical, and organizational capacity of health-training institutions. The extent to which health workers are *willing* to work in the national, public, and/or urban labor market (as opposed to international, private, and/or rural) is largely linked to variations in compensation as well as variations in living and working conditions.

Figure 1.1 Flow of Individuals into the Health Labor Market: Effect on Stock and Distribution of HRH



Source: Adapted from Vujicic 2004.

The extent to which training institutions expose students to nationally relevant training, practice, and local working conditions can also impact labor market supply.

Health worker performance within the labor market—the extent to which health workers are competent, able, and willing to perform—is influenced not only by the capacity of education systems to train health workers in sufficient skills, but also by the extent to which there are supportive working environments, and functioning management and accountability structures, and by the extent to which health workers are motivated (influenced by some or all of the above).

Finally, the flow of health workers into, within, and out of the labor market can be affected by policies and regulations (so-called interventions) and by the capacity to develop and implement them. Such interventions, in turn, are highly dependent on a supportive fiscal as well as political environment. Without the available funding and relevant support from stakeholders, the desired number of health workers may not be trained or absorbed, and the supply side behavior and performance may not be positively influenced.

Key Findings on Stock, Distribution, and Performance

The following section summarizes the key findings from chapters 2, 3, and 4. These chapters assess and find explanations for the current situation on the stock, distribution, and performance, respectively, of health workers in Ghana.

Health Worker Stock

Chapter 2 shows that, although the aggregate number (40,040) and density (1.93 HRH per 1,000 population) of individuals on the public payroll who work in the health sector in Ghana is larger than in many other Sub-Saharan countries, a higher-than-average proportion of these workers are nonclinical cadres (40 percent). Of the clinical cadres, the largest number and proportion comprise professional (registered) nurses (7,339 and 26.8 percent), followed by health assistants/enrolled nurses, community health nurses, and midwives. Medical doctors and specialists represent fewer than 7 percent of the clinical health workforce.

Although the number of nurses has grown only recently (following a decline in number during the early to mid-2000s), the number of medical doctors and particularly midwives reflects a significant increase over the period 2003–09. Despite representing less than 13 percent of the total

clinical workforce today, the number of midwives almost tripled during this period. Notwithstanding such gains, however, the aggregate number of doctors, nurses, and midwives per 1,000 population (1.04) still falls far short of the frequently cited World Health Organization (WHO) benchmark of 2.3 that is globally associated with achieving 80 percent assisted delivery rates.

The aggregate number of health workers can be partly explained by a situation where annual enrollment and production output of HRH is growing for some cadres, but continues to be stifled by capacity constraints of health-training institutions (see box 1.2). It is also partly explained by a situation where loss from retirement and particularly outmigration—until very recently a major cause of attrition—is finally declining significantly.

Following years of extremely high levels of outmigration of doctors and nurses—largely to the United Kingdom and the United States—such attrition seems to have declined significantly since 2006. Although some levels continue, the sudden drop in outmigration is attributed to

Box 1.2

Overview of Key Findings from Appendix B: Preservice Education Capacity

The assessment in appendix B points toward physical capacity constraints of many health-training institutions. Many laboratories lack sufficient equipment and on-demand running water. Libraries are ill-equipped and lack adequate pedagogical and information communication materials. Substantial variations also exist in the adequacy of the academic staff, both in numbers and in qualifications. Although some of the medical and top nursing schools have instructors with at least a master's degree, many of the faculty members at schools for community health care and health assistants have no more than a bachelor's. Organizational capacity also varies. Medical, dental, and pharmacy schools have functional boards of governors. These schools also have a process in place for upgrading curricula that lies with the professional regulatory bodies. But fewer nursing and midwifery schools, and even fewer schools for community and health care assistants, have this process. Finally, most training institutions lack software for managing human resources, appraising performance, offering online courses, and conducting other management functions.

Box 1.3**Overview of Key Findings from Appendix C: Compensation of Health Workers before and after 2006**

The analysis in appendix C finds that wages for health workers in Ghana are low compared with wages for similar work in developed countries, but high compared with wages in other sectors in Ghana and with wages for health workers in other African countries. Salaries for health workers increased significantly between 1998 and 2006, thanks to various policies. Supplements provided under the additional duty hours allowance were the main source of increases in remuneration (prior to 2006). The so-called salary rationalization program in 2006 is often credited with having increased overall compensation of health workers, but the analysis in appendix C does not back this up. The new health salary structure simply folded the additional duty hours allowance (representing a significant proportion of health worker compensation prior to 2006) into the base salary structure and changed the relative baseline pay of different cadres (increasing the cost of payroll by 20 percent). Moreover, appendix C finds that real wages have actually fallen since 2006 because of wage freezes and inflation. As a result, real wages were not higher in 2009 than they were in 2003.

a number of factors, including an overall upsurge in compensation and salaries in Ghana since the 2000s (see box 1.3); international measures that make it more difficult for Western countries to “poach” health workers; increased opportunities for higher education; a prolonged and enforced bonding scheme for some cadres; and a perception of outmigration that became significantly more negative.

Distribution

Chapter 3 shows that, aside from the shortage at the aggregate level (in relation to needs-based benchmarks), a core concern in Ghana is the inequitable distribution of health workers. Greater Accra, for example, has by far the largest number of clinical health workers (6,286), followed by Ashanti (4,824); the lowest overall number of clinical workers is found in the Upper West Region (855). The skewed geographical distribution of health workers is most pronounced for higher-level cadres (particularly doctors and professional nurses). When taking into account population numbers, the picture changes: the Upper West region has the

second-highest clinical health worker-to-population density (1.2), after only Greater Accra (1.6). The region with the lowest health worker-to-population density is the Northern Region—also one of the poorest regions in Ghana.

There is a relatively strong correlation between the density of doctors, nurses, and midwives per region and the percentage of assisted deliveries in Ghana. Greater Accra, with the highest health worker-to-population density of all the regions, is the only region that exceeds—or even meets—the recommended rate of 80 percent assisted deliveries, with 84.3 percent of deliveries assisted. This probably reflects the region's greater number of higher-level cadres as well as an additional number of health workers directly employed by the private sector (not counted in this study because of a lack of reliable data), which is estimated to be small but disproportionately present in Greater Accra. By contrast, the Northern Region, which ranks last in terms of health worker-to-population density, is also the region with the lowest percentage of attended births: only 25.1 percent of deliveries in the Northern Region are attended by a doctor, nurse, or midwife.

In general, the uneven distribution of health workers, particularly higher-level cadres, can in part be explained by factors related both to key features of the education system and the supply-side behavior of health workers in the national labor market, which predominantly favors urban over rural employment.

In part, this preference is attributed to the fact that, for higher-level cadres—including medical doctors and professional nurses—health sciences training is largely an urban experience that trains individuals from urban backgrounds in urban settings, employing training strategies that are focused more on urban than rural practice. By contrast, training for lower-level cadres, including enrolled/certificate nurses, is often present in the more remote and rural regions in Ghana. The nature and training of certificate nurses requires that they work in districts, subdistricts, and communities as part of their training. There is specific evidence from Ghana demonstrating that health students with exposure to rural life are more likely to practice in rural areas after graduation than those who have not lived or worked in such areas.

Higher-level cadres prefer urban over rural employment, thanks in large part to better career-development prospects. The lack of career-based incentives—particularly in light of high workloads, poor infrastructure and supplies, social isolation, and loss of moonlighting opportunities—is critical in determining urban over rural employment. These challenges are

compounded by unclear appointment terms that lead to prolonged postings (in rural areas) and by systemic bottlenecks that make transfers from rural to urban areas difficult (thus making initial practice in a rural area unattractive for many). Those who do work in rural areas, predominantly lower-level cadres, are more attracted to rural areas because of the greater responsibility available to them, as well as lower living costs, access to broader clinical experience, and intrinsic motivation.

Performance

Chapter 4 finds the existing evidence on health worker performance in Ghana to be sparse and outcomes relatively mixed.

Some of the evidence on health worker competencies suggests failures in good practice, although these failures are confined to specific services—in particular, antenatal care and intrapartum health services. Most health-training institutions are accredited, though standards of accreditation vary. The quality of health worker training in Ghana, although generally considered high, is constrained by physical and technical capacity weaknesses, especially outside of Accra. Access to in-service training is perceived as insufficient and unfair, and evidence of the effectiveness of in-service training is lacking. Health workers also often lack adequate equipment and supplies to perform their jobs effectively, and the perception of working long hours (especially if on-duty hours are considered) and having fairly high (but not unreasonable) case loads further adds to an environment that is challenging to work in. This limits the ability of health workers to adequately carry out services, even when competencies exist.

The extent to which health workers apply themselves to deliver services is mixed. Absenteeism is an issue (albeit perhaps not the biggest one), particularly in urban areas, and is largely linked to moonlighting and dual practice. Customer satisfaction surveys generally yield high scores with regard to health worker responsiveness, although the results are not consistent with the poor attitudes of health workers reported in qualitative research. Health worker productivity varies by facility, cadre, and region. And dishonest practices seem to be limited by controls over collecting payments and managing drugs at the facility level. Management practices (or their lack) appear to strongly affect the extent to which health workers apply themselves to delivering services. The Ministry of Health seems to be unable to adequately carry out its performance-management functions. Important management authority to hold

health workers accountable for their performances is not decentralized to the facility level.

Toward Evidence-Based Intervention

The development and implementation of policy and targeted, suitable interventions to address the remaining concerns related to the stock, distribution, and performance of health workers are tasks for the agencies and authorities that manage HRH in Ghana. It is their role to obtain and assess evidence and specific policy options to improve HRH outcomes. It is also their role—with support from their partners—to ultimately develop and implement these policies, taking into account relevant fiscal and political realities and potential constraints. The following sections summarize some of the findings from chapters 5, 6, 7, and 8.

Agencies and Roles and Responsibilities of HRH

The development and implementation of interventions to address some of the bottlenecks to improvements in health worker stock, distribution, and performance in Ghana are the role of different actors across the health system. Chapter 5 shows that many different authorities in Ghana—across different sectors and levels of the health system—are involved in managing HRH. At the central level of the Ministry of Health, health services management is concerned largely with formulating policy, monitoring and evaluating the sector, mobilizing and allocating resources, and regulating services. Authority for managing service delivery (or implementing the strategies and policies devised by the Ministry of Health) is delegated to several semiautonomous Ministry of Health agencies, which include the Ghana Health Service (GHS), the Christian Health Association of Ghana (CHAG), teaching hospitals, and some others.

In line with health services decentralization in Ghana, some levels of management authority have been transferred not only to more autonomous agencies, but also to lower levels of the health system. Chapter 5 shows that the GHS and CHAG carry out some of their management functions at the regional, district, and subdistrict levels. At the same time, as shown in box 1.4 (a summary of appendix A), decision-making authority for HRH at the facility level—particularly for the public sector—is frequently much more limited than often assumed. Although a comprehensive assessment of the capacity and

Box 1.4**Overview of Key Findings from Appendix A:
Decision-Making Authority in HRH by Agency and Level**

The analysis in appendix A finds that decision-making authority over health care personnel management remains far more centralized than often assumed, especially for Ghana Health Service (GHS) facilities. Overall, human resources management decisions are much more decentralized (to the benefit of facility-level managers) in Christian Health Association of Ghana (CHAG) facilities than they are in GHS facilities. For instance, CHAG facility managers have full control over recruitment, and, within CHAG, facility managers have a major influence on decisions except for posting and transfers (these decisions are made regionally). This cannot be said for GHS facility managers, where decision-making authority in HRH remains far more centralized. The current arrangement assumes significant and far-reaching management capacity at the central level (which may not always be the case), and makes it particularly difficult for facility managers in public sector institutions to manage their health workforce and achieve results.

performance of the agencies at all levels of the health system remains due, our findings on HRH outcomes in chapters 2, 3, and 4, and some indications in chapter 5, suggest that the current organization and existing capacity to manage HRH at all levels may require further strengthening.

Examples of Policy Intervention

Some examples of potential broad policy *options*, rather than specific *recommendations*, are laid out in chapter 6. The chapter recognizes that the design and implementation of targeted interventions and policies to achieve specific outcomes are determined by various factors, and is as much fueled by existing capacity to plan, develop, and implement interventions as it is by the political and fiscal environment surrounding HRH (discussed in chapters 7 and 8). The following summarizes some of the policy options outlined in chapter 6 (more are listed in the chapter).

Increasing stock. A core objective of the government will be to ensure that overall health worker stock continues to grow to meet relevant

benchmarks. The following policy options could be considered to increase production output:

- **Increase the physical capacity of training institutions:** Structurally enhanced and better equipped training institutions will absorb the large number of applicants and further increase production output. Fee structures and private sector options may need to be considered.
- **Increase the technical capacity of health-training institutions:** Higher technical capacity can further absorb a larger number of students. Increasing the number of teachers and academic faculty could be achieved in part by tapping into faculty from other countries through regional training programs and bilateral and twinning arrangements.
- **Reduce the length of existing health science courses:** Shorter courses at lower cost can increase the ability of training institutions to admit more health workers.
- **Consider cost-effective e-learning:** Information and communication technology (ICT) provides opportunities for maximizing the use of scarce faculty and learning resources and can train larger numbers of students virtually.
- **Focus training on lower- and mid-level cadres:** A focus on training higher-level cadres (such as physicians) limits the number of training slots that can be generated because of higher unit costs. Lower- and mid-level cadres are not just cheaper to train, but also tend to be less likely to migrate abroad.

A policy focus on attrition in Ghana should be secondary, given improvements in this area. Premature death is not a major factor of attrition, and retirement, for now, is not one either. Nevertheless, the following options could be considered to further address any remaining levels of attrition:

- **Address nonsalary push-and-pull factors:** Policies to limit some of the remaining levels of outmigration may wish to focus on addressing nonsalary-related push-and-pull factors, such as further improving access to career-development opportunities. Further increases in salary are not feasible.
- **Raise retirement age:** Raising the compulsory retirement age in line with increased life expectancy could be considered to make a larger pool of health workers available.

Improve distribution. Even more than the focus on stock, interventions to address the highly uneven distribution of health workers will have to be at the forefront to improve health outcomes in Ghana. The following policy options may be considered:

- **Strengthen rural pipeline policies in education:** Such policies work on the well-tested principle that training health workers from rural areas, in rural areas, and exposing them to rural practice during training, *will* increase the likelihood of rural employment uptake after graduation.
- **Increase opportunities for specialization in rural locations:** Making higher-education opportunities in rural areas available may result from some of the rural pipeline policies discussed above. The current lack of such policies shifts health workers toward urban areas.
- **Strengthen equipment and supplies in rural areas:** Capacity constraints linked to infrastructure, equipment, and supplies should be addressed because these constraints have been identified as key reasons that keep health workers away from rural practice.
- **Consider rural financial incentives, but innovatively:** The importance that health workers place on salary increases for rural posts should not be ignored but innovatively addressed. Tapping into private sector resources by legalizing regulated moonlighting in rural areas, for example, could be considered.
- **Clarify terms of appointments for rural practice:** Addressing the unclear terms of appointments that motivate many graduates to avoid rural service should be rectified. Fixed end points for rural practice and easing restrictions on transfers should be considered and weighed.

Improve performance. Evidence on health worker performance is relatively sparse, so a first objective of the government will be to obtain more evidence related to the different variables and components of health worker performance. Policies to strengthen health worker competencies include:

- **Improve the quality of training during preservice education:** Scaling up the capacity of training institutions, particularly in northern institutions in Ghana, in terms of laboratory equipment, libraries, specialized teaching staff, and better curricula could improve the quality of education offered, and, with it, health worker competencies.
- **Improve access and relevance of in-service training:** Developing programs of in-service training that are accessible and relevant will help improve competencies and motivations. Such training could be provided by faculty and residents from larger health-training institutions.

- **Upgrade facility-level supplies and equipment:** Policies and interventions could address the fact that, even if the skills exist, the quality of service delivery may suffer because of the lack of sufficient equipment, tools, and supplies. Needs assessments should inform and potentially redistribute funding for such investments as needed.

Further interventions on performance may do well to focus on improving the extent to which health workers apply themselves to their job at hand.

- **Strengthening management environments at the facility level:** Efforts may focus on encouraging the development of human resources management models to improve levels of absenteeism, productivity, responsiveness, and the professional probity of health workers.
- **Introduce innovative accountability mechanisms:** Performance-based financing is a wide-ranging reform that could be explored further. Regular supervision and verification arrangements inherent in such schemes hold the potential not only to motivate health workers, but also to hold health workers and health facilities more broadly accountable to key performance indicators (including indicators of absenteeism and responsiveness).

Fiscal and Political Considerations in Policy Making

The development and implementation of the HRH interventions discussed above will need to take into account—and are challenged by—a fiscally scarce environment. This is a serious concern in Ghana, in part because of the large wage bill for health workers. Chapter 7 shows that, if the government wants to spend money on implementing a new HRH strategy, including some of the policy options considered here—while simultaneously sustaining its high wage bill, brought on by fairly high health worker salaries and a growing health workforce—it must reach the commitment made to the Abuja Declaration (allocating 15 percent of its GDP toward health). Chapter 7 shows that this cannot be achieved easily, as the macroeconomic situation suggests that additional health allocations cannot be expected. Instead, the health sector will have to consider reprioritizing health spending, including efficiency-gain measures to create additional resources to respond to the country's needs. This should be accompanied by a greater emphasis on raising funding from donors and supporting the development of a vibrant private sector so that it can provide a supporting role where the public sector is overburdened.

Finally, the initiation, development, and implementation of HRH policies must consider the various stakeholders and interests that may oppose certain reform efforts, in particular the nonconventional ones. Chapter 8 shows that in Ghana, the official governmental bodies—particularly the Ministry of Health, the GHS, and teaching hospitals—wield great power. Their power is substantially checked, however, by professional associations that can bring the health system to a halt through strikes. Around these main players are others that *can*, but do not always, have an influential role. These players include the regulatory councils, CHAG, development partners, other ministries, the media, and consultants. Behind the scenes are larger contextual factors, such as the electoral cycle, opposition political parties, international influences, and local values or ethical perspectives on population health. Alongside an analysis of various stakeholders, chapter 8 provides detailed information on the policy-making process in Ghana and core advice on strategies that will help to pass reforms and policies on HRH.

Conclusion

This book provides a glimpse of some of the positive developments, complexities, and remaining challenges with regard to the stock, distribution, and performance of publicly funded health workers in Ghana. The book recognizes the key role played by the health workforce in increasing access to health services and improving health outcomes and the need to address any challenges in the most efficient and innovative manner possible. Deciding on which interventions and policy options to pursue should be informed by the need for additional (and more recent) evidence, potential capacity constraints to implement and administer such policies, significant fiscal constraints in paying for interventions, and a wide spectrum of political interests that have the potential to block the more innovative solutions. This book is not meant to be a rigorous analysis of HRH. Rather, it is designed to be a basis to encourage further, more in-depth research, and, in the meantime, to fuel the policy dialogue on HRH in Ghana.

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PART II

The HRH Situation

CHAPTER 2

The Stock of Health Workers

James Antwi, Victor Francis Ekey, Christopher H. Herbst, and David Haddad

This chapter examines the number of health workers who work in health posts funded by the public sector. It looks at some of the explanatory forces—especially those related to health worker production and attrition—that explain observed levels of stock. The chapter focuses only on health workers who are paid by the Ghana Health Service (GHS) (the vast majority), for whom data from the 2009 payroll record database of the GHS were analyzed. This includes human resources for health (HRH) who work in public sector facilities, as well as those who work in the not-for-profit private sector, mapped to the Christian Health Association of Ghana (CHAG). Reliable information on the number of health workers on private sector payroll (both private not-for-profit and private for-profit) or on the payroll of so-called quasi-governmental institutions (such as the police, the military, and so on) is not available and not discussed here.

Summary of Findings

The chapter finds that—compared with many other Sub-Saharan countries—the aggregate number (46,040 workers) and density of workers (1.93 per 1,000 people) on the public sector payroll are fairly large, though a higher proportion of those are nonclinical cadres (40 percent)

than elsewhere. Of the clinical cadres, the largest number and proportion are professional (registered) nurses (7,339 and 26.8 percent, respectively), followed by enrolled nurses (or health assistants), community health nurses, and midwives. Medical doctors (1,489)—including specialists (379)—represent less than 7 percent of the clinical health workforce.

The number of doctors and, particularly, midwives reflects a significant increase over 2003–09. The largest increase occurred for midwives, whose number almost tripled during this period. The increase of professional nurses, on the other hand, was much lower (less than 5 percent), following a significant decline between 2003 and 2005. Despite some growth in all three cadres, the aggregated number of doctors, nurses, and midwives in 2009 per 1,000 population (1.04) still falls far short of the frequently cited World Health Organization (WHO) benchmark of 2.3 that is globally associated with achieving 80 percent assisted delivery rates. Adding health workers who are on the payroll of the relatively small private and quasi-governmental sector (and not accounted for here) is unlikely to improve the picture significantly.

Health worker stock in Ghana, as elsewhere, is closely linked to the production of labor supply. The production of most cadres has increased very recently and is likely to increase further in the near future, given the large increases in enrollment into medical institutions in recent years. This is attributed to fairly recent expansion of health-training institutions and programs during the past decade. Even further increases in enrollment and production, however, are stifled by constraints linked to technical and organizational capacity of health-training institutions. Most of these institutions are public with limited resources to accommodate a much larger supply of qualified applicants.

Attrition seems to have declined in recent years, particularly since 2006. Retirement was a significant source of labor market attrition until 2004, after which this dropped. Most important, however, following years of high attrition rates caused by the outmigration of doctors and nurses—largely to the United Kingdom and the United States—outmigration seems to have declined significantly since 2006. This is attributed to a number of factors, including overall increases in compensation and salaries in Ghana since the early 2000s; international measures that make it more difficult for Western countries to “poach” health workers; increased opportunities for higher education; a prolonged and enforced bonding scheme for some cadres; and a perception of outmigration, driven by the media, which became significantly more negative.

Public Sector Health Worker Numbers

Health personnel (clinical and nonclinical) in the formal health sector in Ghana work in the public, private for-profit, private not-for-profit, and quasi-governmental sectors. In each sector health workers are on the payroll of a number of different organizations and agencies. The two largest employment agencies are the GHS and the Ministry of Health in the public sector, followed by CHAG in the private, not-for-profit sector (table 2.1). Given the very limited and piecemeal evidence of personnel paid by sources other than the public sector, only public sector health workers (found in GHS facilities and some in CHAG facilities) are discussed here.

The vast majority of health personnel in Ghana are employed by the public sector. The Ministry of Health in 2009 listed 46,040 workers on the public payroll; these included all workers employed in public sector health organizations as well as 78 percent of health workers (that is, 7,066 workers) employed in CHAG facilities. This number does not include the 18,950 health worker trainees on the ministry's payroll. It also does not include 200 Cuban medical doctors currently practicing in Ghana, sponsored largely by the Cuban government, for which the public health sector pays only allowances.

Compared with many other African countries with a similar national GDP, the aggregate number and density of Ghana's workforce in the health sector is relatively high (table 2.2). Ghana's public workforce at health facilities across the country translates into 1.93 workers per 1,000 people in 2009. The number of individuals employed by the public sector in Ghana in 2009 reflects a 15 percent increase since 2003.

Table 2.1 Health Employment Agencies and Organizations by Sector

<i>Largest employer</i>	<i>Sector</i>
GHS, Ministry of Health	Public
Private clinics, hospitals, independent contractors	Private for-profit
CHAG,^a Islamic Mission^b	Private not-for-profit/faith-based (partly supported by public sector funds)
Volta River Authority, Cocoa Board, police, military	Quasi-governmental

a. CHAG is the largest faith-based agency in Ghana. Seventy-eight percent of workers in CHAG are on the public sector payroll.

b. Islamic Mission services are found mainly in semirural areas and employ mostly semiskilled health staff (auxiliary and ward assistants).

Table 2.2 Number and Density of Public Personnel at Health Facilities, Selected African Countries with Similar GDP

<i>Country</i>	<i>GDP (2010) (US\$, millions)</i>	<i>Number of health workers</i>	<i>Health workers per 1,000 people (year)</i>
Ghana	31,306	46,040 ^a	1.93 (2009)
Cameroon	22,394	30,009	1.55 (2010)
Côte d'Ivoire	22,780	19,784	0.96 (2007)
Kenya	31,409	33,783	0.93 (2010)
Ethiopia	29,717	66,314	0.85 (2009)
Tanzania	23,057	25,820	0.66 (2007)

Sources: Data for Cameroon, Kenya, Ethiopia, and Tanzania: AHWO 2012; data for Côte d'Ivoire: CSR-Health Côte d'Ivoire 2010; data for Ghana: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database; data on GDP: World Bank 2012.

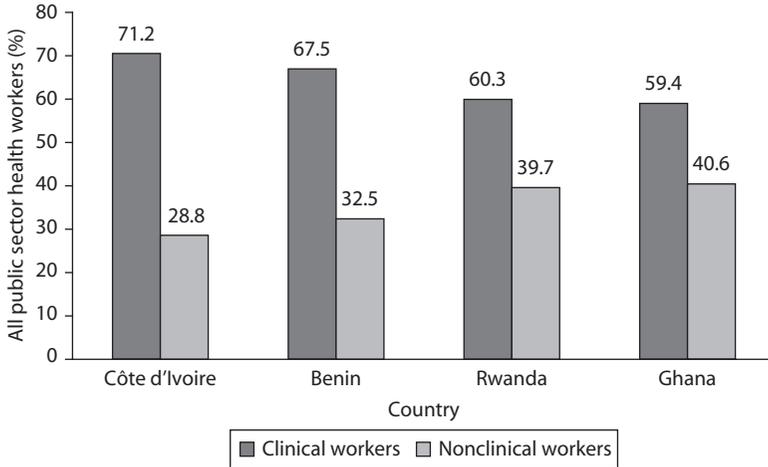
Note: Public personnel include clinical and nonclinical workers.

a. This figure does not include the 18,950 trainees on the Ministry of Health payroll.

Despite the comparatively higher number of health workers in Ghana, only about 60 percent of personnel employed by the public health sector (27,335) are clinical health workers. The remaining are nonclinical staff. Nonclinical cadres include management and administrative workers; technicians (people who work in laboratories and pharmacies); engineers; and various types of nonhealth auxiliary staff, from gardeners and cooks to security guards. The proportion of nonclinical workers as a percentage of all publicly paid personnel working at health facilities in Ghana is larger than in many other African countries (figure 2.1).

Of all the clinical cadres in Ghana, the largest group is professional nurses (who make up 26.8 percent of clinical health workers); the next largest is the health assistants/enrolled nurses (25.4 percent), then community health nurses (18.4 percent) and midwives (12.8 percent). Doctors represent less than 6 percent of the health workforce (table 2.3).

The number of medical doctors and midwives in 2009 reflects a steady rise since 2003, with the number of midwives growing particularly rapidly between 2003 and 2005. The number of doctors (medical officers and specialists) increased nearly 50 percent between 2003 and 2009, whereas the number of midwives almost tripled. The total number of professional nurses, on the other hand, reduced sharply between 2003 and 2005, steadily rising thereafter to reach a level in 2009 just over 4 percent higher than the level in 2003 (figure 2.2). Ghana's total number of professional nurses per 1,000 population is low, at 0.31, compared with some poorer countries such as Zambia (0.59; CSR-Health Zambia 2009) and neighbor Côte d'Ivoire (0.34; CSR-Health Côte d'Ivoire 2010).

Figure 2.1 Clinical and Nonclinical Health Workers, Selected African Countries, 2009

Sources: Data for Benin: CSR-Health Benin 2009; data for Côte d'Ivoire: CSR-Health Côte d'Ivoire 2010; data for Ghana: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database; data for Rwanda: CSR-Health Rwanda 2009, Rwanda Ministry of Health.

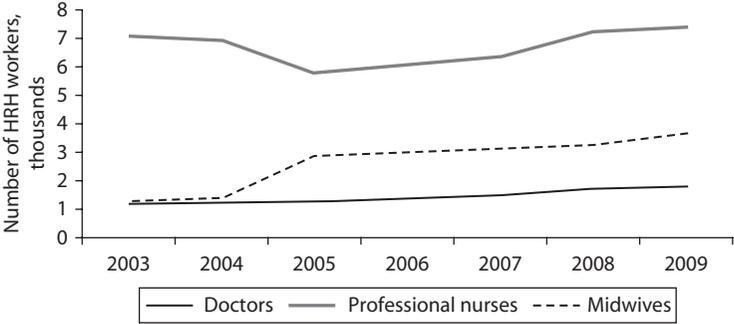
Table 2.3 Numbers and Densities of Clinical Health Cadres, 2009

<i>Cadre</i>	<i>Number</i>	<i>All clinical cadres (%)</i>	<i>Density (per 1,000 people)</i>
Professional nurse	7,338	26.8	0.31
Health assistant/enrolled nurse	6,955	25.4	0.29
Community health nurse	5,022	18.4	0.21
Midwife	3,491	12.8	0.15
Medical officer	1,489	5.5	0.06
Pharmacy technician	768	2.8	0.03
Medical assistant	489	1.8	0.001
Specialist	379	1.4	0.02
Pharmacist	374	1.3	0.02
Biomedical scientist	289	1.1	0.01
Dental surgeon	35	0.1	0.03
Radiographer	33	0.1	0.001
Other clinical	673	2.5	0.03
Total clinical cadres	27,335	100	1.12

Source: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database.

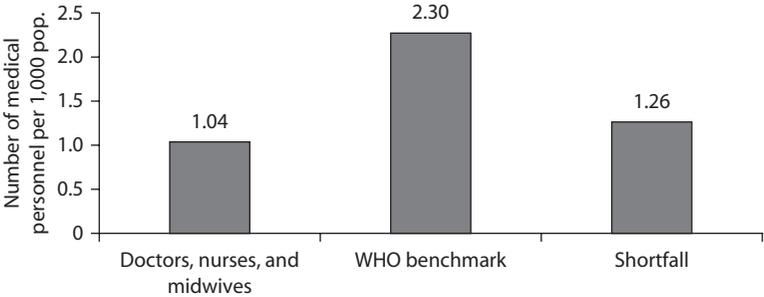
The aggregate number of doctors, nurses, and midwives employed by the public sector in Ghana falls short of recommended benchmarks. Combining all medical doctors (specialists and medical officers), nurses (professional and enrolled as well as community nurses), and midwives, Ghana still falls short of the 2.3 health workers globally associated with

Figure 2.2 Number of Doctors, Nurses, and Midwives, 2003–09



Source: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database.

Figure 2.3 Doctors, Nurses, and Midwives per 1,000 Population (Relative to the WHO Benchmark)



Source: World Bank data.

Note: The often-cited “WHO benchmark” refers to the study by Chen et al. 2004, quoted frequently by the WHO, which found that 2.3 health workers are globally associated with achieving 80 percent assisted delivery rates.

achieving 80 percent assisted delivery rates (Chen et al. 2004). With a density of 1.04 per 1,000 population, Ghana would have to significantly increase existing aggregate numbers of doctors, nurses, and midwives to reach desired benchmarks (figure 2.3).

What Explains the Stock of Health Workers?

The picture of health worker stock in Ghana can in large part be explained by the dynamics related to production and attrition. These are examined below. The picture of funding, of labor market demand, is discussed in chapter 7.

Production of Health Workers

A total of 82 health-training institutions (of all levels) in Ghana produce a growing number of health workers every year, with the largest annual production occurring for nurses today. The annual doctor, nurse, and midwife output of health-training institutions has been steadily rising during the past few years (table 2.4). Of the three cadres, between 2006 and 2009, growth in the production output of nurses and midwives overall has been increasing, while growth in the production of medical doctors has been slower. At the same time, the annual production of medical doctors in Ghana is still much higher than in most other countries in Sub-Saharan Africa, with the exception perhaps of the well-known high producers such as the Democratic Republic of Congo (450), Ethiopia (481), Sudan (1,350), and Nigeria (2,125).

Current and future production output of medical workers is linked to numbers of student enrollment, which increased significantly, particularly for lower-level and mid-level health workers between 2003 and 2007. Figure 2.4 shows that the largest increase (in number) in enrollment occurred for community health and health assistant study, followed by enrollment in nursing and midwifery study. For medical schools, the increase in enrollment is lower, but still evident, particularly from 2005 onward. The only decrease in enrollment in Ghana is evident in schools of health and allied health sciences between 2003 and 2007.

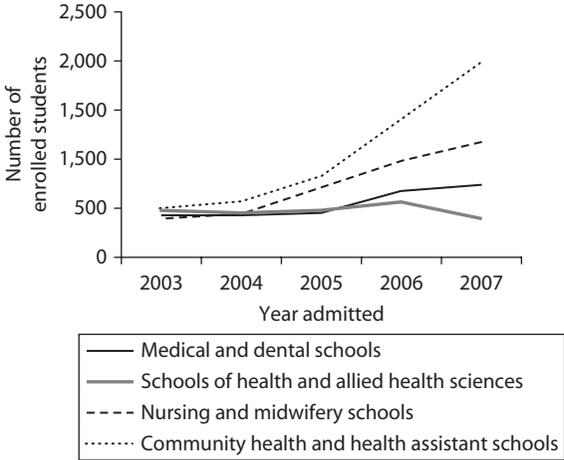
Of the four medical schools in the country, the medical school of the University of Ghana has by far the highest enrollment in the country: 71 students enrolled there in 1994, about 100 students per year after 2003, and close to 200 by 2007 (figure 2.5) (Beciu et al. 2009). The school with the second-highest student enrollment numbers is the Kwame Nkrumah University of Science and Technology. Two other public medical schools—the University for Development Studies' School of Medicine and Health Sciences and the School of Medical Sciences at the University of Cape Coast—each enroll far fewer students. Increased

Table 2.4 Production of Selected Health Worker Cadres in Ghana, All Schools

<i>Cadre</i>	<i>Number of graduates</i>			
	<i>Year 2006</i>	<i>Year 2007</i>	<i>Year 2008</i>	<i>Year 2009</i>
Doctors	214	216	220	230
Nurses	903	1,183	1,045	1,535
Midwives	132	120	124	313

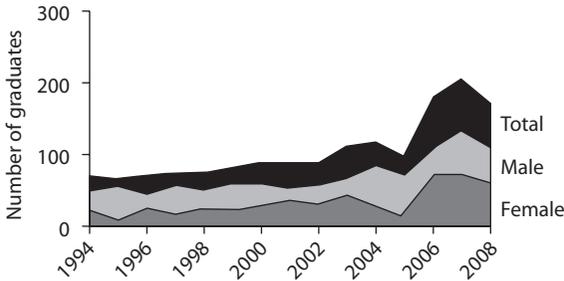
Source: GHWO 2011.

Figure 2.4 Student Enrollment by School Type, 2003–07



Source: Beciu et al. 2009.

Figure 2.5 Student Enrollment at the University of Ghana School of Medicine, 1994–2008



Source: Beciu et al. 2009.

enrollment in medical schools in Ghana in more recent years is likely to see the production output of medical doctors grow significantly in the very near future, as students graduate.

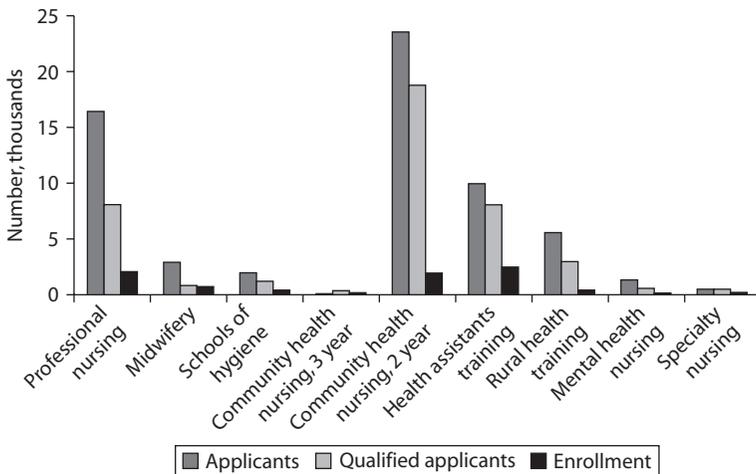
The rise in enrollment of all health workers after 2000 is linked to the recent and fairly rapid expansion of health-training institutions and new programs, particularly those focused on lower-level and nursing/midwifery training. The Ministry of Health established a total of 21 training institutions between 2001 and 2006 alone. CHAG and the private sector together opened seven new schools in general nursing and health assistants (clinical)

(GHWO 2011). The largest percentage of schools today are community health and health assistant (enrolled nurses) schools, followed by nursing and midwifery schools and health sciences schools. Enrollment in a program granting a diploma for health assistants (the equivalent of enrolled nurses) rose extremely rapidly after 2005, when this new program was rolled out.

Although enrollment is growing, the demand for places is even larger, with existing training institutions struggling to absorb the number of potential applicants in light of capacity constraints. Existing health-training institutions today remain unable to accommodate a much larger supply of qualified secondary students, which exceeds the capacity of schools to enroll, train, and produce them. Health worker training in Ghana is dominated by public organizations, most of which charge low or no tuition.^{1, 2} This means that schools have limited fiscal capacity to invest and expand their capacities. As a result, schools can accommodate only a restricted number of students—a number that is significantly below the level of applicants (figure 2.6).

The need to sponsor and fund existing students (and the physical and training capacity to go with it), coupled with insufficient available public sector funding, is a real problem in light of high training costs. Estimated training costs for health workers in Ghana vary according to the type of

Figure 2.6 Applicants and Enrollment at Selected Health-Training Institutions, 2008



Source: Phillips 2009.

Table 2.5 Training Costs by Health Worker Type

<i>Profession</i>	<i>Years</i>	<i>Annual cost</i>	<i>Total recurrent cost (U.S. dollars)</i>	<i>Total capital cost</i>	<i>Investment ratio (percent)</i>
Doctors	6	8,975	18,084,625	236,883	1.3
Specialists	4	10,785	3,235,500	43,000	1.3
Dental surgeons	5	7,500	1,132,500	54,307	4.8
Pharmacists	4	3,161	2,174,768	31,114	1.4
Professional nurses ^a	3	990	7,661,610	1,126,450	14.7
Midwives	3	2,376	3,466,584	72,450	2.1
Laboratory technicians	3	2,600	483,600	10,000	2.1
X-ray technologists	3	2,600	530,400	10,000	1.9
Pharmacy technicians	2	350	14,000	300	2.1
Community health nurses (certificate)	2	323	1,093,678	239,353	21.9
Health assistants	2	386	1,387,516	117,419	8.5
Medical assistants	3	500	193,000	40,000	20.7
Others	3	300	588,000	5,000	0.9
Total			40,045,781	1,986,276	5.0

Source: Preker et al. forthcoming.

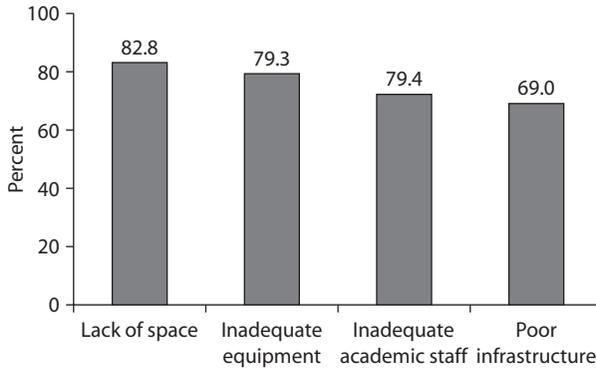
Note: At the time of the study, one Ghanaian cedi was equivalent to one U.S. dollar. The cost calculation is based on an average cost coming from the Ghana preinvestment study (Beciu et al. 2009), coupled with the capital investment budget data from the Ministry of Education (National Council on Higher Education) and the Ministry of Health.

a. *Professional nurses* combines the costs for the three categories of nurses—those with a diploma, a bachelor's degree, and a postgraduate degree.

health track: training medical doctors is significantly more expensive than training mid- and lower-level cadres (table 2.5).³ A recent survey of medical school directors by Beciu et al. (2009) suggested that current medical school spending was about 50 percent below what was necessary to increase enrollment levels and maintain acceptable training standards. Insufficient physical and technical capacities of health-training institutions are major constraints to stepping up production, according to directors of health-training institutions (figure 2.7) (Beciu et al. 2009). A more detailed discussion of the capacity of health training organizations is found in appendix B.

Attrition of Health Workers

The exit or attrition of health workers from Ghana's public health labor market was significant until 2006, when the number dropped significantly. Payroll data were used to determine attrition by matching records from

Figure 2.7 Capacity Weaknesses in Ghana's Training System

Source: Beciu et al. 2009.

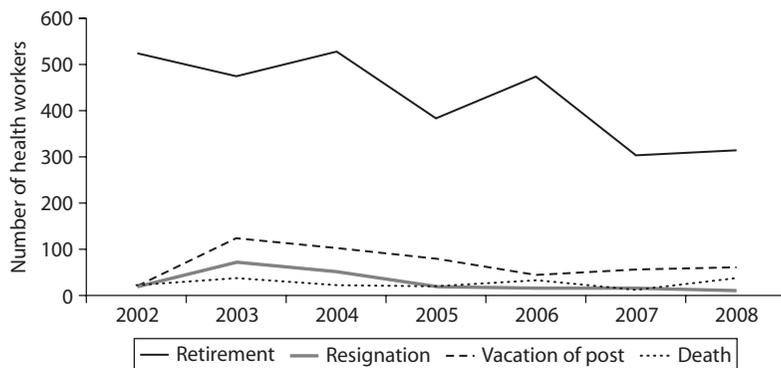
Note: These weaknesses were identified by directors of health-training institutions.

Figure 2.8 Attrition Rates among Health Workers, 2004–08

Source: Phillips 2009, based on data from Controller, Accountant General's Department payroll database.

one year to the next; records that disappeared from the data were counted as attrition. Figure 2.8 compares the declining attrition rates for 2004–08 of all health workers with those of high-skilled workers. The figure reveals a sudden drop in attrition for all types in 2006. This sudden drop is also observed in two other studies on attrition: Antwi and Ekey (2008) and Buchan et al. (2009).

Given the relatively low estimates of the number of health workers employed directly by the private sector (many health workers in CHAG are on the public payroll)—and because the private for-profit sector is unlikely to have suddenly increased recruitment in 2006 or suddenly become more effective in attracting public sector health workers—the drop in attrition from publicly paid employment posts is likely to reflect a drop of the total national health labor market.

Figure 2.9 Trend and Reasons for Attrition in GHS Facilities, 2002–08

Source: Antwi and Ekey 2008.

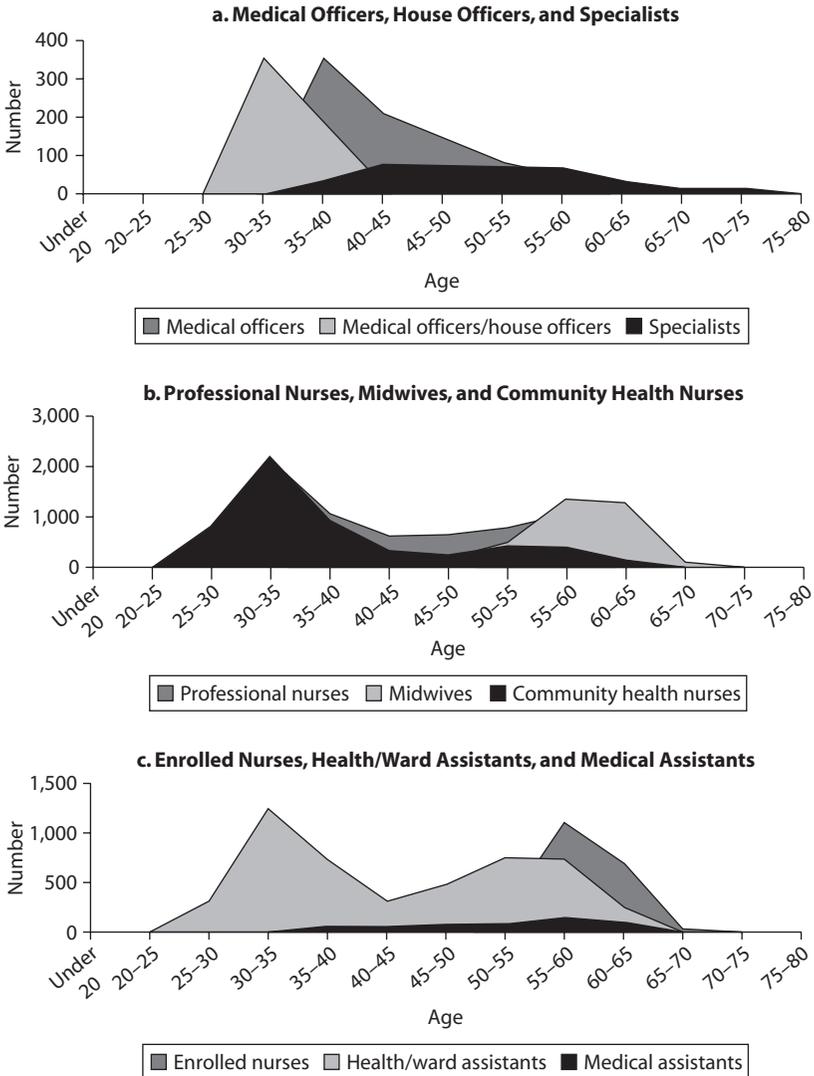
The next sections review evidence for some of the potential causes of the national labor market attrition (and its subsequent drop)—namely, retirement and outmigration. Premature death, sometimes a significant cause of attrition in other Sub-Saharan countries, particularly those with high HIV/AIDS prevalence rates, was not found to be significant in Ghana (figure 2.9). Ghana’s HIV/AIDS prevalence rates are comparatively low, at 1.8 percent (CSR-Health Ghana 2011).

Retirement. Attrition of health workers who retired from the public labor market was significant, particularly before 2004. Antwi and Ekey (2008; see figure 2.9), who confirm a decline in attrition for all health care personnel in the mid-2000s, find retirement to be the primary reason for health workers leaving public employment posts during the 2000s.

Although attrition from retirement has declined steadily during that period, it will remain important in the near future. Some 15,000 health workers—including most midwives, enrolled nurses/health assistants, and medical assistants, as well as a significant proportion of professional nurses—will turn 60 (the official retirement age) by 2021. Whereas the retirement of medical doctors is of less concern in the immediate future (most doctors are currently young), the retirement of mid- and lower-level cadres (a significant proportion of whom are in their 50s) will require more immediate attention (figure 2.10).

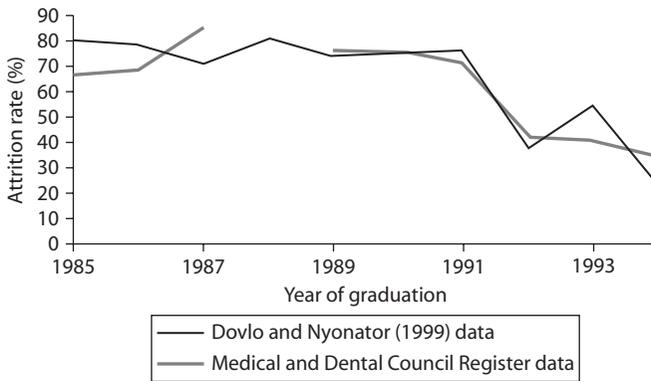
Outmigration (before 2006). The number of doctors and nurses who migrated abroad during the 1980s was significant (figure 2.11). According

Figure 2.10 Age Distribution of Selected Cadres of Health Workers, 2009



Source: Antwi and Ekey 2008

to Dovlo and Nyonator (1999), 60 percent of the 489 doctors who graduated from the University of Ghana School of Medicine emigrated between 1985 and 1994; at the peak of Ghana’s doctor exodus, 80 percent of the university’s graduates had left Ghana (Phillips 2009). During the same period, the estimated average annual loss of each

Figure 2.11 Attrition of Doctors and Dentists, 1985–94

Sources: Dovlo and Nyonator 1999; Medical and Dental Council Register, in Phillips 2009.

graduating cohort of doctors from Ghana was 13.8 percent, meaning that more than half of each cohort of graduates emigrated within 5 years and more than 75 percent emigrated within 10 years.

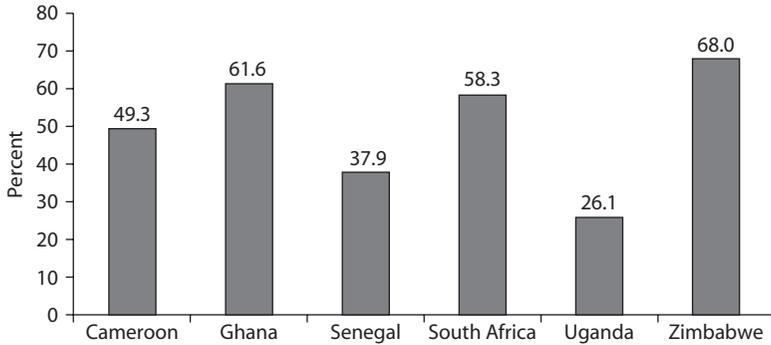
Although outmigration started to decline during the early 1990s, it increased again by 2000. The General Secretary of the Ghana Registered Nurses Association reports that membership fell from more than 12,000 in 1998 to fewer than 9,000 in 2003 because of outmigration (Buchan and Dovlo 2004). The large increase in the vacancy rate for nurses during that time—which rose from 25.5 percent in 1998 to 57.0 percent in 2002—is attributed largely to emigration (Nyonator and Dovlo 2005).

A 2003 survey of health workers who intended to migrate found this to be significantly higher than in most other African countries (Awases et al. 2004). In that year, 61.6 percent of health workers in Ghana expressed an intention to migrate, compared with 26.1 percent in Uganda and 37.9 percent in Senegal (figure 2.12).

By the mid-2000s, Ghana had one of the highest numbers in Africa of domestically trained doctors living abroad. The percentage of doctors trained domestically but living abroad in 2004 was higher in Ghana than in all other African countries except Zimbabwe, Malawi, and South Africa (figure 2.13).

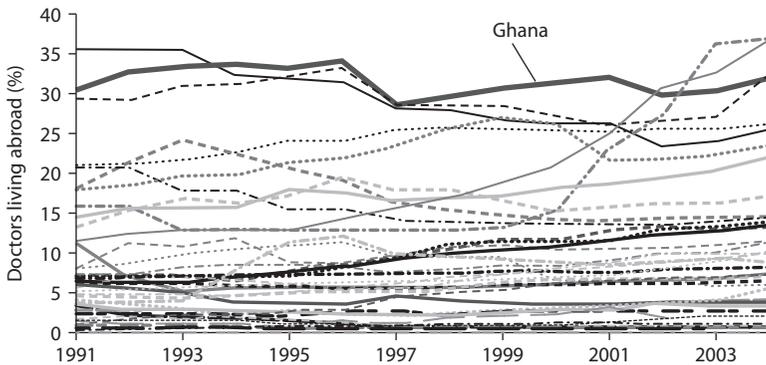
The top destinations of health workers migrating abroad were Anglophone countries in the developed world. Analysis of data from the Nurses and Midwifery Council found that the majority of nurses requesting verification of employment—a proxy for outmigration—during

Figure 2.12 Intention to Migrate among Health Workers, Selected African Countries, 2003



Source: Awases et al. 2004.

Figure 2.13 Doctors from Selected African Countries Living Abroad, 1991–2004

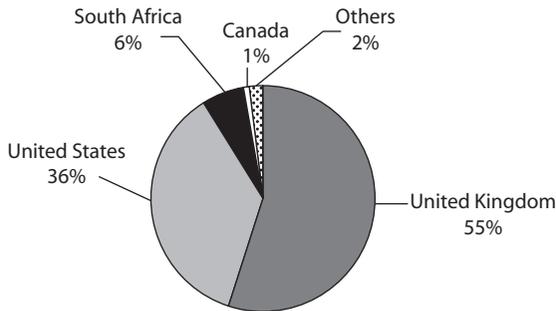


Source: Docquier and Bhargava 2007, in Phillips 2009.

Note: These data refer to stocks, not flows, for selected African countries.

2002–05 (93 percent) migrated to the United Kingdom or the United States (figure 2.14). Most of the rest left for other developed countries, including Canada, Australia, New Zealand, and countries in Europe. Between 1999 and 2004, the number of doctors and nurses trained in Ghana who registered in the United Kingdom alone grew from approximately 130 to 300 and from 50 to 1,000, respectively (Mensah, Mackintosh, and Henry 2005).

Various push, pull, and cultural factors can help explain these high levels of outmigration before 2006, as documented in various studies.

Figure 2.14 Destinations of Emigrating Ghanaian Nurses, 2002–05

Source: Data from Nursing and Midwifery Council, quoted in Phillips 2009.

- **Salaries in Ghana considered low:** Doctors surveyed in 2004, who intended to migrate, cited low salaries in Ghana as a primary push factor (Mensah, Mackintosh, and Henry 2005). Although doctors' overall compensation in Ghana was higher than in many other African countries, by the early 2000s baseline salaries were modest relative to developed countries (see appendix C).
- **Inadequate postgraduate study opportunities:** The desire for better postgraduate training opportunities was a major pull factor for those intending to migrate abroad (Dovlo and Nyonator 1999). Prior to 2004, for example, Ghana did not have an institution offering postgraduate medical specialization.
- **Recruitment from abroad:** The growing aging populations in Europe and North America increased demand for health workers there (Vujicic et al. 2004). For example, among doctors registered in the United Kingdom in 2004, 9,152 had trained in Africa, including 239 in Ghana—more than twice the Ghanaian doctors registered in the United Kingdom in 1999 (GMDC 2004).
- **Perceptions of better workplace and living conditions abroad:** The desire to secure a basic standard of living—to own a home, a car, and domestic appliances—was important for health workers who intended to migrate (Dovlo and Nyonator 1999; Hagopian et al. 2005). Moreover, among doctors surveyed in 2004, 89 percent who intended to

migrate cited poor working conditions at home as an important push factor. (Mensah, Mackintosh, and Henry 2005).

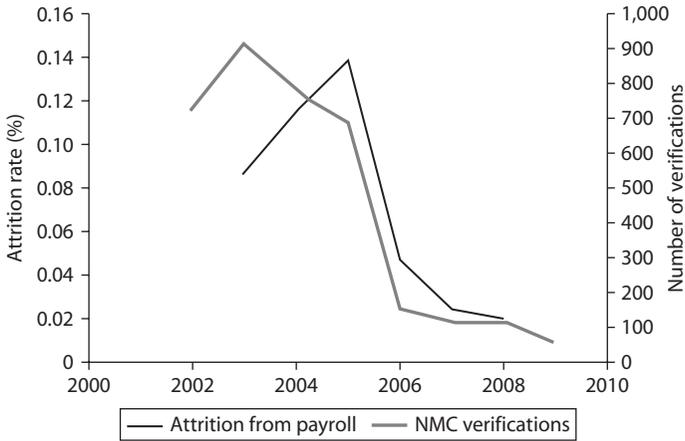
- **Prestige and social status:** Medical students and faculty associated outmigration with prestige, status, and career success. Success for professors was measured not only by their experience practicing abroad, but also by the ability of their students to attain competitive medical positions in countries such as the United Kingdom and the United States (Dovlo and Nyongator 1999; Hagopian et al. 2005). Students learned from their professors, family members, and others about the benefits—tangible and intangible—of migration and were eager to emulate them by pursuing prestigious opportunities abroad (Hagopian et al. 2005).

Outmigration (after 2006). There are strong indications that the trend of intensive outmigration of doctors and nurses slowed significantly in recent years, particularly since 2006. Focus group discussions with health workers in 2010 provided strong indications that outmigration for all health workers decreased in the mid-2000s (Lievens et al. 2011). Quantitative analysis supports this. Ghana’s Nurses and Midwives Council maintains statistics on the number of requests to verify the credentials of domestically trained nurses for international employment (a proxy for outmigration). As figure 2.15 indicates, the migration of nurses from Ghana reached a plateau in the early 2000s, dropped precipitously in 2006, and then leveled off at a reduced rate. Decreases in migration are also apparent for physicians, as depicted in figure 2.16. Data on attrition from the public sector and on new Ghanaian registrants to the United Kingdom’s General Medical Council (GMC) show a strong correlation as well as a drop in 2006.

Various explanations have been put forward for the drop in outmigration, but more research is required to determine the relative importance and weight of each. Explanations for the drop (as well as remaining levels) focus on the following:

- **Salary increases and rationalization program in 2006:** Health worker remuneration has grown significantly since the early 2000s, largely in the form of allowances and benefits (see appendix C). The salary rationalization program was instituted in 2006 then consolidated, equalized, and raised the baseline salaries of health workers. Although

Figure 2.15 Migration and Attrition of Nurses, 2002–09



Sources: Data from the NMC, Integrated Personnel Payroll Database (IPPD), as shown in Antwi and Phillips 2012.
Note: NMC = Nurses and Midwives Council, Ghana.

Figure 2.16 Migration and Attrition of Physicians, 2002–09



Sources: Data from U.K. GMC; Integrated Personnel Payroll Database (IPPD), as shown in Antwi and Phillips 2012.
Note: GMC = General Medical Council.

appendix C shows that this rise is correlated with the removal of the additional duty hours allowance introduced a few years earlier (keeping overall health worker compensation steady), it can be argued that the drop in migration rates would not have happened if wages had been allowed to fall with such a removal (see the findings of the

background study on the correlation of wage increases with outmigration in box 2.1). Qualitative research finds that more nurses today qualify for bank loans because of the increase in their baseline salaries. Nurses recognize that increased base salaries allow them to obtain mortgages, and they report that being able to save in order to buy property significantly reduces their motivation to migrate (Lievens et al. 2011). Remaining levels of outmigration, however, continue to be financially driven. Focus group discussions emphasize that potential savings from a foreign salary far exceeds the savings possible from a Ghanaian salary. Saving toward constructing or buying a house is one of the most-cited uses of savings earned abroad (Lievens et al. 2011).

- **Improvements in higher education opportunities in Ghana in 2004:** The Ghana College of Physicians and Surgeons opened in 2004 as the first domestic institution for specialist training in Ghana, enabling doctors to receive specialist training without migrating.⁴ But some challenges remain. Despite the establishment of the college, some doctors in focus group discussions continue to express frustration over

Box 2.1

Impact of Wage Increases on Outmigration

Quantitative evidence strongly suggests that the steady increase in wages and the additional duty hours allowance since 2003, and later the salary rationalization program in 2006 (see appendix C for details), were partly responsible for reducing outmigration. A study by Antwi and Phillips (2012) finds that increasing wages by 10 percent reduces the probability of migration by 1.3–4.3 percentage points (depending on the econometric specification)—a huge reduction relative to the estimated average outflow of workers of 11.9 percent. The findings from the study also suggest that increasing wages by 10 percent for the 11,990 skilled potential migrant health workers on the public payroll as of July 2009 would retain 156–516 health workers a year, at an annual cost of US\$20,000–\$52,000. The study also finds that increasing wages greatly impacts retaining younger staff, because older cohorts who wanted to migrate already have, leaving a group that is unlikely to migrate whether wages are increased or not.

Source: Antwi and Phillips 2012.

difficulties in gaining access to postgraduate training in Ghana, which requires at least two years of work experience—including time in rural areas, a policy intended to affect rural job uptake—and authorization from an employer to be released to attend postgraduate training (Lievens et al. 2011).

- **International measures on migration in 2004:** In 2004, the U.K. Department of Health developed a code of practice that restricted the employment of medical staff from an agreed list of developing countries, including Ghana.⁵ Countries in the Commonwealth and several other countries also adopted the code. Recent qualitative research suggests that nurses are less tempted to consider emigrating because of the lower probability of finding work in the United Kingdom and the higher costs associated with the migration process (Lievens et al. 2011). Remaining levels of outmigration might be linked to the continued, albeit evolved, poaching methods of U.K. recruitment agencies, however (box 2.2).

Box 2.2

Poaching from U.K. Recruitment Agencies

Focus group discussions suggest that recruitment agencies continue to act as brokers between Ghanaian nurses and employers in the United Kingdom (such as homes for the elderly), contacting them through teaching hospitals and training organizations. Agencies are paid a set price, often requiring nurses to raise substantial sums in Ghana before leaving or commit a percentage of their future salary to the agent. Although the role of the agents has diminished in recent years, significant barriers to emigration motivate many nurses to contact them.

The complex migration process—leaving the country to find work abroad involves multiple steps in both Ghana and the country where work is sought—and the uncertainty arising from the lack of information or continuously changing requirements explain why so many would-be migrants rely on agents. Focus group discussions suggest that information asymmetries between nurses and recruitment agencies have led to considerable abuse by agencies in Ghana—for example, intentionally providing misleading information to nurses hoping to emigrate.

Source: Lievens et al. 2011.

- **A prolonged bonding scheme for nurses in 2005:** Since 2005, nurses trained with public funds are required to work for the Ministry of Health for five years or repay the cost of their training.⁶ A much higher bond value, set in 2005, was reported to be ₵200 million (Ghanaian cedis)—a 100-fold increase from the previous ₵2 million. Under a new agreement between the Nursing and Midwifery Council and the GHS, certificates of validation for work abroad will not be issued unless the GHS confirms that the employee’s bond has expired or been paid. Darko, Nyan-teh, and Boni (2006) credit this agreement as one of the main reasons for the falling migration rate.⁷ Bonding tends to work in the short term worldwide, although the long-term effects remain to be seen.
- **Changes in perception of outmigration:** Focus group discussions reveal that outmigration is increasingly seen as less socially acceptable among some health workers. Health workers remaining in Ghana have begun to see migrants as “thieves of tax money,” taking skills acquired through subsidized training in Ghana abroad (Lievens et al. 2011). This might be partly attributed to the larger media awareness about human resources health issues in recent years.

Conclusion

This chapter reviewed and tried to offer some explanations for the current level of health worker stock in the public sector in Ghana. Compared with other countries with a similar GDP, Ghana’s aggregate number and density of health workers is comparatively large. However, the number of doctors, nurses, and midwives is still below the desirable ratio associated with increased coverage of assisted births. The current health worker stock is largely the result of increased levels of production of health workers (the capacity of which seems to have peaked), as well as a reduction of attrition from retirement and, most notably, outmigration. Physicians in Ghana today are mostly young, although this can be said less about enrolled nurses (impacting current and future attrition from retirement). The reduced levels of outmigration, on the other hand, can be linked to a number of reforms and policies, including increases in salaries and remuneration, restrictions on international recruitment agencies, increased opportunities for higher education and specialization, temporary bonding of some cadres, and a reversal of the perception of outmigration (toward the negative). Further research will need to focus in particular on accurately capturing evidence on the

private sector (not covered in this chapter because of the lack of reliable data) to identify whether production and employment targets can be reached with shrinking public sector financial capacity (discussed in chapter 7).

Notes

1. As of June 2009, an estimated 82 schools, public and private, were involved in training health workers in Ghana. Of these schools, 76 (93 percent) were public and 6 (7 percent) were private (Beciu et al. 2009).
2. Institutions do charge some fees (for access to the library, registration, matriculation, sports), and students at some public institutions contribute a sizable share of tuition.
3. With the exception of professional training for doctors and dentists, and bachelor-level training for nurses, estimated training costs include only the direct cost of preservice training. The costs for training doctors, dentists, and bachelor-level nurses also include the indirect overhead and operating costs shared with the institutions that provide tertiary education during the pre-clinical phase of the training. Lack of detailed data on indirect costs at the university level for all cadres makes it difficult to reliably attribute the indirect costs of universities' fixed overhead. To facilitate the analysis, the authors assumed a 25 percent overhead cost for each institution.
4. See Kwesi (2008) for an in-depth discussion of higher education policies that may have reduced outmigration.
5. The United Kingdom has long been the primary destination of health workers migrating from Ghana. In 2001 the U.K. National Health Service explicitly banned active recruitment of workers from low-income countries, and over the next few years it strengthened enforcement of this policy. After several years of increases, the number of new nurses—foreign and domestic—hired by the National Health Service fell in 2004. This drop corresponded with an increase in the domestic supply of nurses. These factors reduced demand from the United Kingdom for foreign-born health workers (Buchan et al. 2009; Phillips 2009).
6. The Nursing and Midwifery Council stepped up the enforcement of bonding rules and extended the bond length from two to five years. The policy was implemented by coordinating with the GHS to withhold professional certificates and refuse certificate verification (thus preventing migration) until the nurses had completed their bond (Phillips 2009). Although nurses are allowed to pay a fine in place of the bond, very few have done so.
7. Buchan et al. (2009) argue that enforcing the bonding scheme for doctors may make emigration an even more attractive option.

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CHAPTER 3

The Distribution of Health Workers

**Rachel Snow, Christopher H. Herbst, David Haddad,
Janet Kwansah, James Antwi, and Victor Francis Ekey**

This chapter examines the numbers and densities of health workers in Ghana's regions and districts. It looks at why health workers choose urban or rural employment, and how these choices link to characteristics of health worker training (the extent to which health worker trainees are exposed to rural practice during training), to differences between rural and urban working conditions, and to systemic and management bottlenecks. As with chapter 2, this analysis of geographical distribution focuses on health workers paid by the public sector only (the large majority), using data from the 2009 payroll record database of the Ghana Health Service (GHS). These health workers include the vast majority of those working in the nonprofit private sector under the umbrella of the Christian Health Association of Ghana (CHAG).

Summary of Findings

The distribution of health workers varies substantially across and within regions. Greater Accra has by far the largest number of clinical health workers, followed by Ashanti; the lowest overall number of clinical workers is found in the Upper West Region. The skewed geographical distribution of health workers is most pronounced for higher-level cadres (medical officers, medical specialists, diploma/degree nurses, dental surgeons, and pharmacists).

Taking into account population densities, Accra, followed by the Upper West Region, have the highest densities of health workers per 1,000 population. The very lowest densities are found in the Northern Region. All regions find themselves below the recommended 2.3 doctors, nurses, and midwives per 1,000 population, a benchmark that is linked to achieving assisted delivery rates of 80 percent (although, taking into account the private, for-profit sector, Greater Accra has likely reached this benchmark). Greater Accra is the only region with assisted delivery rates of more than 80 percent. The Northern Region, on the other hand, which is home to the lowest health worker-to-population densities, is also the region with the lowest percentage of assisted deliveries. Overall, more highly trained workers—such as degree nurses and medical doctors—are underrepresented in rural areas, where clinical practice is largely provided by certificate and diploma nurses.

The preference of many health workers to work in urban areas is reflected in a 2009 survey of Ghana medical, nursing, and public health students in their fourth and final year of training: 43 percent of graduating doctors declared themselves unlikely to work in a deprived area in the future (Kotha 2010; Kotha et al. 2012). This proportion was even higher for diploma nurses, 60 percent of whom said they would be unlikely to work in deprived areas. Prior rural experience had a measurable and progressive impact on a graduate's willingness to work in such areas, net of other factors, and male medical graduates were more than twice as likely as female graduates to anticipate working in deprived areas (Kotha et al. 2012).

The supply-side behavior of some higher-level cadres toward urban employment can be explained in part by the country's education system. Medical students and diploma nursing students from rural backgrounds are generally underrepresented. Moreover, Ghana's major medical schools are located in urban areas, as are internships for medical doctors. By contrast, training for lower-level cadres, including certificate nurses, takes place in the more remote and rural regions. The work of certificate nurses requires that they train in districts, subdistricts, and communities. Indeed, Ghana health students who have been exposed to rural life are more likely to practice in rural areas after graduation than those who lacked such exposure.

The urban-biased, supply-side behavior of higher-level cadres is also shaped by the perception that urban areas provide better working conditions, both in terms of career development prospects and in workloads, clinical infrastructure, social life, and income. Added to these drawbacks

are widespread ambiguities in contracts, which can lead to prolonged job postings in deprived areas as doctors recognize that there is no one to replace them. This creates anxiety and distrust among doctors about being “forgotten” or “abandoned” in a rural posting, motivating young doctors to stay close to the teaching hospitals to gain recognition (Snow et al. 2011).

Where Ghana’s Health Workers Are Employed

The distribution of health care personnel across regions in Ghana is highly uneven (table 3.1). The largest number of health workers is found in Greater Accra, which is home to more than 55 times the number of doctors and 10 times the number of professional nurses that are found in the Upper West Region, for example.

Taking into account population density, the picture changes for some regions, although it remains stable in Greater Accra (table 3.2). The highest densities of clinical workers per 1,000 population are found in Greater Accra (1.6) and the Upper West Region (1.3); the lowest density is found in the Northern Region (0.7), followed by the Western Region (0.9). Including nonclinical cadres, Greater Accra is home to more than 2.5 health workers per 1,000 population. Mid-level and lower-level cadres (professional nurses, midwives, and community health nurses) are distributed more evenly across regions than are higher-level cadres.

Most CHAG health workers on the government payroll (and those paid by CHAG facilities) work in the Ashanti, Eastern, and Brong Ahafo regions (figure 3.1). Those on CHAG payrolls were not counted in tables 3.1 and 3.2.

Densities of doctors, nurses, and midwives (only) in all 10 regions of Ghana are far below the benchmark of 2.28 per 1,000 people recommended by the World Health Organization for achieving 80 percent assisted deliveries (figure 3.2). Aggregating doctors, midwives, and all nursing cadres finds the density to be highest in Greater Accra (1.4) and lowest in the Northern Region (0.6). The benchmark, which does not consider the skill mix and performance of health workers, should be interpreted with caution. Many other cadres, including community health workers, can play a role in assisted deliveries.

Indeed, the correlation between doctors, nurses, and midwives per 1,000 population and the number of births attended is not always strong except for the regions ranked highest and lowest (table 3.3). Greater Accra has both the highest density of health workers (1.4) and the

Table 3.1 Public Sector Health Workers by Region and Cadre, 2009

<i>Cadre</i>	<i>Region</i>									
	<i>Ashanti</i>	<i>Brong Ahafo</i>	<i>Central</i>	<i>Eastern</i>	<i>Greater Accra</i>	<i>Northern</i>	<i>Upper East</i>	<i>Upper West</i>	<i>Volta</i>	<i>Western</i>
Medical officer	478	89	51	104	607	25	18	11	51	55
Specialist	71	23	18	24	196	11	6	3	15	12
Professional nurse	1,148	491	560	726	2,320	532	348	238	509	466
Midwife	580	315	252	409	733	268	177	146	360	251
Community health nurse	494	394	468	750	785	392	358	219	666	496
Biomedical scientist	58	28	13	24	111	16	8	8	12	11
Radiographer	6	2	4	1	14	2	0	1	2	1
Pharmacist	83	24	12	27	153	13	12	10	16	24
Pharmacy technician	242	70	39	63	153	48	34	23	45	51
Health assistant (enrolled nurse)	1,460	835	874	719	939	419	243	168	708	590
Medical assistant	93	50	40	51	74	65	40	14	27	35
Dental surgeon	6	2	0	4	18	0	0	0	1	4
Other clinical	105	59	55	83	183	33	23	14	75	43
Total clinical	4,824	2,382	2,386	2,985	6,286	1,824	1,267	855	2,487	2,039
<i>Including nonclinical health workers</i>	<i>7,815</i>	<i>4,076</i>	<i>3,928</i>	<i>5,118</i>	<i>10,055</i>	<i>3,060</i>	<i>2,105</i>	<i>1,495</i>	<i>4,904</i>	<i>3,484</i>

Source: Calculated from GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database.

Note: Those on CHAG facility payrolls are not counted here.

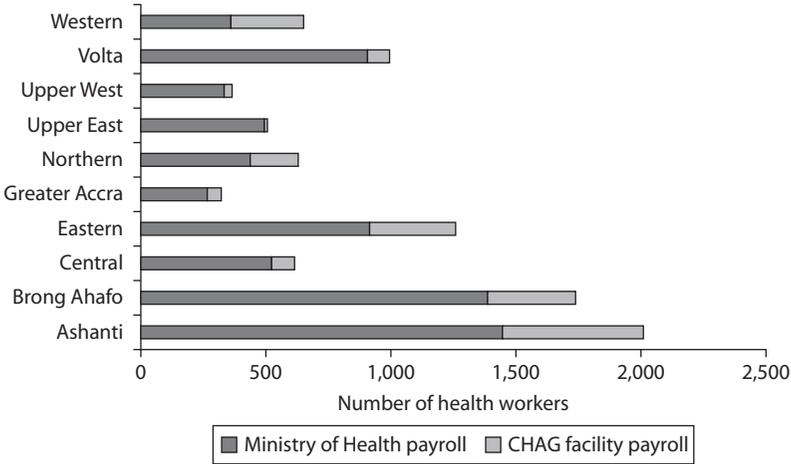
Table 3.2 Public Sector Health Workers per 1,000 Population by Region and Cadre, 2009

<i>Cadre</i>	<i>Region</i>									
	<i>Ashanti</i>	<i>Brong Ahafo</i>	<i>Central</i>	<i>Eastern</i>	<i>Greater Accra</i>	<i>Northern</i>	<i>Upper East</i>	<i>Upper West</i>	<i>Volta</i>	<i>Western</i>
Medical officer	0.101	0.039	0.024	0.040	0.155	0.010	0.017	0.016	0.024	0.024
Specialist	0.015	0.010	0.009	0.009	0.050	0.004	0.006	0.004	0.007	0.005
Professional nurse	0.243	0.215	0.266	0.280	0.593	0.216	0.337	0.351	0.242	0.200
Midwife	0.123	0.138	0.120	0.158	0.187	0.109	0.172	0.215	0.171	0.108
Community health nurse	0.105	0.173	0.222	0.289	0.201	0.159	0.347	0.323	0.317	0.213
Biomedical scientist	0.012	0.012	0.006	0.009	0.028	0.006	0.008	0.012	0.006	0.005
Radiographer	0.001	0.001	0.002	0.000	0.004	0.001	0.000	0.001	0.001	0.000
Pharmacist	0.018	0.011	0.006	0.010	0.039	0.005	0.012	0.015	0.008	0.010
Pharmacy technician	0.051	0.031	0.019	0.024	0.039	0.019	0.033	0.034	0.021	0.022
Health assistant (enrolled nurse)	0.309	0.366	0.415	0.277	0.240	0.170	0.236	0.248	0.337	0.254
Medical assistant	0.020	0.022	0.019	0.020	0.019	0.026	0.039	0.021	0.013	0.015
Dental surgeon	0.001	0.001	0.000	0.002	0.005	0.000	0.000	0.000	0.000	0.002
Other clinical	0.022	0.026	0.026	0.032	0.047	0.013	0.022	0.021	0.036	0.018
Total clinical	1.021	1.044	1.132	1.150	1.608	0.739	1.228	1.262	1.184	0.877
<i>Including nonclinical health workers</i>	<i>1.654</i>	<i>1.786</i>	<i>1.864</i>	<i>1.971</i>	<i>2.572</i>	<i>1.240</i>	<i>2.041</i>	<i>2.206</i>	<i>2.335</i>	<i>1.498</i>

Sources: Calculated from GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database; 2010 Population and Housing Census, Provisional Result, February 2011.

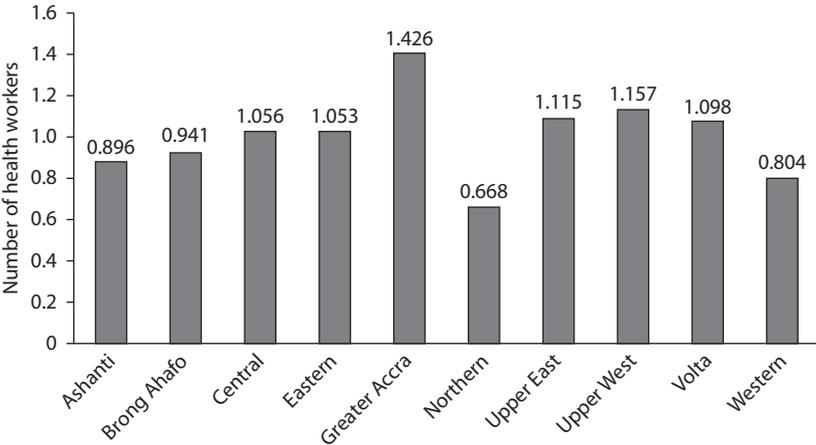
Note: Those on CHAG facility payrolls are not counted here.

Figure 3.1 CHAG Health Workers by Region, 2009



Source: Calculated from internal CHAG personnel database, accessed 2010, Accra, Ghana.

Figure 3.2 Doctors, Nurses, and Midwives per 1,000 Population by Region, 2009



Sources: Calculated from GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database; 2010 Population and Housing Census, Provisional Result, February 2011.

highest percentage of births attended in Ghana (84.3); the Northern Region has both the lowest health worker density (0.7) and the lowest percentage of births attended (25.1). In Accra, the number of private, for-profit providers and others not counted in the payroll data probably

Table 3.3 Health Worker Density and Proportion of Assisted Births by Region

<i>Region</i>	<i>Doctors, nurses, and midwives per 1,000 population (2009)</i>	<i>Births attended by a physician, nurse, midwife, or auxiliary midwife (% 2008)</i>
Greater Accra	1.4	84.3
Ashanti	0.9	71.6
Brong Ahafo	0.9	65.6
Western	0.8	60.2
Eastern	1.0	58.3
Central	1.0	54.0
Volta	1.1	52.3
Upper West	1.2	43.4
Upper East	1.1	38.9
Northern	0.7	25.1
Total	1.0	57.2

Sources: Calculated from GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database; GSS, GHS, and ICF Macro 2009; 2010 Population and Housing Census, Provisional Result, February 2011.

pushes the health worker-to-population density above the benchmark of 2.3 per 1,000 population. The fact that some other regions do not fit the pattern may indicate that variables other than the number of select health cadres play a role in attended deliveries.

Reasons for the Uneven Distribution of Health Workers

Medical graduates and university-trained (degree) nurses have the widest array of job choices, and they are free to apply for any public or private post after graduation. Public sector posts are centrally advertised, and selection is competitive. When doctors apply for *regional* posts within CHAG or the GHS, they can express a preference for a given facility (or district), but they are subject to the assignments specified by the regional director of health services.

Certificate nurses are more constrained by bonding requirements. All certificate nurses receive national subsidies for which they are bonded to remain in the country for five years, but they can apply for any public or private post within Ghana. But, because the national subsidy does not cover all expenses, certificate nursing students may also receive fiscal support from their local government—that is, the district assembly. Nurses who receive training support (all or in part) from a district assembly are bonded to work for that district assembly after graduation; the bonding period varies.

Diploma nurses are also subsidized by the national government, after which they must remain in the country for five years; they too can apply for any public or private post within Ghana. There is an active policy debate under way over whether (or not) to withdraw national support for diploma students and shift fiscal responsibility to district assemblies. As of this writing, these students remain subsidized by the national government.

Data from the 2009 cohort of medical school, diploma nurse, and public health graduates in Ghana illustrate the underrepresentation of medical and nursing students from rural areas (table 3.4). Just 24 percent of medical students and 35 percent of diploma nursing students studying in Kumasi or Accra had ever lived in a rural area.¹ Public health students were the most likely to have done so (54 percent), as rural experience is often part of their training. More than 60 percent of medical students and almost 30 percent of nursing and public health students had at least one parent with a university degree, suggesting privileged backgrounds. Social advantage is further reflected in the high percentage of medical students who have ever lived abroad (34 percent).

Sixty percent of diploma nursing students and about 40 percent of fourth-year medical graduates reported that they are unlikely to work in a deprived area after graduation (table 3.5).² Male medical graduates were almost three times more likely than their female peers to express interest in working in a deprived area in the future (Kotha 2010). This distinction between the sexes was sustained in multiple regression models (Ordinal Regression of 2.3, Confidence Interval = 1.23–4.35, for males versus females willing to work in a deprived area after controlling for other factors) (Kotha et al. 2012). Gender imbalances in rural service are

Table 3.4 Background Characteristics of Medical, Diploma Nursing, and Public Health Students, 2009

<i>Characteristic</i>	<i>Medical students (n = 302)</i>	<i>Nursing students (n = 439)</i>	<i>Public health students (n = 81)</i>
Male	180 (60.6)	110 (25.1)	42 (51.9)
Female	118 (39.1)	328 (74.7)	39 (48.1)
Parent with a university degree	183 (60.6)	105 (26.7)	24 (29.6)
Lived in other country	103 (34.1)	29 (6.6)	24 (29.6)
Lived in rural area	72 (23.8)	154 (35.1)	44 (54.3)

Sources: Authors' compilation, based on Johnson et al. 2011; Kotha 2010; Kruk et al. 2010.

Note: Data are based on all 2009 medical and public health graduates in Ghana, as well as diploma nurses from Accra and Kumasi (a subset of all diploma nurses). Foreign medical students are excluded. Figures in parentheses are percentages of all students.

Table 3.5 Likelihood that Selected Students in Accra and Kumasi Consider Rural Practice, 2009

<i>Likelihood of rural practice after graduation</i>	<i>Number of medical students (%)</i>	<i>Number of diploma nursing students (%)</i>	<i>Number of public health students (%)</i>
Definitely not	19 (6.3)	85 (19.4)	7 (8.6)
Unlikely	108 (35.8)	175 (39.9)	23 (28.4)
Likely	140 (46.4)	116 (26.4)	44 (54.3)
Definitely	19 (6.9)	24 (5.5)	4 (4.9)

Source: Authors' compilation, based on Johnson et al. 2011; Kotha 2010; Kruk et al. 2009.

Note: At the time of this study, all fourth-year medical students in Ghana were teaching at the Kwame Nkrumah University of Science and Technology (KNUST) or U-Ghana teaching hospitals. By conducting the survey in these two localities, we were able to open recruitment to all 310 fourth-year medical students in Ghana; 307 (99 percent) participated in the survey. Public health students are almost exclusively based in KNUST and U-Ghana if they are not undertaking fieldwork; all final-year Master in Public Health students were recruited.

consistent with qualitative evidence that married female doctors and nurses find it difficult to convince their partners to join them in rural areas, and that single women fear harassment, isolation, and difficulty finding a husband in such settings (Kwansah et al. 2012; Lievens et al. 2011; Snow et al. 2011).

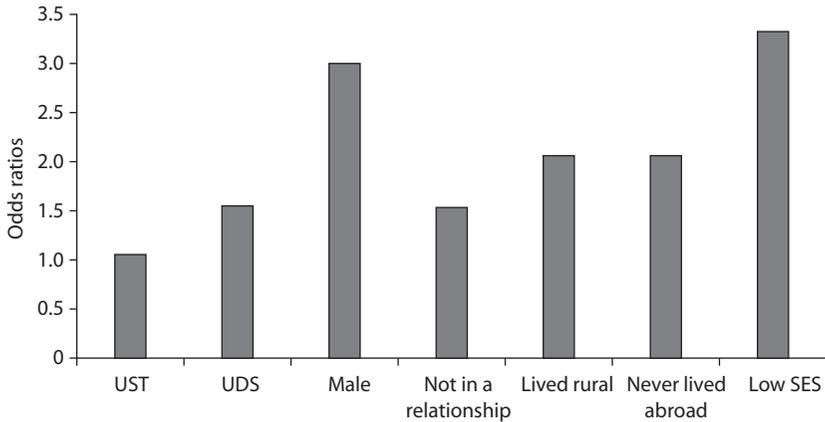
Preservice Education

The low proportion of medical students from rural Ghana is critical because those exposed to rural life are more likely to consider practicing in deprived areas than those who have not lived or worked outside urban areas (figure 3.3; table 3.5). Medical education has traditionally been an urban experience in Ghana. The two oldest medical schools (the University of Ghana School of Medicine and the Kwame Nkrumah University of Science and Technology) are in major metropolitan areas. The recent addition of medical schools in Tamale and Cape Coast illustrates the Ministry of Health's commitment to a better regional distribution of training.

Consistent with data from numerous studies suggesting that prior rural experience heightens interest in a rural post, fourth-year medical graduates from the University of Development Studies (UDS) in Tamale were 1.5 times more likely to consider rural practice than their peers who had preservice training at the University of Ghana in Accra (figure 3.3) (Kotha 2010).

The "housemanship" period required of graduating medical doctors is also largely an urban experience. Graduation from medical school in Ghana is followed by two years of housemanship, consisting of six months

Figure 3.3 Likelihood that Graduating Medical Students Consider Rural Practice, 2009



Source: Kotha 2010.

Note: Odds ratios for Kwame Nkrumah University of Science and Technology and the University of Development Studies are relative to the University of Ghana; male (versus female); not in a relationship (versus currently in a relationship); lived rural (versus never lived in a rural area); never lived abroad (versus ever lived outside Ghana); UST = University of Science and Technology; UDS = University of Development Studies; low SES = low socioeconomic status: the proportion for whom *neither* parent is a university or polytechnic-trained professional (versus those with one or both parents with university training).

devoted to each of four clinical disciplines: medicine, surgery, pediatrics, and obstetrics/gynecology. Few rural hospitals have the specialists to oversee housemen in more than one or two disciplines. One to two semesters of housemanship can be performed in a regional facility, but such training would require moving between hospitals. Most doctors finish their entire housemanship requirement in a teaching hospital. This practice leads to a diminished presence of in-training doctors in rural and regional hospitals and less exposure of young doctors to rural practice.

Underscoring the importance of social background to rural service, positive predictors of considering practice in deprived areas include ever having lived in a rural area, never having lived abroad, and coming from parents with less professional education (figure 3.3) (Kotha 2010).

In 84 in-depth interviews with clinicians and medical leaders across Ghana, numerous leaders suggested that medical schools should include a compulsory student rotation in rural areas to alleviate unfounded fears about actual conditions in remote settings (Snow et al. 2011).

In 2009 the Ghana College of Physicians and Surgeons was the first and only school to make rural service a prerequisite for specialization.

Doctors completing their training in 2009 and who spent all four semesters in a teaching hospital were required to add a year of service in a district hospital before admission to the college. Although enforcement has varied across specializations, this policy is expected to create a strong incentive for rural service, albeit for a limited duration.

Ghana has many two-year certificate nursing programs, including in the more remote northern regions. Nurses with these degrees are the most likely to be appointed to rural or deprived areas. By contrast, three-year diploma and university degree nurse-training programs—that is, those training the highest professional cadres of nurses—are typically found only in major metropolitan areas and regional capitals. Professional socialization into tertiary and regional hospitals is the norm for the highest cadres of nurses, and few work outside such facilities (Kwansah et al. 2012); those encountered during research in remote Upper West or Brong Ahafo were typically working in upper management in regional hospitals or training institutions (Snow et al. 2011).

Working Conditions

Greater access to mentoring and faster promotion in urban areas—in addition to better monetary and nonmonetary compensation—motivate many doctors to avoid rural areas. Eighty-four in-depth interviews revealed that the low prospect for career development was the primary factor discouraging doctors from pursuing or continuing in rural posts (Kwansah et al. 2012; Snow et al. 2011). Doctors from all regions describe Accra and Kumasi as the best places to access specialist training, and for study leave or international opportunities, and where one has the best chance to receive mentoring by specialist and senior doctors.

Health workers who choose deprived or rural posts do so for various reasons. Some are attracted by the greater responsibility offered by rural jobs and the opportunity for faster access to broad clinical experience (box 3.1) (Lievens et al. 2011). Some want proximity to family, are self-identified adventurers, or invoke ideational factors (Agyei-Baffour et al. 2011). The latter include Christians who are passionate about service for the poor and self-identified socialists, trained in the former Soviet Union or Cuba, who express strong commitments to health equity and rural development (Kwansah et al. 2012; Snow et al. 2011).

Doctors, nurses, and medical leaders all stress the fact that the Ministry of Health has failed to offer significant career incentives for rural service, which—in light of high workloads, poor infrastructure, weak management capacity, social isolation, and loss of moonlighting opportunities

Box 3.1**Reasons to Prefer Rural over Urban Posts**

Focus group discussions find that some health workers view the ideal career as starting in a rural area—where they can acquire wider clinical experience and assume greater responsibilities—and ending in a clinical specialty, practiced in an urban setting. Because health facilities in rural areas are often understaffed, new workers can acquire new skills quickly and develop clinical leadership. Doctors in urban teaching hospitals get less hands-on experience, while in remote hospitals they handle many deliveries and surgeries with a skeleton staff. Forced to perform procedures without much supervision or experience, many doctors and nurses find rural work challenging but satisfying. Further, doctors and nurses are exposed to a wide range of pathologies in rural areas, allowing them to acquire in-depth clinical knowledge in a short time. Some health workers find that working relationships and camaraderie are better in rural areas, resulting in greater job satisfaction. For some professionals, the loss of “locum” (moonlighting income) is partly compensated for by the lower cost of living. And some health workers simply prefer living in rural areas.

Source: Lievens et al. 2011.

(“locum”)—are deemed critical to making rural posts more attractive. Promotions within the GHS are, in fact, *slower* than promotions in the urban teaching hospitals. Senior doctors noted how ironic this is, considering that rural doctors typically learn faster because of their heavier workloads and greater responsibilities.

Doctors, nurses, and medical leaders argue that remote services deserve a higher financial incentive—not only because of the higher workloads, but also because of lost opportunities for supplementary pay—that is, moonlighting. Extra salary is rationalized to “level the pay” between urban and remote posts, but most agree that explicit career advantages such as accelerated promotion or study opportunities will be required to draw a significant number of health staff into rural Ghana (Kwansah et al. 2012; Snow et al. 2011). Suggested “pull factors” include faster promotion, study leave, guaranteed access to specialist training, rotation programs that routinely bring visiting students and senior doctors to remote facilities, better Internet access, and more equitable pay (see box 3.2). If mentoring opportunities were redistributed to remote districts, and career

Box 3.2**Incentives to Draw Health Workers from Urban to Rural Areas**

A discrete choice experiment asked all graduating medical students in Ghana in 2009 to choose between hypothetical rural job posts with varying types of incentives—including various grades of housing, a salary increase, a vehicle, supportive management, and various grades of clinical infrastructure—and different fixed terms of employment followed by study leave. Students ranked the following incentives equally high: a fixed term of two years of rural service followed by study leave, advanced equipment and supplies, 100 percent salary increase, and supportive management.

Source: Kruk et al. 2010.

progression actually *avored* a fixed period of rural service, many felt it would quickly redistribute providers to deprived areas.

Capacity constraints linked to infrastructure, equipment, and supplies are additional factors that keep health workers away from rural work locations. Young health workers place a high priority on equipment and supplies when choosing their posts (Kruk et al. 2010), but this was a factor emphasized more among young doctors (Snow et al. 2011); older providers emphasize the trade-offs of gaining more *up-to-date clinical instruction* in teaching hospitals, yet more *clinical practice* in rural areas. While the best equipment is in urban teaching hospitals, nonteaching urban hospitals do not always have infrastructure advantages over remote district or regional hospitals. Health workers in nonteaching facilities in Greater Accra complain of serious overcrowding and the need to refer patients to other hospitals because of a lack of oxygen tanks, inadequate laboratory support, or broken equipment. Overcrowding is rarely mentioned in remote regions of Ghana, but rural providers are frequently without any referral options, underscoring their sense of isolation and responsibility (Kwansah et al. 2012; Snow et al. 2011).

Systemic Bottlenecks

Unclear terms of appointment also motivate many graduates to avoid rural service. Both doctors and nurses complain that unclear terms of appointment lead to prolonged postings in remote areas and also lead

to being passed over for expected rotations and promotions. The discrete-choice experiments affirmed this anxiety about prolonged stays in rural posts; both medical and nursing students underscored the importance of reliable terms of appointment with fixed endpoints (Kruk et al. 2010).

Many lower-level health workers simply find it impossible to secure a transfer out of a rural area. A lack of transparent contracting procedures and a lack of common promotion guidelines are the most significant problems in this regard. Ministry of Health transfer guidelines do exist, but they are neither widely known nor followed. Both doctors and nurses have inconsistent information about the expected duration of contracts and the timing of promotion in the public sector. Medical leaders acknowledge that intentional delays in transfers sometimes occur because of the lack of a potential replacement nurse or doctor (Kwansah et al. 2012; Snow et al. 2011). Special political treatment also takes place, especially if a health worker knows a higher-up in the Ministry of Health or has a spouse or friends in politics. Some health workers who are unable to obtain transfers from rural to urban facilities simply resign from the public sector and enter the private for-profit or quasi-governmental sector, working in facilities such as military or police hospitals in urban areas (Lievens et al. 2011).

Health workers and leaders consistently argued that the Ministry of Health should define a reliable system of rewards and transfers, whereby service in a hardship post would last for a fixed maximum period, after which staff would have the option of transfer, without unwarranted delays or any requirement to locate their own replacement (Kruk et al. 2010; Kwansah et al. 2012; Snow et al. 2011).

Conclusion

The numbers and densities of health workers are unevenly distributed throughout Ghana, with a majority of doctors and university-trained nurses serving in the two major metropolitan areas of Accra and Kumasi, and inadequate numbers of health staff in remote and rural districts. Interventions that aim to address the inequity evident in the health care available in urban and rural regions will need to take into account the career motivations that keep health workers in urban areas, and the differences between urban and rural working conditions and training. A variety of recent studies using mixed methods underscore the value of rural exposure for students in order for them to consider a rural assignment in future, the importance

of guaranteeing (and not prolonging) fixed-term contracts in remote areas, and the potential for motivating short-term service in deprived areas by rewarding such service with clear career advantages, such as early promotion or specialist training. Future research should pay attention to the private sector, as well as the distribution of funded employment opportunities, not discussed here due to lack of data.

Notes

1. Note that this study included all fourth-year medical and public health students in Ghana in 2009, but only those diploma nurses who were studying in Kumasi or Accra.
2. *Deprived area* is a term used by the Ghanaian Ministry of Health to describe a rural area that is distant from the large cities and has few social amenities such as schools, roads, or pipe-borne water. Students were asked to rate how likely they were to work in a deprived area at some point in the future. Those responding “I will definitely” or “I am likely to” work in a deprived area are coded as *willing*; while those responding “I will definitely not” or “I am unlikely to” work in a deprived area in the future were coded as *not willing*.

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CHAPTER 4

The Performance of Health Workers

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This chapter examines the performance of health workers in Ghana, distinguishing and reviewing evidence related to two types of performance issues: (1) health workers who do not possess the necessary skills, knowledge, or means to carry out their jobs sufficiently (they are not competent or able to provide services)—a situation often linked to the lack of necessary education and training or to difficult working environments; and (2) health workers who do not sufficiently or ethically apply themselves, their knowledge, or their skills (they are absent, unresponsive, unproductive, and engage in questionable behavior)—a situation often linked to a lack of motivation or lack of accountability arrangements.

Summary of Findings

Evidence on health worker performance is extremely limited in Ghana. Some of the evidence on health worker competencies suggests failures in good practice, although these failures are confined to specific services—in particular, antenatal care and intrapartum health services. Most health-training institutions are accredited, though standards of accreditation vary. The quality of health worker training in Ghana, although generally considered high, is constrained by physical and technical capacity weaknesses, especially in schools outside of greater Accra. Access to in-service

training is perceived as insufficient and unfair, and evidence of the effectiveness of in-service training is lacking. Health workers also often lack adequate equipment and supplies needed to perform their jobs effectively, and the perception of working long hours (especially if on-duty hours are considered) and having fairly high (but not unreasonable) case loads add to a challenging work environment.

The extent to which health workers apply themselves to deliver services is mixed. Absenteeism does occur, particularly in urban areas, and is largely linked to moonlighting and dual practice. Customer satisfaction surveys generally yield high scores with regard to health worker responsiveness, although the results are not consistent with the poor attitudes of health workers reported in qualitative research. Health worker productivity varies by facility, cadre, and region, and dishonest practices seem to be limited by controls over collecting payments and managing drugs at the facility level.

Management practices (or the lack thereof) appear to strongly affect the extent to which health workers apply themselves to delivering services. Management capacities and the associated quality of performance management vary significantly in Ghana. The central Ministry of Health level seems unable to adequately carry out performance management functions at the decentralized level. Important management authority to hold health workers accountable for their performance is not decentralized to the facility level. A culture of automatic promotion, based on seniority and with no sanctions for poor performance and no rewards for good performance, is a problem. Finally, one study on some of the factors that most motivate health workers indicates the importance of intrinsic factors.

Evidence on Health Worker Performance

Evidence pertaining to two different dimensions of health worker performance is reviewed below: (1) the extent to which health workers are *competent and able* to deliver health services and (2) the extent to which health workers *apply effort* to delivering health services.

Competence and Ability to Perform

Globally, health worker competence and ability to deliver services of acceptable quality can be assessed by a number of different methods, including vignettes, clinical audits, patient surveys, provider observation, confidential enquiries, and analysis of case mortality rates. In Ghana, the

number of such studies is low, and their scope is limited to looking at specific service areas, such as antenatal care. The existing studies do reveal some concerns, although much more comprehensive and more recent evidence will be needed to draw wider conclusions about the competence and ability of health workers to provide services in Ghana.

A quality-of-care assessment undertaken in 2002 by the Ghana Health Service found that the performance of antenatal care services, including routine history taking, lacked comprehensiveness.¹ In some cases, patients were not asked routine questions, such as their age or the date of their last menstrual period; diagnosis of signs, symptoms, and risk was also deemed inadequate. Caregivers rarely screened patients for sexually transmitted diseases or offered prophylaxis, and discussions on the progress of pregnancy and delivery plans were observed in only a third of patient-provider interactions (GSS, Ministry of Health, and ORC Macro 2003).

Findings from a 2003 study comparing key performance indicators related to antenatal care services in control clinics with clinics where a World Health Organization (WHO)-focused antenatal care package had been introduced indicate that performance scores for all clinics remain well below maximum possible scores. This gap suggests widespread deficiencies in the technical quality of care (Nyarko et al. 2006).

A 2007 maternal health survey also found gaps in care: only 37 percent of women were given intestinal parasite drugs during antenatal care visits, 68 percent were informed of where to go in the event of complication, and 70 percent were informed of the signs of birth complications (GSS, GHS, and Macro International 2009).² Just under two-thirds of women received at least two tetanus typhoid injections. These indicators show improvement from a 2003 survey, despite falling short of full coverage.

More recent studies, of the quality of care of intrapartum health services, also reveal deficiencies. A 2006 study surveying 9 percent of deliveries in 49 facilities (22 in the Central Region and 27 in the Volta Region) found that the quality of clinical medical care was substandard in both regions (averaging 14–15 out of a possible 44 points for management of all stages of labor). The lowest scores were for first-stage labor monitoring with a partograph,³ and for immediate postpartum monitoring of mother and baby. Quality-of-care scores were lower in private facilities than in public ones, and they were higher in facilities in which the use of such tools was higher (Deganus and Tornui 2006).

A related study in 2006 of the quality of maternal care in 14 regional and district hospitals in the Central and Volta regions also found evidence of poor practice: partographs were used in only a third of cases,

fetal heart rates were not routinely recorded, and magnesium sulfate was used in fewer than half of cases of hypertensive diseases for which it was indicated (Townend et al. 2006). The delay between the recognition of a complication and the patient being taken to the operating theater for a caesarean was substantial, exceeding the 30–45 minutes recommended.

Application of Effort

The extent to which health workers sufficiently apply themselves to their tasks and functions of serving patients in their respective place of employment is reflected in health worker (1) availability/absenteeism, (2) responsiveness, (3) productivity, and (4) professional probity. The following discusses evidence pertaining to each of these aspects.

Availability. Globally, several indicators (staffing ratios, the number of vacant posts, staff turnover, the distribution of health workers, staff attendance/absenteeism, and waiting times) can be used to assess availability. The distribution of health workers was discussed in chapter 3, which shows health workers to be much more available in urban than rural areas. The focus in this section is on the limited findings of largely qualitative evidence on staff attendance and waiting times for patients. Ghana has no quantitative data on attendance/absenteeism.

Existing qualitative evidence suggests that absenteeism is not very frequent, and that it is more common among some cadres than others. When it does occur, medical officers are more likely to be absent from work than professional nurses, who in turn are more likely to be absent than auxiliary support staff (Lievens et al. 2011). Engagement in dual practice, or moonlighting—especially of higher-level cadres—is the main cause of absenteeism. Interestingly (in light of the perception of infrequent absenteeism), moonlighting is perceived to be fairly common among health workers in urban areas. More stringent legislation making moonlighting illegal, as well as the practice of covering for absent colleagues, may play a role in minimizing absenteeism and its negative effects (box 4.1).

Reports on waiting times for patients to see health workers are mixed. In 2002, 74 percent of patients reported that waiting times were average to excellent (Awases et al. 2004). A 2006 WHO study revealed that 62 percent of patients in intervention clinics were satisfied with waiting times for antenatal care (Nyarko et al. 2006). In a 2009 maternal mortality survey of women who did not deliver in a health facility (46 percent),

Box 4.1**Dual Practice and Moonlighting**

Dual practice and *moonlighting* refer to health workers who are engaged in a second job during or after regular working hours. For the public sector worker, this often involves working in the private sector (own practice or private employer). Globally, some observers believe that dual practice or moonlighting adversely affects health worker performance: it is a major cause of absenteeism (in the public sector), and because health workers “juggle more than they can handle,” it can negatively affect their responsiveness and productivity. Others argue that, for some cadres, dual practice may actually improve performance, especially if health workers practicing in the private sector bring new knowledge and skills back to the public sector (Ferrinho et al. 2004).

Qualitative evidence suggests that dual practice is fairly common among some health workers in Ghana and may negatively impact their performance. Focus group discussions found that opportunities for dual practice are more common in urban than rural areas, and that public sector health workers, especially doctors and nurses, commonly engage in private practice. This is perceived to be problematic: focus group discussions reveal perceptions that two jobs can be exhausting, leading to lower efficiency and less-positive attitudes toward patients. Some health workers in Ghana scale down their (primary) clinical public work to provide better services to their (secondary) professional private activities (Lievens et al. 2011).

As for absenteeism, health workers refer to the practice of setting up systems so that absenteeism is minimized. Factors reportedly constraining absenteeism include the need for staff on one shift to wait for their replacements to arrive before they can leave (thus exerting pressure on colleagues to arrive on time). In a well-staffed public facility, health workers often set up an informal scheduling system so that each worker works in rotation with a colleague who covers for his or her absence (Lievens et al. 2011). Nurses arriving late sometimes have to pay their colleagues for covering for them. In addition, the lack of good private employment opportunities and the understaffing of facilities in rural areas limit both the temptation and the ability to shirk duties at public institutions (Lievens et al. 2011).

The reforms linked to the salary rationalization program, moreover, may have made dual practice more difficult. Under the new terms of employment, staff are not permitted to engage in private practice, but enforcement is weak (Lievens

(continued next page)

Box 4.1 (continued)

et al. 2011). A study after the salary rationalization program came into effect finds that only 1 percent of health workers (two doctors) reported any income from private practice (Witter, Kusi, and Aikins 2007). Because the study was carried out in rural areas and was based on self-assessment, however, it might not be representative of the actual picture throughout the country.

10 percent mentioned service-related problems, with inconvenient service hours (8 percent) foremost of the problems (GSS, GHS, and Macro International 2009). Other service-related problems cited include long waiting times and the lack of a female doctor. In a mystery-shopper exercise,⁴ conducted in the outpatient departments of 12 hospitals and polyclinics in Greater Accra, waiting times for patients to see a medical provider were two to five hours, though this might not be typical of other areas (Bannerman et al. 2010). Several factors other than provider availability—including demand for services, staffing norms, and service organization—affect waiting times, which are thus only a weak indicator of staff availability.

Responsiveness. The responsiveness of the provider to the patient—treating people decently, regardless of who they are or whether their health improves (WHO 2006)—is usually assessed through patient surveys or qualitative research, including focus group discussions. Some such evidence exists for Ghana, although it is not entirely reliable because it tends to reflect expectations and cultural factors.

Existing evidence from the mid-2000s suggests that patient satisfaction with care in Ghana was generally high. Several surveys conducted in the mid-2000s show that patients were generally satisfied with the respect, attention, communication, and services provided by health workers. More than 75 percent of respondents in another study rated the quality of care as average to excellent on most parameters (Awases et al. 2004). And 93 percent of respondents rated “respect given to patients” and “communication between health workers and patients” as average to excellent, while 82 percent rated “attention given to patients” similarly. In a separate study, most patients reported being satisfied with the antenatal care services they received (Nyarko et al. 2006).

More recent studies on the attitudes and behavior of health workers are mixed. Focus group discussions reveal that attitudes toward health workers are best in Christian Health Association of Ghana facilities and are better in rural facilities than in urban ones. Evidence from the private sector is mixed, with some users reporting better treatment than in the public sectors and some worse. There are no indications that patients with HIV/AIDS are sidelined or treated differently, despite health worker fears of contracting the disease (box 4.2). Some patients indicate that health workers became impatient and angry when patients failed to comply with treatment (for diseases in general), shouting at and insulting them; others report rude behavior, such as staff chatting with friends or spending too long on the phone. They also reported that the higher use associated with the National Health Insurance Scheme increased tensions between providers and patients (Lievens et al. 2011).

A recent mystery-shopper exercise in Accra reported overall positive findings of health worker behavior, with only some select instances raising concern (Bannerman et al. 2010). Overall, many respondents in the exercise indicated that staff were polite, friendly, welcoming, courteous, and proactive and maintained good eye contact. But some respondents reported staff chatting to colleagues while interviewing patients and attending to their own affairs—for example, selling secondhand

Box 4.2

Health Worker Responsiveness toward Patients with HIV/AIDS

About half of all health workers in Ghana worry that they may contract HIV through a work-related injury, and 38 percent report stress from caring for HIV-positive patients. Despite this, there is no evidence that Ghanaian health workers treat HIV/AIDS patients differently than they treat other patients; nor do they opt out of clinical jobs (Lievens et al. 2011). Focus group discussions reveal that health workers are happy to use their professional skills in treating and caring for people with HIV (Lievens et al. 2011). An earlier study, conducted in 2002, found that 93 percent of health workers in Ghana were willing to work with HIV patients. This level of willingness is higher than in some other African countries. In Zimbabwe, for example, where the prevalence of HIV/AIDS is much higher than in Ghana, only 76 percent of surveyed health workers were willing to care for or treat people with HIV (Awases et al. 2004).

clothing—rather than dealing with patients. Others reported rudeness, coldness, shouting, unresponsiveness, and irritation when asked questions, and an overall lack of respect.

One perceived problem in Ghana is that patients have few avenues for expressing their views on treatment standards to management. In focus group discussions, users of public facilities suggest that complaint procedures do not exist or are not well publicized (Lievens 2011). Mystery shoppers in Accra report that there were complaint desks in most of the facilities, but the desks were not staffed and often lacked complaint forms and pens. Most staff also lacked name tags, making it difficult to report individual staff for poor behavior (Bannerman et al. 2010). Initiatives such as patient charters and quality assurance are being introduced to address this issue, but it is too early to assess their effectiveness in changing organizational culture.

Productivity. WHO defines *productivity* as “producing the maximum effective health services and health outcomes possible given the existing stock of health workers” (WHO 2006, p. 68). Different methodologies can be used to assess health worker productivity, but varying case mix and quality of care complicate assessment. In Ghana, the two broad measures of workforce productivity used in several studies were equivalent patient days per health worker, for both skilled and unskilled workers;⁵ and total salary cost per equivalent patient day.⁶ More information on the methodology used to assess productivity (and its limitations) can be found in (Vujicic, Addai, and Bosomprah 2009).

The results from two productivity-mapping exercises in Ghana (one in 2004 and one in 2007) using these broad measures of productivity reveal a wide variation in workforce productivity across districts and regions. The 2004 study found that, on average, productivity in Ghana was comparable with countries such as Sri Lanka, but that there were wide differences across facilities, with the highest productivity observed in faith-based hospitals (Adams, Darko, and Accorsi 2004). Facilities in the north showed the lowest cost per patient day equivalent (¢73,275, or Ghanaian cedis) (Adams, Darko, and Accorsi 2004). The authors attributed the higher productivity to the lower staffing ratios and the greater use of mission facilities. In the public sector, regional hospitals were less efficient than district hospitals. According to a 2007 study, the district-weighted national average workforce productivity level was 315 equivalent patient days per health worker and ¢51,284 per equivalent patient day (Addai

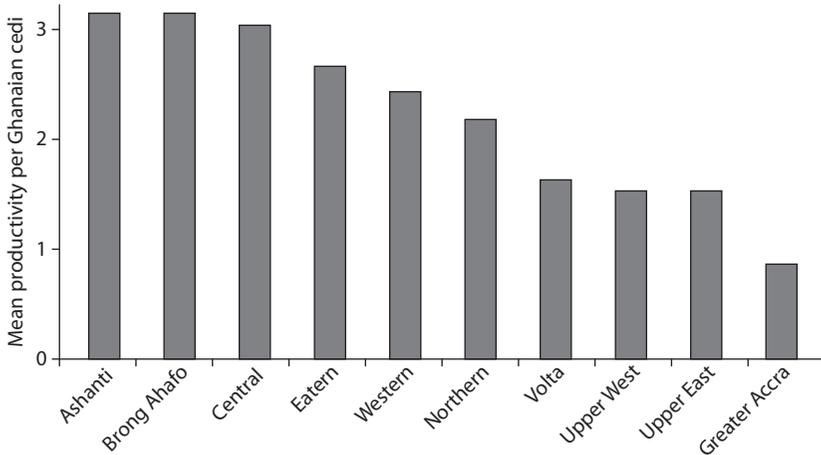
and Bosomprah 2007). Productivity levels were highest in the Ashanti, Brong Ahafo, and Central regions and lowest in Greater Accra (figure 4.1).

Professional probity. In addition to being available, responsive, and productive, it is important that health workers behave ethically toward their employer and patients, both medically and financially. Health workers must not take advantage of their professional knowledge and patients' vulnerability for gain, and they must not steal funds, drugs, or other supplies from the facilities where they work. Qualitative evidence on professional probity indicates that such behavior may be fairly limited in Ghana, although more research will be needed to draw more concrete conclusions.

Focus groups reveal that charging informal fees does occur in some instances, but is not very common. Sometimes patients give a token of gratitude to staff, but they do so on their own initiative (Lievens et al. 2011). When these do occur, such payments are often higher in urban areas than in rural and possibly periurban areas.

The theft of funds by health workers is usually perceived to be constrained by administrative systems that restrict financial transactions to

Figure 4.1 Productivity of Health Workers by Region, 2007



Source: Addai and Bosomprah 2007.

Note: These findings should be interpreted with caution. They make four assumptions: (1) case-mix variation is negligible or the same across facilities; (2) staff absenteeism is negligible or the same across facilities, (3) all facilities are fully functional (there are adequate equipment, staff, and drugs), and (4) all facilities have similar catchment areas.

accountants, though sometimes health care staff collude with administrators to commit fraud (Lievens et al. 2011). A mystery-shopper exercise in Greater Accra did find some instances of charges that were not properly invoiced, charges levied for jumping the queue, and charges that were allowed to go unpaid if the patient could not pay (Bannerman et al. 2010). But such instances are not common (Lievens et al. 2011).

Focus group discussions reveal that incidents of drug pilfering are relatively uncommon. When it does occur, such pilfering is more common in rural than urban areas (Lievens et al. 2011). Facilities have several curbs on drug pilfering. Pharmacies use drug sheets to keep track of quantities and prices, and pharmacists and drug administrators are the only staff with direct access to pharmaceutical stocks. Only physicians and some nurses can prescribe medicine, further limiting potential pilfering. If caught, a health worker might be dismissed. But some pharmacists are reportedly lenient when providing drugs to health workers, and it is not uncommon for health workers to obtain drugs without prescription for themselves and their family members (Lievens et al. 2011).

The practice of providing informal care, such as free medical advice given to friends and family in nonclinical settings, is widespread and sometimes deemed to be rooted in Ghanaian culture. Patients regard a refusal to provide such care as rude, and it is potentially harmful to the provider's reputation. As a result, doctors tend to accept informal requests, though an increased awareness of liability issues seems to have led more doctors and practitioners to refer patients to hospitals (Lievens et al. 2011).

Determinants of Performance

We review below the factors that determine the different dimensions of performance: (1) the factors impacting *competence and ability* and (2) the factors impacting *application of effort*. Such evidence may not only help explain the above findings on performance, but may also indicate the extent to which these performance dimensions may be further compromised.

Factors Impacting Competence and Ability

The extent to which health workers are sufficiently competent to carry out their service delivery functions is largely determined by the accessibility, quality, and relevance of their education and training. The

extent to which health workers are sufficiently able to carry out services, on the other hand, is largely determined by the availability of supportive working environments (manageable workloads, availability of equipment and supplies, and so on).

Education and training. Although the overall quality of secondary-school graduates entering health-training institutions is perceived to be high, there are indications of some regional variations, with the quality of admitted students in the south perceived to be higher than in the north. Focus group discussions reveal that, because more students want to enter training institutions in the south—especially the Korle Bu Teaching Hospital in Accra—and because entrance is strictly based on secondary-school grades, the better students end up in the south (Lievens et al. 2011).

There are concerns that the quality of education is uneven across institutions, particularly at the training institutions of mid- and lower-level cadres (Beciu et al. 2009). Concerns about quality are largely attributed to a shortage of teachers and their lack of adequate clinical experience, a lack of access to up-to-date information sources, a lack of systematic and reliable internal mechanisms for revising the curriculum, an excessive emphasis on theory at the expense of practice, an insufficient number of accredited teaching facilities, and the lack of preparedness of high-school graduates to handle science and preclinical training. Appendix B discusses in detail the physical, technical, and organizational capacity challenges of many health-training institutions in Ghana. Schools outside greater Accra are particularly disadvantaged (Beciu et al. 2009).

In a 2009 study by Beciu et al., the heads of several health-training institutions were asked to identify key internal and external threats to their performance as a pedagogical institution. Lack of adequate funding, pressures to raise enrollment without parallel increases in staff and physical infrastructure, poor qualification of staff, and low workplace ethics and morale were among frequently cited challenges (box 4.3). Moreover, the study found that 20 percent of the surveyed health-training institutions in Ghana were not accredited by the National Accreditation Board (Beciu et al. 2009).

Challenges linked to in-service training are also reported. In focus group discussions, some health workers felt that access to in-service training opportunities is inadequate and that, as a result, critical skills and competencies—including those related to antenatal care—were underdeveloped or outdated. Workshop opportunities sometimes cannot be pursued

Box 4.3

Internal and External Threats as Perceived by the Heads of Schools, 2008–09

Medical and dental schools

- Cumbersome administrative policies that need updating
- Poor work ethics
- Competition with other schools for resources
- Pressure to increase student numbers without a commensurate increase in funding
- Low funding from donor agencies thanks to the global financial crisis

Health sciences schools

- Lack of motivation for teachers
- Lack of transportation
- Inadequate storage facilities
- Lack of administrative staff
- Inefficient finance officer
- Pressure on school to enroll more than it can handle

Nursing and midwifery schools

- Lack of water, electricity, and toilet facilities
- Low qualification of staff
- High teacher turnover rates
- Few mental health tutors
- Inadequate midwifery tutors
- Intense pressure on admissions (political interference)

Community health and health assistant training schools

- Lack of accommodation and lack of access to electronic media
- Inability to pay casual or part-time tutors
- Political interference and pressure for admissions

Source: Beciu et al. 2009.

because health facilities lack enough personnel to cover shifts that would allow health workers to participate or because fees are too high. Professional nursing associations try to facilitate access to continued education, but doing this sometimes conflicts with the interests of employers (Lievens

et al. 2011). There is consensus that the allocation process for in-service training (that is, determining who can receive training) is nontransparent.

Little information is available regarding the effectiveness and quality of in-service training. Some observers note the need for more integrated training (rather than courses on specific programs), more flexibility in the type of cadres trained, more applied teaching methods (such as on-the-job training, with observation of performance, peer review, and periodic feedback), and a proactive approach to training based on district needs rather than availability of funding (Agyepong 1999).

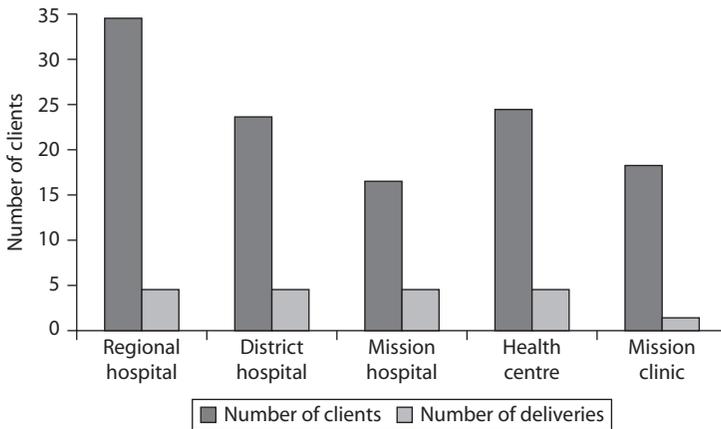
Working environment. Many health workers in Ghana perceive workload to be excessive. A heavy workload can increase productivity, but it poses risks to the quality of care. Focus group discussions reveal that most health workers believe that heavy workloads reduce the time doctors and nurses can spend with each patient, leave no time for lunch or other breaks, and lead to complaints from patients about the lack of dedication of health staff (Lievens et al. 2011).

A 2008 study of workloads in the Eastern Region found that, on average, doctors see 45 patients a day and perform four operations a week. The average number of patients a day was 65 for medical assistants. Midwives performed just three deliveries a week (Addo 2009). In a 2005 study of the Central and Volta regions, the self-reported average number of patients seen a week was 269 for doctors, 172 for medical assistants, 119 for public sector midwives, 103 for community health nurses, 86 for nurses, and 38 for private midwives (Witter et al. 2006).

Workloads for public midwives were highest in regional hospitals and health centers and lowest in faith-based hospitals (figure 4.2) (Witter, Kusi, and Aikins 2007). Although there are no set international (or Ghanaian) norms for workloads, Ghana's health staff might not be considered overworked compared with the norm of 100–245 patients a week in South Africa (Kraus 1998).

Self-reported working hours for some cadres are extremely high. A 2005 survey of public and private health workers reported an average of 54 hours a week for community health nurses, 109 hours a week for doctors, and 129 hours a week for medical assistants (Witter, Kusi, and Aikins 2007). These levels are self-reported and include on-call time, but it is clear that globally, some cadres are on duty for very long periods. Doctors in the United States, for example, report working 51 hours per week (*USA Today*, 2010).

Many factors contribute to these workloads. In the past, attrition from retirement and outmigration may have resulted in excessive workloads

Figure 4.2 Mean Daily Workload per Public Midwife by Facility Type, 2007

Source: Witter, Kusi, and Aikins 2007.

for health workers who remained in Ghana (Awases et al. 2004). As described in chapter 2, however, attrition is no longer the problem it once was. Focus group discussions in 2007 revealed that most recent extra work may be the result of requirements of the National Health Insurance Scheme (see CSR-Health Ghana 2011 for more detail on that scheme).

Quality of care is influenced not only by provider competencies, but also by the enabling environment in which health workers operate. A 2002 study of the quality of antenatal care found that only half of antenatal care facilities had essential equipment and supplies, and just 6 percent were fully equipped to manage complications of pregnancies (GSS, Ministry of Health, and ORC Macro 2003). Tests for anemia were available in only 57 percent of facilities, and tests for protein deficiencies in only 62 percent. Only 36 percent of facilities had essential items needed to offer high-quality counseling, 24 percent had essential items to prevent infections, and 11 percent had all essential items for a good physical examination.

A service provision assessment survey conducted in 2005 (Quality Health Partners and Ghana Health Service 2005) found that only 61 percent of facilities offering antenatal care had the required infection-prevention items, 60 percent had basic medicines and equipment for a normal delivery, and just 34 percent had all delivery room infrastructure and furnishings. This study concluded that only 40 percent of health centers had transportation procedures in place for women with obstetric

emergencies. More generally, facility infrastructure was found to be lacking: only 13 percent of facilities (41 percent of hospitals) had regular infrastructure support (electricity, water, communications); 38 percent had regular, 24-hour supply of electricity or a generator; and 35 percent had a source of water available year-round.

A more recent study found the availability of supplies needed for comprehensive emergency obstetric care in some facilities—including blood transfusions, laboratory tests, drugs, equipment, and consumables—to be acceptable (Ansong-Tornui et al. 2007). Using a confidential enquiry technique to examine 20 maternal deaths in hospitals in the Central and Volta regions, the study concluded that care was substandard, particularly for complications and acute emergencies. But it suggested that the quality-of-care failures reflect staff competence and practice rather than the lack of needed facilities.

Work environments marked by an insufficient number of health workers—a condition prevalent particularly in rural areas—has further implications on performance. A synthesis report on six African countries, including Ghana, suggests that the attrition of skilled health professionals from Africa before 2004 might have also reduced the quality of care, because it resulted in lower-level workers performing the functions of the higher-level workers who had left (Awases et al. 2004). Whereas attrition may have improved, dire shortages of human resources for health remain, particularly in rural facilities (see chapter 3). Recent focus group discussions with health workers and patients reveal that informal skill substitution continues to occur: ward assistants are performing the jobs of health assistants, and nonpharmacists regularly sell prescription and over-the-counter drugs in both the public and private sectors (Lievens et al. 2011). Patients complained about the quality of care provided by such underqualified staff (Lievens et al. 2011).

Factors Impacting the Application of Effort

The extent to which health workers apply themselves to provide services (reflected in the picture on availability/absenteeism, responsiveness, productivity, and professional probity) is largely determined by (1) the extent that management and accountability structures are in place to supervise and hold health workers accountable, and (2) the extent to which health workers are motivated to apply themselves and deliver quality services.

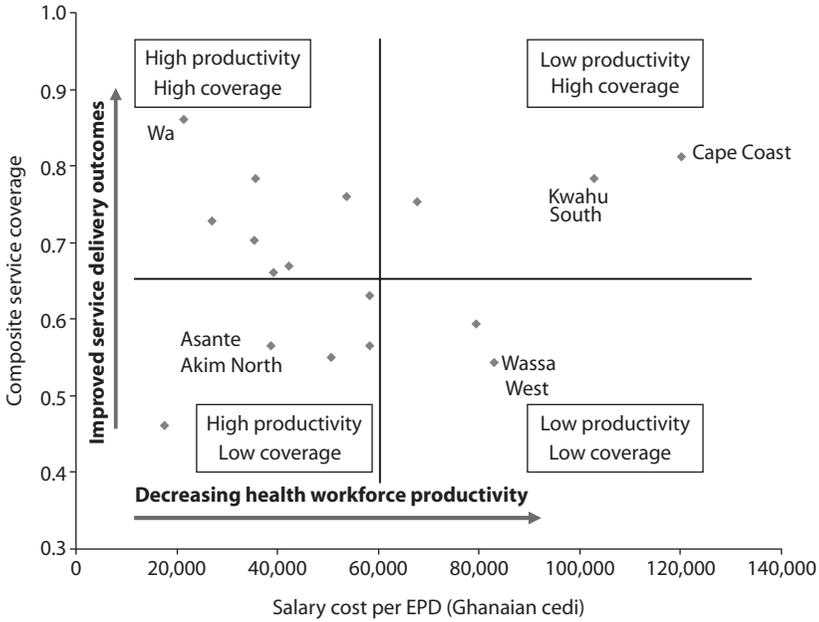
Management and accountability structures. An effective management and accountability system is one of the most powerful determinants of

many aspects of performance. *Performance management* (a product of such a system) refers to “measuring, monitoring, and enhancing the performance of staff, as a contributor to overall organizational performance” (Martinez and Martineau 2001, p. 1). This includes holding staff accountable for their actions. Productivity, responsiveness, absenteeism, and professional probity are globally directly linked to functioning management systems. In addition, some of the above-discussed performance determinants (for example, the provision of in-service training, the availability of equipment and supplies, and manageable workloads), as well as health worker motivation (discussed below), are often closely linked to effective performance management.

There are some indications that management capacities and the associated quality of performance management varies significantly in Ghana (by region and facility), with significant implications for some key performance variables. Efforts to identify the causes of variations in productivity (figure 4.3), for example, did not result in clear links to expected factors such as skill mix, pay, coverage of services, or density of health workers (World Bank, Ministry of Health, and Ghana Health Service 2006). Such findings, in addition to direct evidence of a correlation between supportive supervision and increased productivity in Ghana (see study by Frimpong et al. 2011), suggests that management and leadership—as a residual category—may be an important component in explaining the variations in absenteeism, responsiveness, productivity, and professional probity. A quality assurance study in the Eastern Region showed that among the four districts consistently leading in a regional league table (ranking) on such performance aspects (see box 4.4), three had the most stable and experienced management teams (Acquah et al. 2008).

Important management authority to hold health workers accountable for their performance (including the responsibility to carry out formal performance appraisals or to fire health workers) is not decentralized to the facility level, although there are variations by sector (see appendix A). A mystery-shopper exercise in Accra noted the absence of serious sanctions for staff who demonstrate abusive behavior—as well as the absence of rewards for staff who deliver good patient care (Bannerman et al. 2010). Many health workers in Ghana deem the centrally managed civil service-wide staff performance appraisal systems to be ineffective for managing performance. Some health workers point to the large number of nonperforming health workers as an illustration of a nonfunctional appraisal system (Lievens et al. 2011).

Figure 4.3 Productivity of Health Workers as a Function of Pay and Coverage Levels, 2006



Source: World Bank, Ministry of Health, and Ghana Health Service 2006.
 Note: EPD = equivalent patient day.

Despite the absence of more encompassing management decision-making authority at the facility level, there is nevertheless some evidence that positive management practices at select health facilities does occur. Focus group discussions with health workers reveal that, when a facility manager or supervisor is committed and dedicated to improving the performance of his team, performance evaluation does occur. Such appraisals consist of a face-to-face meeting between the supervisor and the health worker, using a form that is jointly filled out. Normally the evaluator is the direct manager of the appraised health worker. Both parties express their views, and, in case of disagreement, a panel is called to intervene. After the form is read aloud, both parties sign it (Lievens et al. 2011). There is some evidence that other simple human resource management practices, reflecting the quality, capacity, and dedication of facility managers, are also sometimes applied to great effect (see box 4.4).

Some attempts have been made to strengthen and incentivize management efforts at the district level. Experimentation with using a league

Box 4.4**A Positive Hospital Management Experience**

Some staff in select facilities in Ghana are reporting high levels of satisfaction and trust in their management. An evaluation of a well-performing regional hospital in the Central Region identifies some of the human resources management practices that contributed to success. The study concludes that a well-balanced human resources management “bundle” or collection of management policies can stimulate organizational commitment and accountability of health workers, even where managers have narrow decision spaces. The bundle included a clear and well-communicated vision of the role of the hospital, which included elements such as striving for excellence, offering services to all, paying attention to personnel, and practicing sound financial management. Management took staff training seriously and decentralized responsibility where possible. Teamwork, reduction of status differences, and open communication were prioritized. Access to top management was facilitated by an open door policy, and top managers remained engaged in operational issues. The socialization of staff was also important, with both formal inductions and close supervision and mentoring by colleagues. These practices were applied to all cadres. As a result, staff reported feeling recognized and supported—and reported high levels of trust in management.

Source: Summarized from Marchal, Dedzo, and Kegels 2010.

table approach in one region seems to have yielded benefits. This quality assurance approach, tested in the Eastern Region, combines peer review/qualitative assessment with periodic feedback based on reports and district indicators. A 2008 evaluation concluded that district teams and hospitals found the system motivating. High-scoring districts received citations and some small prizes, and low-scoring districts were encouraged to study high-scoring facilities. Reported positive effects included increased use of monitoring data and improved communication among stakeholder groups. But there were some methodological concerns over whether the scoring was too subjective and allowed for factors outside the scope of health services (Acquah et al. 2008).

Accreditation and regulation of the health sector as a whole, which have often been weak until now, are receiving new impetus from the funding channel of the National Health Insurance Scheme. As a new third-party purchaser, the scheme is setting up an accreditation program that

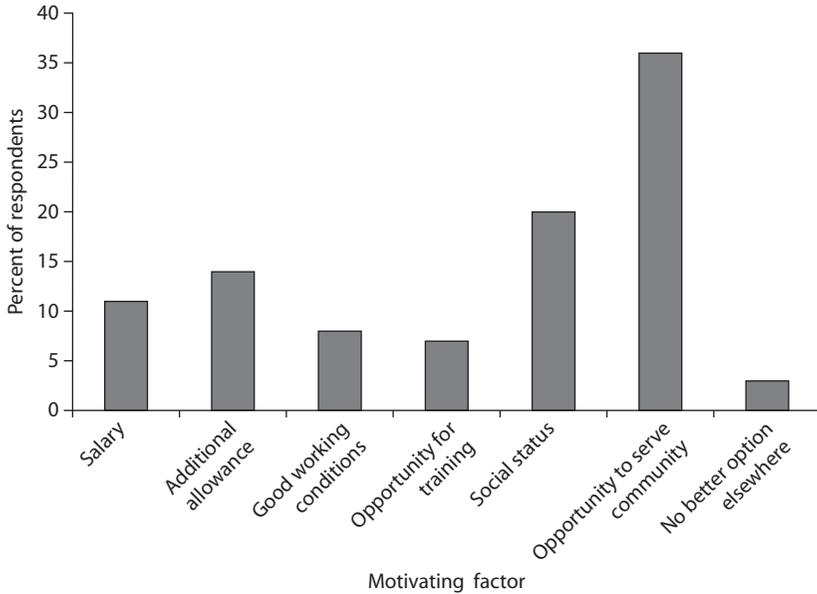
might have quality-assurance implications for facilities and individuals (Witter and Garshong 2009). The Christian Health Association of Ghana is also developing tools to assess and monitor facility performance. Focus group discussions, moreover, point toward recent improvements in some management controls—for example, health workers do not handle drugs without a prescription or involve themselves in financial transactions—which may have kept corruption and drug pilfering in check (Lievens et al. 2011).

Motivation to perform. The motivation of health workers is a critical determinant of the extent to which health workers apply themselves to the delivery of high-quality services. *Health worker motivation* is defined as the “willingness to exert and maintain an effort toward organizational goals” (Franco, Bennett, and Kanfer 2002). Generally, factors that motivate health workers tend to vary (by cadre, number, and importance), and can include both altruistic factors, salary, or bonuses, and many of the performance determinants discussed above (that is, opportunities for training, working conditions, performance management, and so on).

Comprehensive evidence of health worker motivation in Ghana does not exist. One survey on motivation that included many lower-level cadres indicated that social status and intrinsic motivation play a powerful role. In a 2006 survey of 374 health workers, which included cadres such as traditional birth assistants in the Central and Volta regions, respondents were asked to rank the factors that motivated them (figure 4.4). The leading factor was the opportunity to serve the community (36 percent of respondents), followed by the social status attached to the profession (20 percent) and the additional allowances paid (14 percent). General working conditions, salary, and allowances, and the opportunity for training were much lower on their list.

Very few other studies shed light on health worker motivation in Ghana, and much more evidence is needed in this regard. In particular, no study has evaluated the effect of increases in health worker salaries on motivation to perform (see appendix C for information on salary increases). Existing evidence is piecemeal and ad hoc. Focus group discussions in Ghana reveal that appreciation and recognition increase motivation, while bad management and unfair performance appraisals reduce it (Lievens et al. 2011). Anecdotal (nonrepresentative) evidence seems to suggest that some health workers (particularly those who are starting) are frustrated with delays in their salary payments and feel that long delays and the costs involved in getting on the payroll (for example, requiring

Figure 4.4 Motivating Factors for Health Workers in the Central and Volta Regions, 2006



Source: Witter et al. 2006.

Note: Respondents were asked to rank various factors from 0 to 9. The figure reports the total scores (the sum of all scores divided by the total).

travel to Accra) are demotivating (Rassekh 2008). A 2010 study of a hospital in the Central region found that focusing on good working conditions for staff increased their effectiveness and motivation (Marchal, Dedzo, and Kegels 2010). A comprehensive study will need to be carried out in Ghana to assess current levels of health worker motivation and the different factors that affect it.

Conclusion

Evidence on the different aspects of health worker performance is sparse. More research is needed on health worker competency and application of effort (and the factors determining these), ideally by level of care, sector, and health worker. Existing studies indicate mixed results, with some of the evidence—particularly on maternal health—suggesting that competencies may not always be as solid as they could be, and that existing working environments sometimes limit the extent to which high-quality

services can be provided. In addition, although the evidence is not always negative, attention should be paid to remaining levels of absenteeism, variations in health worker responsiveness, and productivity. Addressing performance issues in Ghana will involve drilling down into the key reasons why health worker performance in some regions or districts, in some sectors, or of specific health cadres may not always be as good as it could be. Further assessing and measuring weaknesses in education and training capacity as well as working environments will inform policies to improve competencies and to enhance the ability of health workers to practice what they know. Further understanding not only the limitations, but also the positive experiences that result from stronger management and accountability mechanisms and health worker motivation will help inform the development of interventions to ensure that health workers apply themselves fully and achieve optimal results.

Notes

1. The 2002 Ghana Service Provision Assessment Survey (GSPAS) was conducted in a representative sample of 428 health facilities throughout Ghana. The survey covered hospitals, polyclinics, health centers, health posts, clinics, and private maternity homes, and included both government (public) and approved nongovernment (private) facilities. The GSPAS used interviews with health service providers and clients as well as observations of provider-client consultations to obtain information on the capacity to provide care and the existence of functioning systems to support quality services.
2. The 2007 Ghana Maternal Health Survey is the first nationally representative, population-based survey to collect information on maternal health and mortality in Ghana through a combination of data collection at the household level and at the individual woman level, and a follow-on verbal autopsy into the specific causes of female deaths, particularly maternal deaths.
3. A *partograph* is a single-page monitoring tool, developed by the WHO, that allows a trained birth attendant to monitor the progress of labor and will signal when a labor has become complicated.
4. *Mystery shopping* or a *mystery consumer* is a tool used externally by market research companies or watchdog organizations, or internally by companies themselves, to measure the quality of service or compliance to regulation, or to gather specific information about products and services. The mystery consumer's specific identity is generally not known by the establishment being evaluated. Mystery shoppers perform specific tasks, such as purchasing a product, asking questions, registering complaints, or behaving in a certain way. They then provide detailed reports or feedback about their experiences.

5. An *equivalent patient day* (EPD) combines inpatient days and outpatient visits using a weighting of three outpatient visits to one inpatient day.
6. Productivity was calculated as composite service delivery divided by composite human resources for health. Composite service delivery was calculated by adding all services together, weighted as follows: (1 × outpatient days; 1 × antenatal care; 0.5 × immunization; 3 × inpatient days; 3 × supervised deliveries). Composite human resources for health were calculated as the total wage bill for clinical and support staff working in the district (excluding national and regional staff, because they cannot be mapped onto any particular district).

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PART III

Toward Interventions in HRH

CHAPTER 5

Ghana's Agencies and Their Roles and Responsibilities in HRH

Ebenezer Appiah-Denkyira, Angela E. Micah, and David Haddad

This chapter reviews the key agencies and their given roles and responsibilities in managing health services and, more specifically, human resources for health (HRH) in Ghana. These agencies and individuals are responsible for the planning, development, implementation, and administration of any interventions designed to improve the HRH situation in Ghana. Because a comprehensive assessment of management capacity in each agency has yet to be carried out, this chapter is largely descriptive and simple. It provides an overview of the different actors and levels concerned with managing health services and HRH, including basic information on management composition, roles, and responsibilities, as well as information on the HRH decision-making authority available to agencies (drawing on the findings in appendix A).

The Organization of Health Services Management

The organization and management structure of the public health system is characterized by efforts to create greater managerial flexibility and autonomy, and to decentralize key functions from central to subnational

levels. The 1992 Constitution provided the key principle of the current model of decentralization: “local government and administration should, as far as practicable, be decentralized, to ensure functions, powers, and resources are all times transferred from the central government to local government units in a coordinated manner.” As such, health service management today is delegated to different agencies across various levels of the health system, all employing individuals tasked with administrative, management, and support functions to run the health system in Ghana. The following provides a brief overview of (1) the roles and responsibilities of agencies managing the health sector in Ghana, (2) the different levels on which they operate, and (3) the mix of management and support personnel employed by these agencies.

The Role and Responsibility of Agencies

In total, 1,833 health facilities provide services in Ghana (table 5.1). Each is under the overall authority of a particular management agency. Whereas the Ministry of Health carries out a stewardship role over the entire health sector (in addition to overseeing teaching hospitals), authority for managing the public health system is delegated to the GHS, a public semiautonomous agency of the Ministry of Health, with the mandate to “ensure access to health services at the community, sub-district, and regional levels.” Authority for managing and operating health facilities is

Table 5.1 Distribution of Facilities by Type and Ownership, 2007

<i>Facility type</i>	<i>Quasi-</i>					<i>Total</i>
	<i>Government</i>	<i>government</i>	<i>Mission^a</i>	<i>Private</i>	<i>Others</i>	
Teaching hospitals	3	0	0	0	0	3
Regional hospitals	8	0	0	0	0	8
Specialized hospitals	3 ^b	0	1	12	0	16
District/local hospitals	61	7	34	72	2	176
Polyclinics	8	0	0	2	0	10
Health centers	416	2	42	10	2	472
Clinics	162	24	92	375	37	690
CHPS	172	0	0	0	0	172
Maternity homes	35	1	1	199	5	241
Others	30	0	12	3	0	45
Total	897	34	182	673	46	1,833

Source: GHS (Summary of Health Facilities, 2007); depicted in Couttolenc 2012.

Note: CHPS = Community-based Health Planning and Services.

a. Mission facilities are mostly run by CHAG.

b. These three are psychiatric hospitals.

also delegated to CHAG, a private, not-for profit, semiautonomous agency partly funded by the Ministry of Health. CHAG is responsible for managing and operating an extensive network of mission health facilities across Ghana, including many facilities in rural and more marginalized areas. The private sector, as well as several quasi-governmental institutions (such as the prison service, the armed forces, and the police force), and a number of universities are responsible for managing the remaining health services.

Levels of Agency Operation

For Ministry of Health and GHS structures, health services are managed on four main levels (figure 5.1): central, regional, district, and sub-district; these correspond to the political administrative units of the country.

- **At the central level**, the Ministry of Health, headquartered in Accra, is concerned largely with formulating policy, monitoring and evaluating the sector, mobilizing and allocating resources, and regulating services. It also oversees the three teaching hospitals. The GHS is also headquartered in Accra, and is tasked with managing service delivery in the public sector.
- **At the regional level**, the GHS Regional Health Administration (RHA) is responsible for managing secondary hospital-level care provision through regional hospitals and coordinates district health activities and planning.

Figure 5.1 Levels of Health Services Management in Ghana



- **At the district level**, District Health Administration (DHA) offices of the GHS are responsible for managing district hospitals as well as most health centers and primary care facilities.
- **At the subdistrict level**, nonpolitical entities below the district level report to the DHAs; below that, nonpolitical entities report to the Community-based Health Planning and Services (CHPS). Their role and influence today remain largely underdeveloped.

To promote financial decentralization, administrative units were structured into Budget Management Centers (BMCs), which sit at all levels of the health system. BMCs were developed to administer government of Ghana and development partner funds. They were created to promote financial decentralization to and within districts, and to improve both access to health services and community involvement in the planning and delivery of services.

Management and Support Personnel

Health service administrators, technical managers, operational managers, and support staff are involved in the management and administration of the public health system. Together, 7,519 of these individuals are listed on the payroll, and they provide management and support services across the different agencies and levels of government health services (table 5.2).

This number does not reflect the actual number of individuals *performing* management and supportive functions in health (particularly HRH management functions), because many individuals carrying out such functions are health workers and are listed as such—for example, they are listed as doctors or nurses on payroll records.

Out of the total of 7,519 individuals formally listed as cadres engaged in management, administrative, or support functions (table 5.2), 2,798 were administrative and technical managers working at various levels of the health system in 2009. This group includes individuals leading health agencies and units at the central, regional, district, and subdistrict levels, such as district directors (administrative managers) and people managing facilities or specific technical components of service delivery (technical officers). Most of these workers are technical officers.

In addition, 2,856 operational managers work at various levels of the health system; 42 of them are human resources managers or personnel officers. Operational management personnel include all cadres that manage input and resources such as finance, human resources, supplies,

Table 5.2 Management Personnel on the National Payroll in Ghana, 2009

<i>Administrators and technical management personnel</i>		<i>Operational management personnel</i>		<i>Support staff</i>	
<i>Cadre</i>	<i>Number</i>	<i>Cadre</i>	<i>Number</i>	<i>Cadre</i>	<i>Number</i>
Technical officer (disease control)	654	Accounts officer	1,020	Biostatistician assistant	502
Technical officer	588	Accountant	783	Typist	459
Executive officer	379	Store keeper	306	Medical records assistant	384
Technical officer (lab)	260	Supply officer	198	Stenographer	315
Technical officer (biostatistics)	239	Finance officer	102	Technical assistant	125
Facility or district director	161	Technician electrical engineering	100	Secretary	80
Health service administrator	161	Biostatistics officer	51		
Technical officer (X-ray)	112	Health research officer	48		
Technical officer (nutrition)	76	Human resources managers	42		
Administrative manager	74	Personnel officer	36		
Ministry-level director	35	Clinical engineering technologist	36		
Auditor	28	Mechanical engineering technologist	33		
Health planners	16	Records supervisor	32		
Technical officer (orthotics and prosthetics)	14	Transport officer	21		
Technical officer (antiretroviral therapy)	1	Statistician	13		
		Records officer	11		
		Transport manager	9		
		Clinical engineering technician	7		
		Architect	3		
		Housekeeper	2		
		Mechanical engineer	2		
		Hostel warden	1		
Total	2,798	Total	2,856	Total	1,865

Source: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database.

equipment, infrastructure, maintenance, and information, producing effective services.

Payroll records also list 1,865 management support staff. This group includes cadres that provide administrative support toward the functioning of the health system. The most represented cadres in this group are biostatistician assistants, typists, and medical record assistants.

A recent survey by the World Health Organization found that not all “management cadres” in Ghana are trained in management. Administrative managers such as district directors must have public health or management degrees, but technical managers such as hospital directors need only a clinical specialty qualification. There are no qualification requirements for operational management personnel such as human resources managers or personnel officers. Only 54 percent of district directors meet the formal qualifications for their jobs (WHO 2009).

HRH Responsibilities of the (Nonautonomous) Public Sector Agencies

The main public sector agency that is not autonomous and involved in managing HRH is the Ministry of Health. Some critical tasks also lie with the Ministry of Education, and the Controller and Accountant-General’s Department pays the salaries. The roles and responsibility of each are reviewed below.

The Ministry of Health

Overall managerial authority for HRH planning, administration, and development of health care personnel lies with the Ministry of Health’s Human Resources Directorate. The directorate oversees three units: planning and information, management and administration, and educational development (table 5.3).

Table 5.3 Ministry of Health: Human Resources Management Responsibilities, by Unit

<i>Unit</i>	<i>Responsibilities</i>
Policy planning and information management	<ul style="list-style-type: none"> • Craft policies, strategies, and directions in consultation with all other levels of the ministry. • Conduct planning to improve stock, distribution, and performance of HRH based on assessments and evidence. • Manage the information system. • Develop the policy manual, ensuring compliance with regulations and inclusion of the private sector (in consultation with agencies).

(continued next page)

Table 5.3 (continued)

<i>Unit</i>	<i>Responsibilities</i>
Management and administration	<ul style="list-style-type: none"> • Define broad definitions of service. • Monitor and evaluate health workers. • Evaluate performance of all health workers (although agencies have their own performance management units). • Classify personnel and jobs. • Allocate and absorb medical school graduates and handle inter-agency transfers. • Distribute hiring quotas for each agency based on graduate output. • Procure short- and medium-term professionals (such as Cuban and Egyptian doctors). • Ensure the equitable distribution of new health professionals across agencies.
Training and development	<ul style="list-style-type: none"> • Provide training related to staff requirements; with the Ministry of Education and the private sector, coordinate preservice education (at diploma level and below). • Ensure that courses meet competencies set by regulatory bodies. • Coordinate preservice training and link relevant universities and health facilities for graduate internships. • Manage the scholarship program. • Mobilize resources. • With the Ministry of Education, coordinate postgraduate training.

Each of the three units is headed by a deputy director who reports to the HRH director (of the directorate). In total, the three units employ 11 professionals and 7 support staff.

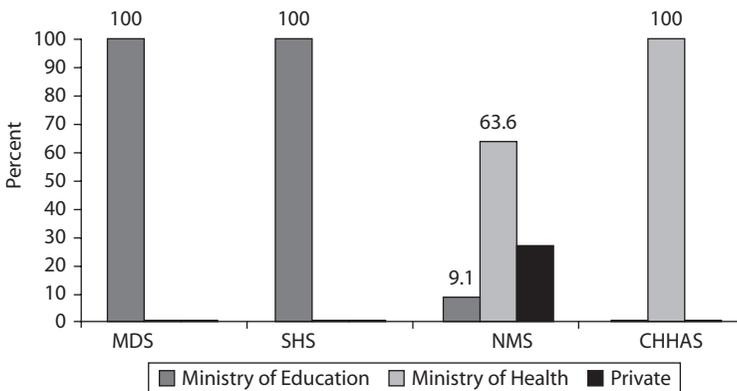
Key types of HRH decision making are not within the formal authority of Ministry of Health managers. Although the ministry often plans recruitment and is involved in decisions on postings (for agencies), performance assessments (in collaboration with agencies), promotion (of select cadres), and salary negotiations, the Human Resources Directorate does not have the power to allocate training, authorize leave dates, initiate or approve transfers, or take disciplinary action. It can terminate some cadres without approval but has to seek approval for others (table A.2).

Collaboration with the Ministry of Education. A 2009 study by Beciu et al. suggested that there is a lack of harmonization between the Ministry of Health (the training and development unit) and the Ministry of Education in the planning and development of human resources for health education. Government stewardship over the education of health workers is split between the Ministry of Education and Ministry of

Health. Although many countries in Africa have moved toward a system where the Ministry of Education and Ministry of Health oversee preservice and in-service training, respectively, Ghana’s Ministry of Health retains significant oversight responsibility for a large share of preservice training. Whereas professional education at universities (for doctors, dentists, and pharmacists) and schools of health sciences falls under the Ministry of Education, most nursing and other levels of training outside these settings still fall under the Ministry of Health (figure 5.2).

An attempt was made 10 years ago to link the two ministries’ institutions through the Regional Colleges of Health Sciences and Technologies (RCHST). The RCHST intended to bring all degree- and diploma-awarding schools under the Ministry of Education and ensure that those remaining outside this framework were affiliated with a university. This policy was never fully implemented, however, with the result that many of the non-degree-awarding courses were left under the Ministry of Health, and some schools remained in limbo, with a split arrangement between the two ministries. For example, some schools upgraded to award degrees under the Ministry of Education, but their teachers are still paid by the Ministry of Health. Others are technically under the Ministry of Education but still report to the Ministry of Health because they have not established a board of directors, or because their boards do not yet fully function (Beciu et al. 2009).

Figure 5.2 Ministerial Responsibility for Health-Training Institutions, 2009



Source: Beciu et al. 2009 (data calculated from sample of training institutions surveyed).

Note: MDS = medical schools, SHS = schools of health science, NMS = nursing and midwifery schools; CHHAS = community health and health assistant schools.

The division of responsibilities with regard to the planning, management, and oversight of preservice education, coupled with weak stewardship, is associated with the absence of a coherent policy framework and with variations in standards. There also appears to be a disconnect between understanding the needs of the workforce and policies of the health sector and the strategies adopted by the Ministry of Education's training institutions. Partly as a result of shortcomings that occurred in establishing the RCHST, training institutions under the Ministry of Education have appeared to be slow to respond to human resources plans under the various Ministry of Health Programs of Work (POWs) or to the need to scale up the production of health workers. The lack of a tertiary education policy by the Ministry of Education—one that is also linked to the HRH strategy of the Ministry of Health—along with the insufficient and ineffective efforts at collaboration between the Ministry of Health and the Ministry of Education has contributed to this slow response (Beciu et al. 2009).

The Controller and Accountant-General's Department

The Controller and Accountant-General's Department—otherwise known as the *Accounting Class*—was established under the Civil Service Act 1960.

It plays a key role in providing salaries to permanently employed health workers. Permanent health worker employees (those captured on the government's Integrated Personnel Payroll Database) are paid through the central government treasury at the Controller and Accountant-General's Department at the end of every month.¹

The Ghanaian government is the sole source of funds for personal emoluments of permanent employees. Salaries do not pass through the Ministry of Health, but are sent directly to the recipient's bank account. A recent article argues that this channel tends to run smoothly, and salaries are largely paid on time (Abekah-Nkrumah, Dinklo, and Abor 2009). At the same time, others have suggested some problems with this approach to administrating and paying salaries. A paper by Buchan and McPake (2007) argued that there is often a shortfall between the wage bill and available resources, with new staff members expecting delays in payments.

HRH Responsibilities of the (Semiautonomous) Public Sector Agencies

The semiautonomous public sector agencies in Ghana involved in managing HRH are (1) the GHS and (2) the teaching hospitals. Their roles and responsibilities are discussed below.

The GHS

The GHS is a semiautonomous executive agency, established in 1996, responsible for implementing national policies. It is under the control of the Minister for Health through its governing council, the GHS Council. The GHS continues to receive public funds and thus remains within the public sector, but its employees are not part of the civil service, and it is not required to follow all civil service rules and procedures. The independence of the GHS is designed primarily to ensure that staff have greater managerial flexibility to carry out their responsibilities than they would if they remained wholly within the civil service. The following provides a brief overview of the management functions specific to HRH.

The central level (GHS headquarters). At its headquarters in Accra, the GHS is responsible for management of HRH in public sector health facilities (with the exception of the three teaching hospitals). Its Human Resources Directorate has four human resources management departments: administration, management, training and capacity development, and planning and monitoring (table 5.4). Except for the administration department, which is led by a principal health services administrator, the departments are led by a deputy director who reports to the director of the Human Resources Directorate.

About 50 people work for all four departments of the Human Resources Directorate of the GHS. The management department is the largest and comprises 24 people, including 5 managers.

Tasks of the directorate include making decisions on regional postings and assessing individual worker performance. It also makes decisions on training schedules, promotions, disciplinary action, and termination (appendix A). It shares decision-making authority over recruitment (of permanent workers) and salary increases with the Ministry of Health, the Ministry of Finance, and other agencies.

The regional level (regional health authority). A regional health authority (RHA) coordinates and implements all health activities and programs at this level through the regional hospitals; it also coordinates the districts' health activities and planning.

The RHA has three divisions: regional health administration and support services, clinical care, and public health.

On HRH appendix A shows that GHS regional health managers' authority includes posting employees; conducting performance assessments; handling promotions; and determining who should be trained,

Table 5.4 The GHS: Human Resources Management Responsibilities by Department

<i>Department</i>	<i>Responsibilities</i>
Administration	<ul style="list-style-type: none"> • Support the Human Resources Directorate in directing and coordinating activities. • Coordinate management meetings. • Manage correspondence from the director's desk. • Oversee human resources activities and related operational research. • Support the College Appointments and Promotions Subcommittee of the GHS Council. • Support the GHS Posting Committee. • Coordinate the implementation of the performance management system. • Provide technical guidance for efficient registry practices.
Management	<ul style="list-style-type: none"> • Implement and apply human resources policies and strategies. • Recruit, deploy, and promote staff. • Manage staff disengagement (leave, departure from post, resignation, retirement, death). • Manage staff welfare. • Manage personnel records. • Provide career guidance and counseling. • Manage industrial relations.
Training and capacity development department	<ul style="list-style-type: none"> • Provide a consistent supply of well-trained and qualified staff. • Coordinate the assessment of training needs. • Support the development of training systems, in collaboration with other health sector divisions. • Develop health-learning materials for health-training institutions. • Manage training information systems of all training programs. • Coordinate and support national in-service training programs. • Provide technical support to training institutions in recruitment and selection procedures.
Planning and monitoring	<ul style="list-style-type: none"> • Develop human resources planning policies. • Forecast human resources needs. • Develop staff norms and track staff availability. • Maintain a comprehensive and up-to-date human resources database. • Analyze human resources data to support management decisions. • Manage the human resources budget and staff costs. • Communicate with other directorates at headquarters to determine implications of health objectives and plans. • Provide technical support to regional and district human resources managers and officers.

transferred, or disciplined. Authority to hire and fire health workers exists only for temporary workers, who are sometimes hired at this level. Appendix A shows that regional health managers in the GHS have considerably more power than regional CHAG managers (see below).

The district level (district health administration). The role of the district health administration (DHA), headed by the district director of health services, is to coordinate and implement national policy and decisions about HRH through the district hospitals (see appendix A for their management structure) and health centers. Each district health administration has at least one clinical and public health division. A human resources unit in each GHS district health directorate is responsible for all human resources issues in the district.

A district health committee serves as an advisory board to the district director of health services in the execution of his or her functions, as well as any other functions assigned by the committee. The district director reports to the district general through the regional director of health services. The district director is typically a health professional with qualifications in public health.

Appendix A shows that, despite the focus on decentralization in the districts in Ghana, the DHAs actually have relatively limited authority with regard to HRH. The decision-making powers of the district health executive officer include those related to posting, performance assessments, training, leave and sick days, and disciplinary action. As with the RHAs, authority to hire and fire health workers is only at the DHA level for temporary workers, who are sometimes hired at this level.

The facility level (GHS). At the facility level, below the regional and district hospitals, are health centers and polyclinics. GHS health centers are headed by medical assistants, with staff trained in midwifery, public health, laboratory services, environmental interventions, and nutrition.

Polyclinics, which are located largely in urban areas, are larger and offer a wider range of services than health centers. They are often headed by physicians. There are no staff solely responsible for human resources at this facility level, and a medical assistant usually handles any human resources issues. This is because GHS provides supervisory and management support to subdistrict facilities through the regional or district health administrations. In the GHS facilities, decision-making authority on HRH is mainly limited to informally assessing performance, approving

training, approving sick and leave days, and taking minor disciplinary action (appendix A). Decision-making authority for HRH in GHS facilities is significantly less extensive than it is in CHAG facilities (discussed below).

Teaching Hospitals

Ghana's three teaching hospitals—Korle Bu, Komfo Anokye, and Tamale—operate as semiautonomous institutions under the Ministry of Health.

Act 525 lays out the administrative structure of teaching hospitals. Each hospital has a 12-member management board that provides overall guidance for administering and managing its staff. A chief executive officer is in charge of day-to-day management of the facility. Six directors support this officer (the directors of medical affairs, nursing services, administration, finance, pharmacy, and general services).

Presently, human resources (HR) management is a unit under the director of administration in all three hospitals. The organization of the unit differs in each hospital.² The decision-making authority of management over HRH in all three teaching hospitals is considerable, while some decision-making authority remains with the Ministry of Health. The assessment in appendix A shows that teaching hospitals can decide on the number of employees to recruit. Although they need to seek approval from the Ministry of Health, they can decide on posting, conduct performance assessments, and determine promotions. Although HRH management in teaching hospitals is involved in the salary negotiations of its staff, this is dependent on approval from the Ministry of Finance. In addition, teaching hospital management teams can determine who receives training, can grant leave and sick days, can decide on transfers to other facilities, and can propose disciplinary action (to be approved by the Ministry of Health). Moreover, management can terminate some lower-level health cadres, but must seek approval from the Ministry of Health for terminating all other cadres.

HRH Responsibilities of the (Semiautonomous) Private, Not-for-Profit Agency

The main private, not-for-profit semiautonomous agency that plays a significant management role for a large number of health workers in Ghana (both public as well as private, not-for-profit workers) is CHAG. Its key role and core responsibilities are discussed below.

CHAG

CHAG is a nongovernmental organization that brings together churches involved in providing health services. CHAG is the second-largest provider of health services in Ghana, and its network of hospitals that belong to individual churches provide an estimated 42 percent of all health services in the country—many of them in more marginalized regions.³ CHAG has a council composed of representatives of member churches and a governing board whose members are elected by the member churches. The governing board is responsible for a secretariat (see discussion below), which is the network's implementing agency.

The central level (CHAG headquarters). Management by the CHAG secretariat is limited to facilitation and advocacy with member institutions in its network.

The executive director of the secretariat is responsible for two divisions: technical services and operations. The technical services division includes all units tasked with strengthening the health care system (human resources, health financing, health technology, and performance management). The operations division is responsible for all finance and administration units.

The secretariat management staff are made up of one human resources manager with one support staff. This manager works closely with the national health coordinating units of the member institutions to advance their agenda in national dialogue and to achieve national outcomes. Managing and supervising human resources at the secretariat falls under the operations division and is the responsibility of the head of administration, who is assisted by the human resources manager when necessary.

Appendix A shows that decision-making authority over HRH in CHAG headquarters is very limited. CHAG headquarters submits recruitment requests to the Ministry of Health and posts new staff allocated to the ministry. It also prepares salary increases and decides who receives training awards, based on the number of slots allocated by the Ministry of Health.

The regional level. At the regional level, CHAG managers are represented in the regional health authorities (see the discussion of GHS representation), though representation depends on the member church.⁴ CHAG managers at the regional level have limited actual decision-making authority and largely contribute to the coordination of different aspects of HRH management. This includes coordinating postings to church facilities,

performance assessments of facility managers, and promotion and salary increases of senior staff and managers. The only actual decision-making authority that CHAG regional managers hold is the authority to discipline and terminate facility managers in CHAG institutions (see appendix A).

The district level. At the district level, CHAG hospitals have human resources managers on site. These managers rely on the administrative structure—which depends on the member institution—to provide additional support as needed. The human resources manager coordinates performance appraisals, addresses staff requests from departmental heads, and manages pension planning.

The facility level. At the facility level, polyclinics and health centers in Ghana operate without human resources managers as such. Support is received from either the dioceses or the area general manager. The typical management team of a health center comprises a community health nurse, an accountant, and a representative of the congregation (table 5.5). At larger facilities, such as polyclinics, the management team is much broader. Appendix A indicates that the management team at the facility level generally has more authority than GHS facility heads for recruiting, promoting, and increasing salaries of junior staff as well as disciplining and firing them. For more senior staff, this is done at the regional level, as discussed above.

Conclusion

This chapter provides an overview of the different roles and responsibilities and actual decision-making authority of Ghana's numerous agencies, which operate at various levels of the health system and are given a role in managing health services, and of HRH in particular. Public sector health service and HRH management in Ghana is characterized by efforts

Table 5.5 Typical Management Teams in Catholic-Owned and Presbyterian-Owned Facilities

<i>Catholic-owned polyclinic</i>	<i>Presbyterian-owned health center</i>
Medical assistant	Midwife
Head of nursing (matron)	Superintendent/medical assistant
Accountant	Accounts officer/clerk
Field officer	Dispensing technician
Representative of congregation	Lab assistant/technician

to create greater managerial flexibility and autonomy, as well as to decentralize more decision-making powers. As such, HRH management is divided among the public nonautonomous agencies (such as the Ministry of Health); semiautonomous, public sector agencies (such as GHS and teaching hospitals); and semiautonomous, private, not-for-profit agencies (such as CHAG) at the central, regional, district, and subdistrict levels. The chapter indicates that health and HRH management organization is thus complex, and that—despite efforts to decentralize key decision-making authority for HRH—management authority for public sector HRH remains relatively centralized. Future research should include a comprehensive assessment of management capacity in each agency, at each level.

Notes

1. The second category of salaries are those paid to casual or part-time health workers who are sometimes employed across different levels of the health system. These were not discussed in this book. These are workers employed at the BMC or facility level (across central, regional, and district lines); they have not yet been, or will not be, captured in the central government payroll. Payment for short-term or temporary workers is determined between the facility or BMC and the worker in question. This type of personal emoluments is normally paid from the internally generated fund.
2. At the Tamale Teaching Hospital, for instance, the unit is headed by a deputy director who, in conjunction with the chief executive officer and the director of administration, is responsible for policy development and general oversight of the unit. The deputy director is supported by three other HR managers, two HR officers, and two secretarial staff. At the Komfo Anokye Teaching Hospital, there is a head of HR who is in charge of the management of the unit. Other units in the HR division are employment services (recruitment and promotions), HR information (management of staff information), compensations (salaries and benefits processing), employee relations (management and employee relations), and training and development (staff training and performance management). At Korle Bu, the HR unit is much smaller. The unit is in charge of personnel work that includes recruitment, promotion, and management of leave requests and coverage. Little attention is currently given to training or planning personnel retirement options.
3. See <http://www.chagghana.org/chag/>.
4. For instance, for administrative purposes, the Catholic secretariat has divided Ghana into 19 dioceses, each headed by a bishop who has autonomy over all

decisions within the diocese. Bishops may seek technical advice from the church health coordinating units at the secretariat before making decisions. The Presbyterian Health Service, on the other hand, divides Ghana into 15 presbyteries and 4 area boards; the head of the presbytery is also the chair of the area board. All facility-level management committees report to the area boards. Four general managers are in charge of all institutions in an area. These managers are responsible for ensuring that support required by the institutions is provided.

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CHAPTER 6

Interventions to Increase Stock and Improve Distribution and Performance of HRH

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This chapter discusses some of the specific interventions that may be considered to (1) increase the stock, (2) improve the distribution, and (3) improve the performance of health workers in Ghana. The chapter provides examples of policy options rather than specific recommendations, recognizing that the actual design of targeted interventions and policies is fueled not only by the need for additional evidence and sufficient capacity to develop and implement interventions, but also the fiscal and political environment surrounding human resources for health (HRH) in Ghana (as assessed in chapters 7 and 8, respectively).

Interventions to Increase Stock

A core objective of the government will be to ensure that overall health worker stock continues to grow to meet relevant benchmarks. Chapter 2 found that, although health worker stock has grown in recent years, it is still far below recommended benchmarks. The third Ministry of Health Program of Work recommends an aggressive human resources policy as central to achieving the objectives of the Ministry of Health. It set clear

labor market targets (such as level and skills mix) to reach certain health outcomes and institutional development goals (Ministry of Health 2007).

Findings in chapter 2 have indicated that future levels of health worker production will not be constrained by a low supply of applicants or by high dropout rates, but rather by the inability of health-training institutions to absorb a larger number of applicants. Attrition, which has reduced significantly with the decline in outmigration, is no longer the biggest impediment to increasing the total number of workers in the health labor market, but some levels do continue.

Listed below are several examples of interventions that could address these concerns and help raise health worker stock to desired levels.

Education Policies

Increase the physical capacity of training institutions. To absorb the large number of applicants and further increase production output, investments in educational and training infrastructure is required. This need extends beyond the establishment of new public sector schools. In addition to considering some type of fee structure (most public sector institutions charge low or no tuition), private sector options need to be supported, particularly given the fiscal constraints and competing priorities facing Ghana. Investment should be informed by the specific capacity constraints of health-training institutions, and can include investment in facilities and laboratory equipment, educational material including hardware and software, library resources, information and communication technology (ICT) infrastructure, and utilities such as electricity, water, and sewerage systems.

Increase the technical capacity of health-training institutions. To further absorb a larger number of students within health-training institutions, policy options may want to focus on increasing the number of teachers and academic faculty. These could include:

- Maximizing the use of the existing teacher pool by investing in faculty development
- Expanding faculty recruitment efforts by targeting categories of health service providers, health professionals, and faculty in the diaspora
- Tapping into faculty from other countries through regional training programs and bilateral and twinning agreements
- Reforming and expanding teacher training, faculty development, and mentoring, and supporting regional professional networks
- Integrating training-of-trainers efforts into health education programs

Reduce the duration of existing health science courses. Increased efficiency could reduce costs and increase the number of students that health-training institutions can admit by reducing the time students are required to attend. Ghana could build on ongoing efforts to diversify the type of medical training and certification by providing shorter courses at lower cost, and thus increase the ability of its health-training institutions to admit more students. A 2008 Global Health Workforce Alliance (GHWA) report also supports the idea that there are potential savings to be had from shortening curricula (and the benefits of training a larger number of health workers more quickly) by focusing on competencies required at primary care levels (GHWA 2008).

Consider cost-effective e-learning. Information and communication technologies, combined with well-developed learning tools, are highly cost-effective and has the potential to scale up distance education of health workers (Mokwena et al. 2007). ICT provides opportunities for maximizing the use of scarce faculty and learning resources by using online or computer-based learning resources and devices, including video conferencing, telehealth, and telemedicine as diagnostic and educational tools. Increasingly, virtual universities and professional networks are being established, linking universities and remote clinical sites, expanding access to educational resources, and offering innovative ways to provide training in underserved areas (Chen et al. 2001; Haythornthwaite 2002; Kasitipradith 2001; Snadden and Bates 2005). New technologies and broadband connectivity have added to innovative options for learning and knowledge sharing, with more professionals looking to open source and distance learning as valuable opportunities.

Focus training on lower- and mid-level cadres. Where health-training institutions use public funds for health training (as is the case in many public institutions in Ghana), a disproportionate focus on high-level cadres (such as doctors and nurses) limits the number of training slots generated because of their higher unit costs. A focus on lower- and mid-level cadres will reduce costs and increase intake because it is relatively inexpensive to provide their education. The critical need to rapidly train and scale up the health workforce in many places, and to admit more students, will require further shifting the focus from higher-level cadres toward more trained and deployed mid-level and frontline cadres. The GHWA Task Force for Scaling Up Education and Training for Health Workers recommends a “massive and immediate increase to train community and mid-level health workers alongside [an] expansion of education and training for more highly trained and specialized health workers” (GHWA 2008, pp. 2, 41–42).

Develop education strategies to reduce graduate preferences to migrate abroad. Reducing the remaining migratory preferences of graduating students could be considered. Because competitive, higher-level cadres from urban backgrounds tend to be more prone to migrate abroad, there should be emphasis on making health workers less competitive by producing alternative cadres that are unique to Ghana only, or lower- and mid-level cadres, and targeting admission policies toward the intake of health workers from rural backgrounds. While alternative cadres are not competitive internationally, and lower-level cadres less so than higher-level cadres, health workers from rural backgrounds are less likely to migrate abroad than those from urban backgrounds. Finally, future education strategies should minimize sending students abroad (outside of Africa) for training, which is often linked to outmigration.

Incentive Policies

Focus on nonmonetary incentives rather than further salary increases. In light of the relatively high health worker salaries—the consequence of past salary increases (see appendix C)—and the resulting fiscal shortcomings (see chapter 7), incentive policies to curb outmigration may want to focus first and foremost on nonmonetary incentive policies (for example, education-related incentives, discussed below). This, however, should not completely shut down the discussion on health worker salaries. Salaries in Ghana, when compared with those in the West, remain low, which is a primary reason for the remaining levels of outmigration. Findings in appendix C, moreover, are particularly worrisome. Although the increase in baseline salaries has provided many more opportunities to health workers in Ghana (such as the opportunity to obtain larger bank loans for mortgages), real wages have actually fallen since 2006 because of the removal of allowances, wage freezes, and inflation (appendix C). With time, this could once again have a negative effect on out migration.

Strengthen incentives to further education. Such policies should aim to address some of the remaining push-and-pull factors causing health workers to migrate—for example, by improving career development opportunities, further expanding postgraduate programs, and addressing some of the remaining frustrations that health workers have with accessing post-graduate training in Ghana (as discussed in chapter 2). Offering such education-related incentives to health workers is, once again, closely linked with further developing in-country training capacity (discussed above), including strengthening academic partnerships with other training institutions in Africa.

Other Policies

Raise the retirement age of health workers and/or allow retirees to work part time. Chapter 2 found that some 15,000 health workers—including most midwives, enrolled nurses/health assistants, and medical assistants, as well as a significant proportion of professional nurses—will turn 60 (the official retirement age) by 2021. The compulsory retirement age has changed little in recent years, despite the fact that the life expectancy of Ghanaians on the whole has appreciated by 11 years, from 53.1 years in 1980 to 64.2 years in 2011 (not taking into account the usual variations by income quintiles), and is expected to rise further in the future. Raising or eliminating a mandatory retirement age could allow more health workers to remain in the workforce. General recommendations from the World Health Organization on how to increase HRH stock suggest that, where full pension benefits have been promised after a given number of years of service, it might be considered “unfair to take them away.” However, not making this promise for new hires could help with retention in the future. For those to whom full pension benefits are promised, additional pension benefits or incentives might be offered if they agreed to stay at work longer, or to work part time to fill existing gaps (WHO 2009).

Ease integration of the diaspora in Ghana. Interventions could focus on attracting back the health worker diaspora, and thus fill gaps in stock. For example, the need for some returnees to retake exams could be reduced (currently, exams have to be retaken and substantial experience and additional skills gained from practicing abroad are not taken into account). Also the excessive length of time needed to process a request for reintegration into the public sector could be addressed. Both factors are currently considered by many health workers to be key bottlenecks, making a return to Ghana less attractive. In considering such interventions, policies will need to carefully weigh the need for additional health workers and quality control measures.

Interventions to Improve Distribution

Interventions to address the highly uneven distribution of health workers will have to be at the forefront to improve health outcomes in Ghana. People in marginalized regions in Ghana, who are often in most need of health services, have disproportionately less access to providers than their urban counterparts. Chapter 3 found that, although the lowest number of health workers is found in the Upper West Region, the lowest ratio of health workers to the population (density) is found in the Northern

Region, one of the poorer regions in Ghana. The picture is closely associated with select health indicators. Greater Accra, for example, enjoys an assisted delivery rate of more than 80 percent, while in the Northern Region little more than 50 percent of births are assisted.

To address this problem, policies in Ghana are urgently needed to focus on influencing the urban-biased supply-side behavior of health workers by expanding efforts to make preservice education more of a rural experience (thus creating health workers who are less prone to urban job uptake), while simultaneously improving the working and living conditions for health workers in rural areas. The following policy interventions could be considered:

Education Policies

Strengthen rural pipeline policies. Such policies combine several features to create a sustainable rural health workforce: admission policies giving preference or allotting a specific number of slots to applicants from rural regions; support and encouragement for rural regional medical and nursing schools; curricula with a strong emphasis on family and community medicine; compulsory rural internships; financial aid and scholarships for rural students; and mentoring, provided by experienced rural doctors, for new health workers in rural areas. Such policies have shown to significantly reduce the number of students who take up urban employment opportunities after graduation (Tulenko et al. forthcoming).

Strengthen opportunities for specialized training for health workers in rural areas. Chapter 3 identified the lack of opportunity to obtain specialized training as a main reason that health workers choose urban over rural areas. Opportunities for specialized training may result from some of the rural pipeline policy components discussed above. Particularly effective could be decentralizing training opportunities and moving them to rural areas (including possibly using innovative ICT solutions and long distance-training opportunities). Policies could also focus on developing partnerships between rural facilities and urban training institutions with the capacity to provide specialized training. In such partnerships, qualified faculty and student bodies from higher education institutions are temporarily placed in rural training institutions and required to provide temporary, in-service training to the faculty and students in those institutions. Such partnerships not only benefit the rural training institutions (in terms of skills transfer), but they also benefit students and faculty from the sending institutions, as they are able to benefit from exposure to rural

work experience and practice (thus feeding into the rural pipeline approach discussed above).

Develop preservice, education-training strategies that focus on training mid- and lower-level cadres. Chapter 3 has shown that the type of cadres produced may also influence rural urban distribution. Lower-level cadres and alternative cadres may have a greater tendency to work in rural areas than higher-level ones. These cadres have fewer opportunities for private practice, so they are more likely to accept rural employment where they can gain wider experience. One policy option thus would be to focus on further scaling up training of mid- and lower-level cadres. These cadres often serve either as substitute health workers in areas that have difficulties in recruiting health professionals, are employed for specific health interventions, or act as the community arm of health systems.

Incentive Policies

Chapter 3 discussed the findings from a discrete choice experiment (DCE) that identified several salary and nonsalary incentives that would motivate health workers to move from urban areas to rural areas, and/or remain in rural areas. Based on the findings from the DCE, policy solutions to attract health workers to rural areas include the following:

Strengthen equipment and supplies in rural areas. Capacity constraints linked to infrastructure, equipment, and supplies are key reasons keeping health workers away from rural work locations (chapter 3). Health workers place a high priority on equipment and supplies when choosing their posts (Kruk et al. 2010). Currently, the best clinical equipment is in urban teaching hospitals. Efforts should focus on upgrading equipment and supplies in facilities in rural areas. Such efforts need to be informed by comprehensive needs assessments, including a review of why some of the problems exist. Interventions may have to take into account capacity weaknesses in management at the facility level (to order and maintain equipment and supplies), as well as at the level of the supplier.

Strengthen opportunities for financial top-ups in rural areas. The importance that health workers place on salary increases for rural posts (see chapter 3) should not be ignored, but needs to be innovatively addressed. Rather than relying on future additional funding (which, under the current fiscal environment, seems unlikely—see chapter 7),

decision makers should consider opportunities for rural health workers to tap into private sector funding—for example, they might address the request of health workers for larger rural salaries by legalizing regulated moonlighting in the private sector. In several countries, innovative arrangements—including so called “private wings” in public institutions—allow health workers to carry out private practice in rural areas (and thus top up their salaries) without having to leave it.

Strengthen supportive management for health workers in rural areas.

The discrete choice experiment by Kruk et al. (2010) found that a “supportive management” environment at the facility level in rural areas (including opportunities for career development) was considered a top incentive that would motivate health workers to work in those areas. To achieve this, interventions may be required to provide existing facility managers with more overall management capacity. A combination of sufficient capacity and committed managers, who implement a balanced human resources management model, can stimulate organizational commitment. To date, however, management authority at the facility level remains very limited, and management capacity at other levels is limited despite greater decision-making authority.

Clarify terms of appointment for rural practice. The unclear terms of appointments that motivate many graduates to avoid rural service should also be addressed. The discrete choice experiment by Kruk et al. (2010) underscored new health workers’ anxiety about prolonged stays in rural posts without reliable terms of appointments and fixed endpoints. Nurses especially fear the pressure to find their own replacements in order to transfer before leaving rural posts. Interventions need to address the difficulties of obtaining transfers to urban posts and also need to develop relevant and transparent procedures and common guidelines.

Other Policies

Determine the effect of rural bonding policies. More research is required to determine the effectiveness of bonding policies for nurses in Ghana, though the evidence from other countries does point out some limitations. Elsewhere in Sub-Saharan Africa, interventions that create a period of obligatory rural services for graduating health workers (as in Ghana) have been shown to temporarily reduce short-term shortages. But these interventions have had little to no impact on long-term rural retention. Considerations about whether to expand rural bonding beyond registered nurses, for example, should be based on additional review and evidence.

Strengthen positive associations with rural practice. An intervention to consider, and to research further, is to manage communication campaigns to increase the altruistic motivations and positive associations of students and health workers with rural practice. The goal would be to drive home the messages that health workers can obtain wider clinical experience in rural settings, that great merit is found in (for example) “working for God and duty of the country,” and that rural practice provides a potential for gaining community respect and recognition. Chapter 3 found that such attributes contribute toward the motivations of health workers to take up rural practice.

Interventions to Improve Performance

Chapter 4 found that the evidence on health worker performance is relatively sparse. Thus a first objective of the government will be to obtain more comprehensive evidence related to the different variables and components of health worker performance. What data do exist point toward competence issues confined to specific services and to some factors that negatively (and positively) influence the extent to which health workers apply themselves to their tasks. Whereas health worker competencies and ability to perform are linked to quality of the workers’ education and their working environments, the extent to which health workers apply themselves (that is, the extent to which they are absent, productive, responsive, and noncorrupt) is linked to management and accountability structures and the extent to which health workers are motivated to perform.

Taking into account data limitations, as well as the need to carry out further research on performance outcomes and related determinants, solutions should generally focus on policies that (1) aim to increase health worker competencies and workers’ ability to carry out services (improving education capacity, working environments), and (2) aim to improve the extent to which health workers apply themselves (by strengthening accountability mechanisms, and health worker motivations). The following lists some such examples:

Education Policies

Strengthen the quality of training at preservice education institutions. Education policies should focus on building the capacity of preservice-training institutions to deliver quality education, particularly in the northern institutions. Chapter 4 indicates that the quality of education may be

uneven and better in the south. Interventions could address capacity constraints related to laboratory equipment and libraries. Gaps in specific, specialized teaching staff could be solved with distance learning and online learning options, and teachers' training efforts could be stepped up (especially on maternal care issues). Interventions, moreover, could further strengthen curricula and put more emphasis on teaching practice than theory.

Improve access and relevance of in-service training. Interventions for access to in-service training could be based on performance indicators and merit structures, making training opportunities more transparent and available to a larger number of health workers who are often left out. Efforts could focus on creating more flexibility in the type of cadre trained, introducing applied teaching methods linked to local contextual factors (such as on-the-job training, peer review, and periodic feedback), and developing a proactive approach to training based on district needs rather than on available funds or donor preference. In-service training solutions at the facility level could be provided by faculty and students from some of the larger health-training institutions in Ghana, through their temporary placement into workplace facilities to provide such training (while at the same time obtaining important work experience themselves).

Upgrade skill sets of lower-level health worker cadres with specialized skills (task shifting). In Ghana, "task shifting" is already applied to community health officers and auxiliary nurses who train for two years to provide "doorstep services" to underserved rural populations. This and similar types of training could be scaled up for lower-level cadres, depending on the facility need and available capacity constraints. Elsewhere, such a strategy has been successful even for highly specialist skill needs. In Mozambique, for example, nonphysicians trained in obstetric surgery perform most emergency obstetric surgery in the country, with no clinically significant differences in postoperative outcomes. Not only do the medical assistants (*técnicos de medicina*) perform just as well as physicians, but around 90 percent of them were still working in rural hospitals where they were employed seven years later, compared with none of the physicians (Pereira et al. 2007).

Incentive Policies

The development of specific incentive policies to encourage health workers to perform to a higher standard should be informed by new studies

and evidence. Policies to provide access to further training, career development opportunities, and mentoring and professional guidance may be key in motivating health workers and thus improving performance (see chapter 4). On the whole, however, a new discrete choice-type experiment to identify the relative importance of incentives to increase the motivation of health workers to perform should be considered. Linking the allocation of identified incentives to the performance of health facilities and the health workers within may be particularly useful (see the discussion of results-based financing below).

Other Policies

Upgrade facility-level supplies and equipment. In facilities in some regions in Ghana (such as Greater Accra), health workers complained that they needed to refer patients to other hospitals because of a lack of oxygen tanks, inadequate laboratory support, and broken equipment (chapter 4). Interventions to improve working conditions—including those that ensure sufficient and relevant equipment and supplies—are often linked to increased staff effectiveness and better performance. Again, a needs assessment and identification of the underlying determinants of problems related to weaknesses in this area must inform the intervention.

Strengthen management environments at the facility level. Management practice might take lessons from Marchal, Dedzo, and Kegels (2010), a “positive deviance” study that identified some HRH management practices as contributing to the success of a well-performing hospital in Ghana’s Central Region. The study concluded that a well-designed and balanced human resources management model (adopted by sufficiently trained and committed managers) can stimulate organizational commitment even where managers have only a narrow decision space. The study suggests that interventions should focus on developing a clear vision of a health facility, carefully selecting management staff (and offering them secure employment), training staff, promoting teamwork, reducing staff differences, communicating openly, enhancing access for all staff to top management, and ensuring that management remains engaged in operational issues.

Introduce innovative accountability mechanisms. Introducing results-based financing mechanisms, which have shown some promising results elsewhere in Sub-Saharan Africa, could increase accountability and monitoring of both facility and health worker performance (always

assuming the required determinants are in place). Performance-based financing mechanisms, which are already considered in Ghana, hold the potential not only to motivate health workers, but also to hold health workers and health facilities more broadly and directly accountable to performance results (performance indicators). Health facilities and health workers under such schemes are provided with a financial bonus only if they achieve specific performance benchmarks (this can include indicators on absenteeism, responsiveness, and health outputs).

Conclusion

This chapter presented some of the different types of policies that could be considered by the government of Ghana to address some of the key weaknesses identified as hampering an increase in health worker stock and improvements in their distribution and performance. The objective is to help start and fuel the policy discussion on HRH in Ghana. The chapter provided examples of policy *options* rather than *recommendations*, recognizing that additional evidence is required, as well as more information on the actual capacity to develop, implement, and carry out the possible interventions. The fiscal and political environment surrounding HRH, a good understanding of which is equally important to consider developing or adopting particular interventions and policies, is discussed next in chapters 7 and 8.

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CHAPTER 7

Financing Available for Policy and Interventions

Karima Saleh

This chapter discusses the financing available for health and any planned human resources for health (HRH) interventions, examining in particular the public budget currently allocated to wages for health workers. Any plans to increase the overall stock of health workers (and to absorb them into the labor market, once produced), or to develop relevant interventions to improve their distribution and performance, will require sufficient funding.

Summary of Findings

The macroeconomic situation will not permit substantial additional allocations to be made to the health sector in the medium term. As a result, the sector will instead have to reprioritize health care spending and adopt efficiency-improving measures and interventions.

Few additional resources are likely to be allocated to health care in the medium term, for two main reasons. First, despite strong oil revenues, annual growth of gross domestic product (GDP) is projected to restabilize at about 6 percent starting in 2013. Second, any additional oil revenue is expected to go to arrears and the Single Spine Pay Program.¹

In nominal terms, health spending will grow proportionally to income growth. In real terms, however, health spending is expected to decline substantially in the medium term.

In 2009, the public sector health care wage bill represented 1 percent of (rebased) GDP and 15 percent of the overall public sector wage bill. The Ministry of Health wage bill (item 1), the single largest itemized spending entry, accounted for 55 percent of recurrent spending. The public sector health workforce has increased substantially in the past 10 years; over the same period, the health sector real wage bill increased by a factor of five. The analysis of public sector funding in this chapter includes external financing contributions (16 percent of the total health spending in 2009) that come as sector budget support.

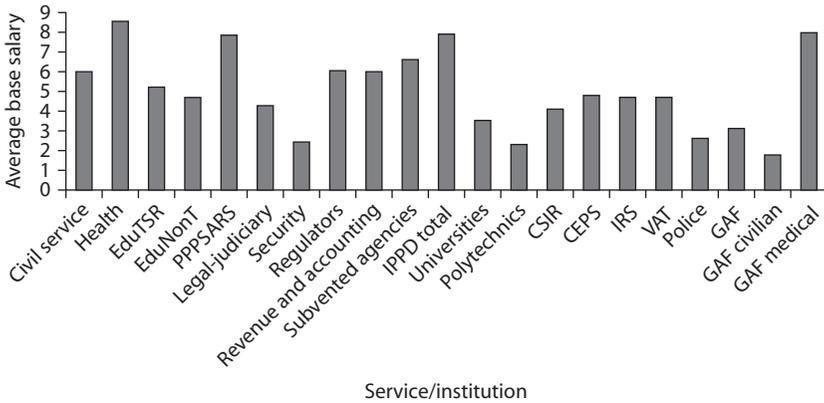
The Health Workforce Wage Bill in the Public Sector

The public sector wage bill has mushroomed, particularly since 2004.² Although the government has considered wide-scale pay reforms beginning in 1997—some of which have been implemented and some scaled up—overall salaries continued to increase. After 2000, minimum wages increased almost annually (after adjusting for inflation). Higher wage increases in some sectors were a result of fragmented pay-scale negotiations, conducted with 20 to 30 trade unions. In other cases, political events—such as the separation of public delivery service from the civil service in the run-up to the completion of the 1992 Constitution and the 2000 and 2004 elections—contributed to the wage bill increase. The health sector median base salary was far above the national median base salary in the public sector in 2008 (figure 7.1).

An increasing proportion of GDP is spent for public sector wage bills. Ghana's total public sector wage bill grew from 3.6 percent of rebased GDP in 2000 to 6.7 percent in 2008 (figure 7.2). Overall government revenue has been low (13 percent of GDP in 2008), and as a percentage of total government revenue, the total wage bill grew from 32 percent in 2000 to 57 percent in 2008. Overall, the public sector wage bill increased in both nominal and real terms, especially between 2004 and 2008 (figure 7.3).

The health sector wage bill has increased as a proportion of the total wage bill. Because of salary increases, the health wage bill rose from 0.3 percent of rebased GDP in 2000 to 1.0 percent in 2008, increasing from 9 percent to about 15 percent of the total wage bill (figure 7.3).

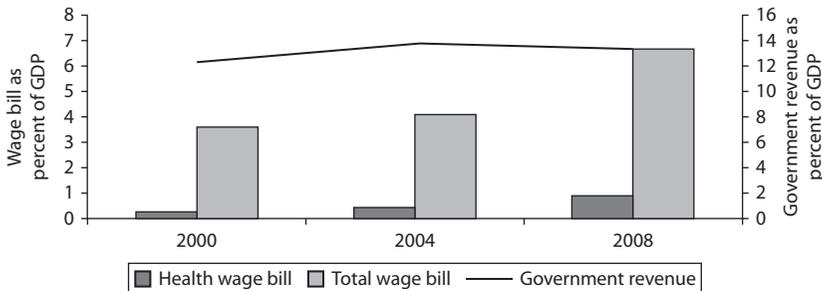
Figure 7.1 Average Base Salary across Public Sector Services and Institutions, 2008



Source: Ghanaian authorities; produced by Cavalcanti 2009.

Note: The institutional services are classified as follows: CSIR = Council for Scientific and Industrial Research; EduNonT = nontertiary education; EduTSR = higher education (tertiary, scientific, and research); health services; legal and judicial services; PPPSARS = public policy, planning, services, administration and related services (including local government services); revenue and accounting services (including CEPS = Ghana customs, excise, and preventive services; IRS = internal revenue services; VAT = value-added tax); security services (GAF = Ghana Armed Forces); subvented agencies (commercial and noncommercial); and regulators. IPPD = Integrated Personnel Payroll Database.

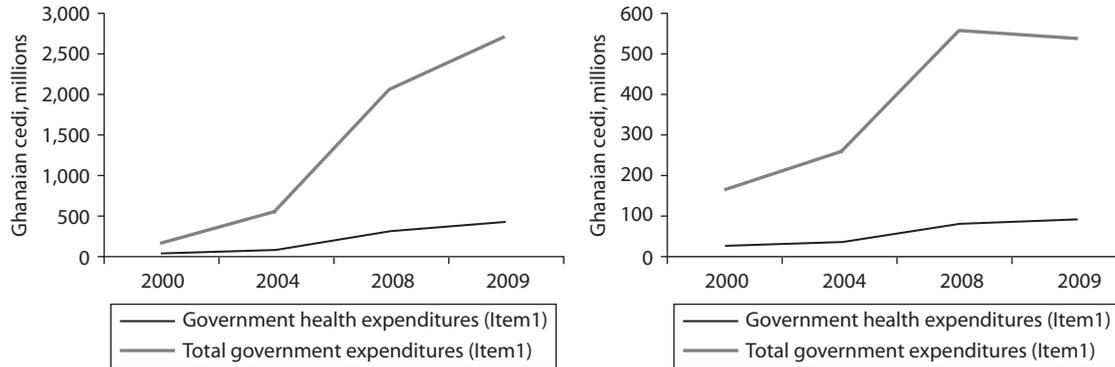
Figure 7.2 Government Revenues and Wage Bills, 2000–08



Source: Ministry of Finance data.

Over the same period, the education workforce wage bill declined, from 57 percent to 50 percent of the total wage bill (figure 7.4). The health wage bill grew faster than the total wage bill between 1999 and 2009, increasing by a factor of five; the overall wage bill tripled (figure 7.5).

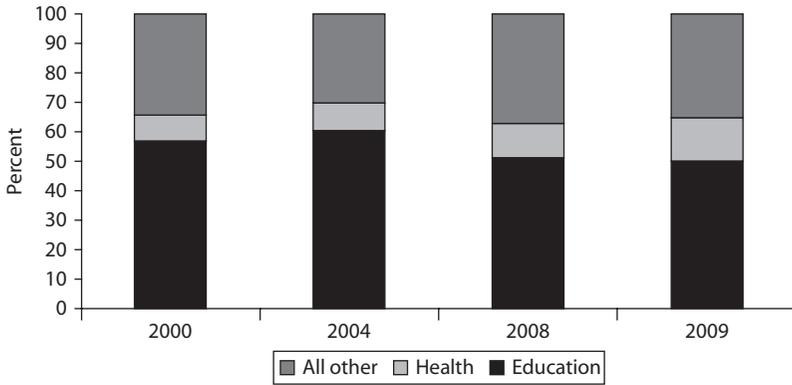
Figure 7.3 Payroll Expenditure for Health Care, 2000–09



Source: World Bank data.

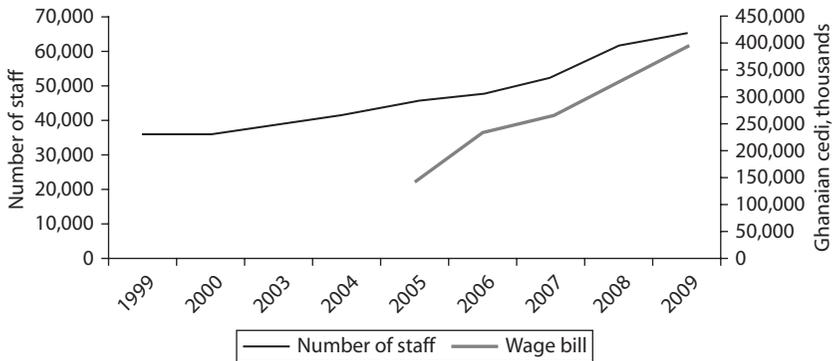
Note: Under the government budgets in Ghana, *Item 1* refers to the component for personnel and emoluments. For estimating real expenditures, the base year has been taken as 2000.

Figure 7.4 Health and Education Sector Shares of Total Wage Bill, 2000–09



Source: World Bank data.

Figure 7.5 Ministry of Health Staffing and Wage Bill, 1999–2009



Source: World Bank analysis, based on data from the Controller and Accountant-General’s Department, the Integrated Personnel and Payroll Database, and the Ministry of Health (2005–09).

Note: Staff includes all personnel in clinical and nonclinical positions employed by the Ministry of Health, including trainees and Christian Health Association of Ghana staff paid through the ministry. It does not include staff recruited by training institutions or regional bodies.

Consequences of Wage Bill Reforms

Although absolute increases are evident in public sector health spending, the change is minor in real terms. Ministry of Health spending on health care increased from ₵352 million in 2005 to ₵880 million in 2009. In nominal terms, per capita spending rose from ₵17 in 2005 to ₵34 in 2008, but in real terms (exchange rate adjusted) the increase was insignificant (table 7.1).³

Table 7.1 Ministry of Health Spending on Health Care, 2005–09

<i>Budget item</i>	<i>2005</i>		<i>2006</i>		<i>2007</i>		<i>2008</i>		<i>2009</i>	
	<i>¢, millions</i>	<i>Percent</i>								
Item 1: Personnel emoluments	142	40	235	43	265	45	325	42	405	46
Item 2: Administrative expenses	41	12	36	7	52	9	66	9	87	10
Item 3: Operation expenses	95	27	130	24	156	27	234	30	246	28
Item 4: Investment expenses	73	21	148	27	115	20	147	19	141	16
Total (¢, millions)	352	100	550	100	588	100	773	100	880	100
Total (US\$, millions)	386		595		605		637		616	
Per capita (¢)	17		26		27		34		38	
Per capita (US\$)	18		28		28		28		26	
Per capita (real 2002 US\$)	10		14		13		11		9	

Source: Financial statements from the Ministry of Health (2005–09) and the National Health Insurance Authority (2005–09); Saleh 2012.

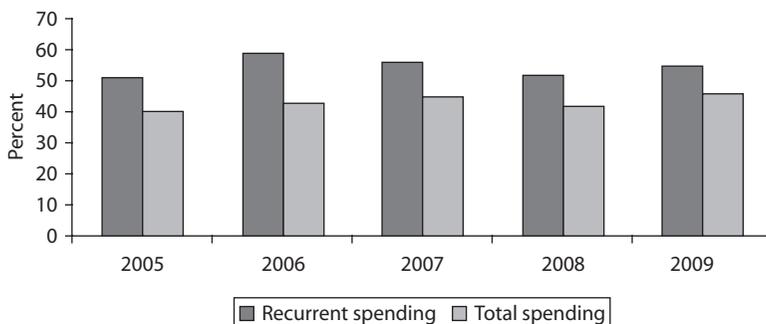
Note: This analysis is for the Ministry of Health, including the Ghana Health Service and the National Health Insurance Scheme. It does not include the police, army, or parastatal organizations. It does include external financing contributions that come as sector budget support. External financing has fallen from about 19 percent of total health spending in 2005 to 16 percent in 2009. ¢ = Ghanaian cedi.

The Ministry of Health's spending on the wage bill has been increasing as a proportion of its total expenditures. Since 2005, the health sector wage bill has made up at least 55 percent of Ministry of Health recurrent health care spending (figure 7.6). As a percentage of the ministry's total recurrent spending, the wage bill (table 7.1, item 1 of the budget items) increased from 51 percent in 2005 to 55 percent in 2009, as seen in figure 7.6. The wage bill now includes allowances paid for service provision in item 1—a change that accounts for much of the increase in item 1 spending. In the past, the additional duty hours allowance was covered under item 2. In 2005, this allowance was at least 2.5 times higher than item 1. External financing generally does not cover salaries or allowances.

The Controller and Accountant-General's Department is responsible for disbursing wage (item 1) payments. If budgets are below requirements, reshuffling occurs so that the payroll is met. In contrast, nonsalary budgets are not always ensured because budget releases are delayed. Off-budget resources—from the National Health Insurance Scheme as claims reimbursement for services, from user fees, and from external financing—are used for nonsalary recurrent spending. The ministry's reliance on off-budget resources has grown over time.

A growing proportion of health sector staffing is decentralized to regions and districts. At least 74 percent of the wages paid by the Ministry of Health is distributed through the Ghana Health Service, most of it to district health services that support staffing at district health departments, district hospitals, subdistrict health centers, and the community-based Health Planning and Service Initiative. Resources allocated to

Figure 7.6 Wages as a Share of Total and Recurrent Ministry of Health Spending, 2005–09



Sources: Financial statements from the Ministry of Health (2005–09) and the National Health Insurance Authority (2005–09); Saleh 2012.

district staffing increased from 47 percent in 2005 to 57 percent in 2009. Over the same period, the ministry's wage bill for tertiary teaching hospital staff decreased from 17 percent to 14 percent.⁴

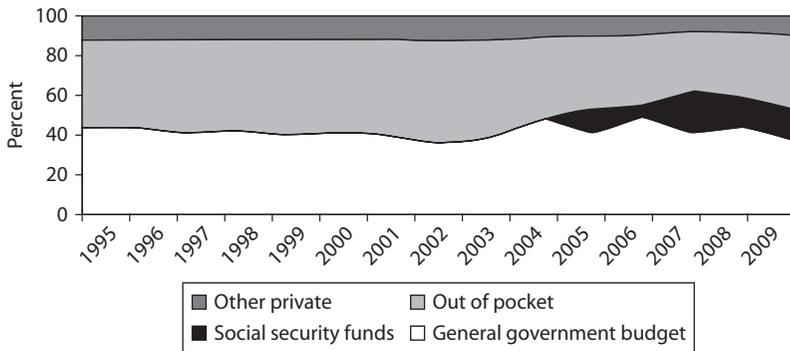
The wage bill may not be comprehensive because it omits contractual staff. The health care wage bill covers everyone working in health care in the public sector, including both full-time and part-time employees. Full-time employees are covered under the regular budget (item 1) and paid through the Ministry of Health and National Health Insurance Scheme budget. Because of the shortage of service delivery staff, the ministry has given autonomy to lower administrative levels to recruit part-time contractual staff. Contractual staff members are not covered under the regular budgets but are paid by the local government under item 3, operation expenses, and through internally generated funds (see table 7.1).⁵ An analysis of district spending suggests that perhaps 2.5 percent of the total financing for local health personnel is through internally generated funds (Couttolenc 2012). However, this study was unable to determine the wage implications of the entire contractual staff. As a result, the ministry's payroll underestimates the actual wage bill.

Health Spending Patterns

Overall health spending in Ghana has increased since 1995, and the households' share of this burden of spending has decreased. With the growth in the economy, total health spending increased from 5.3 percent of GDP in 1995 to 5.5 percent in 2008. In 2009, total health spending declined to 4.9 percent of GDP. Total per capita spending on health was US\$54 in 2009. The share of total health care expenditures borne by the private sector, including individual households, fell to 47 percent in 2009, down from 56 percent in 1995.

Public sector spending in health has made up a higher share of total health spending since 1995. Because Ghana has enjoyed a robust economic performance, its health sector received substantial increases in allocations in absolute terms. Public sector contributions toward total health spending have increased from 44 percent in 1995 to 53 percent in 2009. The big leap in contributions was made with the introduction of the National Health Insurance Scheme in 2003. Public sector expenditures, including social security funds, peaked in 2007, but since then they have been adjusted downward (figure 7.7).

Government spending for health does not meet the terms of the target set by the Abuja Declaration of 2001. Health care represented

Figure 7.7 Total Health Spending Shares, 1995–2009

Source: Saleh 2012.

Note: The author's simulated data, based on National Health Account data from the World Health Organization, the rebased GDP from the International Monetary Fund, and data from the Ministry of Finance and Economic Planning.

14–16 percent of the government budget between 2006 and 2009; allocations and expenditures, however, remained at about 9 percent of total government expenditures. More recently, the government still has not met the terms of the Abuja Declaration: health care budgets declined to 11 percent of the government budget in 2010 and to 9 percent in 2011.⁶

To address the shortage in staffing and to improve the inequity in health staffing distribution, including operations spending, the public sector seeks additional resources. These may come in the form of additional allocations and/or greater efficiency in current spending. Any additional funding for the sector and for HRH in general can come from economic growth, revenue collection, additional external borrowing, and the reprioritization of health care spending.⁷ The next section examines each of these sources as well as projected spending on health care wages through 2013.

Fiscal Space in Health

Fiscal space can be defined as “the availability of budgetary room that allows a government to provide resources for a given desired purpose without any prejudice to the sustainability of a government’s financial position” (Heller 2006, p. 75). An assessment of fiscal space typically examines whether and how a government could feasibly increase its

expenditure in the short to medium term in a way that is consistent with the country's macroeconomic fundamentals (Tandon and Cashin 2010). For the fiscal space analysis,⁸ this section assesses whether additional financing may be expected because of (1) economic growth, (2) the collection of additional revenue, (3) additional external borrowing, and/or (4) efficiency through reprioritizing health expenditures. The simulation was run twice—once including oil revenue projection and once with oil revenue excluded.

Economic Growth

Projections suggest that GDP in Ghana will grow about 6 percent a year between 2010 and 2015. As a result of the discovery of oil, GDP is projected to increase more than 12 percent in 2011, restabilizing at 6 percent in 2013 (IMF 2011).

The macroeconomic outlook is positive. The rebasing of GDP in 2010 made Ghana a lower-middle-income country. The fiscal deficit, equal to 8.5 percent of GDP in 2008, fell to 7.7 percent in 2010, and inflation fell from 20.7 percent in 2009 to 8.6 percent in 2010 (World Bank and Republic of Ghana 2013). Despite high projected economic growth, however, Ghana is not expected to have much additional fiscal space because most of the (modest) increase from oil revenue will go toward arrears and funding the single spine reform.

As health care spending elasticity to GDP in Ghana is estimated at 1.13 (Schieber et al. 2012), the growth of health care spending is expected to be proportional to the growth in income. Thus health care spending is expected to grow in nominal terms, but in real terms, cumulative growth in health care spending is expected to decline in the range of 7 percent (when oil revenue projections are included) to 13 percent (when oil revenue projections are excluded) between 2010 and 2015 (Schieber et al. 2012).

Additional Revenue Collection

For a lower-middle-income country, Ghana has low tax revenue (about 15 percent of GDP in 2010). Taxes on oil revenue are expected to bring in 4.3 percent of total tax revenue in 2011 (Ghana Revenue Authority 2011).

The government is looking at ways to improve tax collection. Although it aims to meet the target of 20 percent of GDP (an average earning for lower-middle-income countries), because of Ghana's structural challenges, it appears unlikely that this goal will be achieved by 2015. If this new target is met, then real cumulative growth in health care spending is

expected to increase by between 7 percent (when oil revenue projections are excluded) and 45 percent (when oil revenue projections are included) between 2010 and 2015 (Schieber et al. 2012). If, however, this new target is not met, it is highly unlikely that tax revenues will increase the fiscal space for health care.

Additional External Borrowing

Net public debt increased from 30 percent of GDP in 2008 to 40 percent in 2010. The government is keen to reduce its debt to sustainable levels. Now that Ghana has become a lower-middle-income country, additional grants and concessional loans may no longer be options.

Reprioritizing Health Care Spending

Neither economic growth nor increased borrowing is likely to provide additional fiscal space for the health sector, so Ghana has little choice but to spend more efficiently. One option is to reconsider the package of health care services being offered. Ghana has a dual burden of disease, but its spending patterns suggest that little is being done to improve primary health care services. As previous chapters showed, primary health care is not equitably distributed, with health care personnel disproportionately concentrated in urban areas instead of rural ones. Moreover, often hospitals are emphasized over primary care. Furthermore, the community-based programs with community health workers are still not scaled up nationwide.

Much can be done to improve the stock and performance of health workers at health care centers, which provide the first line of health care. But the National Health Insurance Scheme creates incentives for providers to promote curative care over preventive care. Appropriate cost-containment measures are not in place, and moral hazard–induced and supplier-induced demand is common. Drug costs are far above international prices. Ghana can gain much in efficiency by putting in place appropriate measures, such as payment mechanisms, that would create the appropriate demands for care and more strongly emphasize primary and preventive care over specialized curative care (and thus rural care over urban care), and by offering a more cost-effective and efficient process for drug procurement and price controls.

Projected Wages through 2013

The Ministry of Health set new staffing norms and standards for 2010–13. Focusing primarily on increasing aggregate stock, which still

remains below recommended benchmarks in Ghana (see chapter 2), the government plans to recruit additional health workers with the aim of meeting the new benchmarks.

Simulations were run for three scenarios (table 7.2):

- Scenario 1: The status quo.
- Scenario 2: Annual government allocations for health care remain at 9 percent of total government expenditures, with item 1 expenditures growing and items 2–4 expenditures increasing in accordance with the

Table 7.2 Estimated and Projected Shortfalls in the Ministry of Health Budget, 2010–13

	2010	2011	2012	2013
<i>Scenario 1</i>				
Government allocations for health care (% total)	9.04	9.04	9.04	9.04
Government allocations for health sector (nominal ¢, millions)	943	1,103	1,223	1,433
Item 1 allocations (% total health care allocations)	46	43	43	40
Item 1 allocations (nominal ¢, millions)	436	479	527	580
Total costs (including December 2010 projections for items 2–4)	1,186	1,328	1,593	1,791
Surplus/deficit (nominal ¢, millions)	–243	–224	–370	–358
<i>Scenario 2</i>				
Government allocations for health care (% total)	9.04	9.04	9.04	9.04
Government allocations for health sector (nominal ¢, millions)	943	1,103	1,223	1,433
Item 1 allocations (% total health care allocations)	53	54	58	58
Item 1 allocations (nominal ¢, millions)	478	571	679	804
Surplus/deficit (nominal ¢, millions)	–305	–339	–548	–612
<i>Scenario 3</i>				
Government allocations for health care (% total)	11	11	12	12
Government allocations for health sector (nominal ¢, millions)	1,147	1,342	1,624	1,902
Item 1 allocations (% total health care allocations)	43	44	43	44
Item 1 allocations (nominal ¢, millions)	478	571	679	804
Total costs (including December 2010 projections for items 2–4)	1,248	1,442	1,771	2,045
Surplus/deficit (nominal ¢, millions)	–101	–100	–147	–143

Source: Author's simulation, 2011.

Note: Government allocations for health care include both allocations to the Ministry of Health and the National Health Insurance Scheme. Scenario 1 includes only inflationary increases in salaries. Scenarios 2 and 3 include increases in staffing and inflationary increases in salary. Items 2–4 allocations are much below the estimates of the Ministry of Health. ¢ = Ghanaian cedi.

projections of the Health Sector Medium-Term Development Plan (2010–13), which involves large capital and related expenses.⁹

- Scenario 3: Annual government allocations for health care increase from 9 percent in 2009 to 12 percent in 2013, with item 1 expenditures growing and items 2–4 expenditures increasing in accordance with the projections of the Health Sector Medium-Term Development Plan (2010–13).

These projections show that if the Ministry of Health continues to spend 9 percent of total government expenditures (a conservative figure, given historical spending) and to carry out planned increases in health worker stock, it will face a funding shortfall in the medium term. This shortfall can be partly met by increasing allocation and spending and implementing efficiency measures. But the challenges are great, especially if the ministry plans to focus its interventions on increasing the overall level of stock in the country. Other, more cost-effective reform options (including some discussed in chapter 6), together with public-private partnerships, may need to be considered. Enabling the growth of the private sector could also alleviate some of the public funding pressure for HRH.

Conclusion

This chapter reviewed the fiscal environment for HRH in Ghana, examining in particular the public budget currently allocated to health worker wages. The Ministry of Health wage bill (item 1), the single largest itemized spending entry, accounted for 55 percent of recurrent spending. Few additional resources are likely to be allocated to health care in the medium term; in real terms, health spending is expected to decline substantially. As a result, the sector will instead have to reprioritize health care spending and adopt efficiency-improving measures and interventions. This need to reprioritize must be taken into account in making any plans to increase the overall stock of health workers (and to absorb them into the labor market once produced). It also must be taken into account in the development of relevant interventions to improve distribution and performance.

Notes

1. The Single Spine Pay Policy reform was announced in 2007 to streamline salaries in the public sector, increase overall salaries, and reduce wage inequality

- in the public sector. Evidence suggests that the situation in the public sector is dire and justifies some of the Single Spine Pay Policy reform efforts. The implementation of this reform began in June 2010, after the white paper on the Single Spine Salary Structure was issued in 2009 (see Atafori 2012).
2. Details on health worker wages before and after the 2006 salary rationalization program are discussed in appendix C. The appendix shows that health worker compensation has increased significantly since 2000—first with the additional duty hours allowance until 2006 (and lower baseline salaries), and then with the removal of the allowance and the absorption of this amount to form much higher baseline salaries. Appendix C also shows that for some health worker cadres, particularly nurses and doctors, wages increased substantially over 2007–10.
 3. Public sector spending captures government spending through the Ministry of Health and the National Health Insurance Scheme. It excludes grants from development partners.
 4. Caution should be used when analyzing these data, as some transfers are incorrectly reflected in the system.
 5. Internally generated funds are collected at the service delivery points and include user fees and reimbursements from the National Health Insurance Scheme and other private insurances.
 6. If the government respects the commitments it made in the Abuja Declaration—under which at least 15 percent of the government budget must be allocated to health—it could use some of the money to develop HRH interventions while maintaining its other recurrent budget needs. Some would like to use the money to increase the health wage bill, and there is a dire need to attend to staffing shortage. There is also an urgent need to ensure the equitable distribution of this staffing, as well as to focus on its competency and performance. This chapter does not necessarily advocate prioritizing health wage bill increases, given that several other areas need attention in parallel, under limited additional fiscal space for health.
 7. For fiscal space analysis in health, see Schieber et al. 2012.
 8. For fiscal space analysis in health, refer to Schieber et al. 2012.
 9. At the time this chapter was being prepared, the Health Sector Medium-Term Development Plan 2010–13 was still in process and costing projections not yet finalized (Ministry of Health 2011).

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CHAPTER 8

The Political Economy of Crafting Policy

**Nathan J. Blanchet, Jurrien Toonen, and
George Dakpallah**

This chapter examines the political economy of crafting policy on human resources for health. The governance structure, the roles of various institutions, and stakeholder involvement all affect the initiation, development, and implementation of policies to increase the stock and improve the distribution and performance of health care personnel. Studies over the past two decades have increasingly recognized the inherently political nature of health reform. Various methodologies have helped explain how and why reforms happen—or fail to happen. This better understanding can lead to more effective strategies for reducing obstacles in the design and implementation of technical solutions.

One of the most important types of political analysis is stakeholder analysis, which maps the relative power of individuals, groups, and organizations that affect or are affected by policy.¹ This chapter presents the results of a stakeholder analysis of policy making in Ghana, based primarily on semistructured interviews with key respondents.² It identifies the key players, their perspectives, and the process by which policy is made and implemented. The chapter provides recent examples from the field of how stakeholders participate and influence policy. It then lays a foundation for further analysis and for building the capacity of sector leaders.

Summary of Findings

The Ministry of Health, the Ghana Health Service (GHS), and teaching hospitals wield great power in Ghana (see chapter 5 and appendix A), but they are substantially checked by professional associations, which can bring the health system to a halt through strikes. Around these main players are regulatory councils, the Christian Health Association of Ghana (CHAG), development partners, other ministries, the media, and consultants, all of which can play very influential roles—though they often do not. In the background are larger contextual factors, such as the electoral cycle, opposition political parties, international influences, and local values and ethical perspectives on health.

There is general consensus among stakeholders on what the “official” or “formal” process entails for policy making—that is, the way policy is supposed to be developed, with all stakeholders making relatively well-defined contributions. This official process is well documented and consistently reported, but the degree to which the development of particular policies adheres to it varies in practice. The official process dominates the development of some policies, but seems to be much less relevant for others. For the latter set, the formal process is altered by myriad other factors that can affect policy outcomes, such as historical power balances among political parties and other groups; cultural factors, including gender relations and personal networking; individual idiosyncrasies; and norms of informal decision making. These factors can seem so influential—as they were for salary consolidation (see appendix C)—that supporters of future reforms may be tempted to ignore the official process and strategize primarily on (nonofficial) political and individualistic factors. But attempting to completely circumvent well-established institutions and processes risks negative feedback, distrust, delays, and ultimate failure. To turn technically sound recommendations into reality, reformers must consider and strategize based on the players, their perspective, and both the formal and informal decision-making and implementation processes discussed in this chapter.

Players and Perspectives

A primary part of stakeholder analysis is identifying the key players, their relative strengths, and their positions concerning a particular policy. This section modifies this standard method by identifying the players relevant to most health care personnel policies and describing their general perspectives on such policies.³

The Ministry of Health

Nearly all stakeholders agree that the Ministry of Health leads in setting policy on health care personnel in Ghana. In addition to the Minister of Health, three offices are most relevant: the Office of the Chief Director, whose role is similar to that of a chief of staff or chief operating officer; the Office of the Director for Policy, Planning, Monitoring, and Evaluation; and the Office of the Director for Human Resources for Human Development.

Health care personnel issues can be placed on the agenda “from above” (by the president or the ruling party’s party manifesto, for example) or “from below” (through agitation by doctors and nurses). There is a clear sense in the government of trying to do the right thing for the health of Ghana’s people as well as some frustration with other players who do not act with the people’s best interest in mind. For example, professional associations, which are very influential, sometimes fight over small matters without sufficiently considering how their actions affect patients, such as patient deaths caused by strikes. Teaching hospitals, which have semiautonomous status, may deviate from Ministry of Health policy on staffing ratios, for example, by keeping the best staff for their own institutions rather than letting them serve in deprived areas.

The Ministry of Health acknowledges that it is much better at developing policies than at implementing, monitoring, and evaluating them. Annual health summits decide on actions and policies, but little official follow-up takes place to ensure that they are implemented. Only minimal monitoring of policy implementation or administration of “carrots and sticks” occurs. Representatives of teaching hospitals (and others) confirm that policies can be subverted if they conflict with the hospitals’ goals.

The GHS

The GHS was established in 1996 to be the main implementing agency under the Ministry of Health. Chapter 5 has shown it to be responsible primarily for delivering health services in the public sector by employing and supervising health workers. As the main implementer of health services, it is very powerful. It is on nearly equal (some say superior) footing as the Ministry of Health.

The most important offices in the GHS are essentially the same as in the Ministry of Health: the Office of the Director General; the Office of the Director for Policy; Planning, Monitoring, and Evaluation; and the Office of the Director of Human Resources. This dual structure—that is, two chief executives; two directors of policy, planning, monitoring, and

evaluation; and two directors of human resources, all with direct stakes and some responsibility for health care personnel policy—creates the potential for both collaboration and conflict between the GHS and the Ministry of Health.

Like the Ministry of Health, the GHS is staffed by health-based technocrats interested in improving health care and distributing it equitably across Ghana. Like their counterparts at the ministry, GHS staff are occasionally frustrated with professional associations. For example, one GHS official stated that, although the government always responds to the associations' demands (usually for higher salaries), when problems arise—such as health workers refusing to report to posts in rural areas—the associations are “nowhere to be found” (Blanchet 2009).

Teaching Hospitals

Ghana's four main teaching hospitals—its premier medical facilities—play an important role in policy making and an even more important role in determining how certain policies are carried out. Many observers rank the Korle Bu Teaching Hospital in Accra and the Komfo Anokye Teaching Hospital in Kumasi (and their chief executives) as the most prestigious and influential. Since the Ghana Health Service and Teaching Hospitals Act (Act 525) was passed in 1996, teaching hospitals have enjoyed semiautonomy from the Ministry of Health, allowing them to deviate from policy in several areas. These areas include staffing ratios, limits on additional pay for workers who receive training above the requirements of their current job, and restrictions on the number and quality of health workers “released” to work for the GHS or CHAG. What the teaching hospitals do matters for national-level health care personnel policy because of their size and the proportion of sector resources they use.⁴

Two perspectives at teaching hospitals may be identified: the administrative perspective and the rank-and-file instructors' perspective. From the administrative perspective, the most prominent theme is the Ministry of Health's inability to monitor or sanction personnel-related actions at teaching hospitals and other institutions not under its direct authority (such as military hospitals).

Interviews with stakeholders revealed three reasons for this lack of capacity. First, there appears to be no official mechanism for enforcing the implementation of policies by hospitals. Second, many Ministry of Health staff do not feel comfortable questioning their former professors, whom they regard as more senior. Third, health workers affected by

policies often have incentives to side with the teaching hospitals (for example, because they prefer working there to working in a rural region), further complicating attempts by the Ministry of Health to achieve its goals.

The perspective of rank-and-file clinical instructors also raises concerns over how policy is made and implemented. Many staff do not understand where policies come from or why certain policies are adopted—a problem that partly reflects their lack of participation in the policy-making process (representation at policy meetings is described as “top heavy” with directors). This lack of participation is cited as one reason that the design of policy has often overlooked key implementation details. Perhaps most important, politicians are perceived to judge health care personnel policies very differently from health workers—measuring success in terms of aggregate numbers and ratios rather than in terms of their impact at the patient level.

Regulatory Councils

Regulatory councils, under the authority of the Ministry of Health, are the bodies that officially license health workers. The Nurses and Midwives Council of Ghana is perceived to be the strongest regulatory council, thanks to its direct authority over training schools for nurses and midwives.⁵

The Nurses and Midwives Council’s governing board is representative of many of the most relevant stakeholders in health care personnel policy, including representatives from the Ministry of Health and the GHS offices, various professional associations, and the Ministry of Education. The council’s role is to implement policies on behalf of the Ministry of Health, though in at least one important instance it has pushed back on the ministry’s authority and established a measure of autonomy over policies that govern the production, training, and evaluation of nurses and midwives. At the time of writing, the Nurses and Midwives Council was critical in scaling back the number of health assistants (nurses with a lower skill level) and scaling up the number of more highly skilled midwives trained in Ghana’s nursing and midwifery schools.

Other stakeholders in Ghana perceive the Nurses and Midwives Council as a “tough” (sometimes too tough) and “serious” body, particularly in enforcing rules on recruitment to nursing and midwifery schools and administering licensing exams. The council seems to view compensation schemes in a traditional and hierarchical manner, with the value of and compensation associated with a particular job determined largely by the years of training required rather than by some impact-based

assessment. According to the Nurses and Midwives Council, cadres of workers should compare themselves only to similar cadres in other countries or settings, not to different cadres working on the same team or in the same facility. These comments are directly relevant to the case of salary consolidation.

Professional Associations

Professional associations also take on the role and key responsibilities of unions. The Ghana Medical and Dental Association and the Ghana Registered Nurses Association, the two largest and most influential professional associations, are probably the most powerful players outside the government for health care personnel policy making, with much of their power coming from their ability to hold strikes.

The Ghana Medical and Dental Association. The Ghana Medical and Dental Association views itself as a key stakeholder in health care personnel policy making. It enjoys perhaps the best access of the professional associations to government bodies because its members hold leadership positions in the Ministry of Health, the GHS, teaching hospitals, and other health sector organizations. The Ghana Medical and Dental Association president typically has direct access to the Minister of Health.

The Ghana Medical and Dental Association has been the source of important policy changes. For example, it lobbied the government to raise the pay of doctors for hours worked beyond the normal 40 hours a week—culminating in the additional duty hours allowance scheme in the 1990s and a cascade of related issues since.

It views doctors as the leaders of the health sector. (As one doctor put it, “Among equals, some are more equal than others.”) It has had tense relations with the other professional associations, which challenged the perceived bias in favor of doctors when salaries were increased and “consolidated” in 2007.

The Ghana Medical and Dental Association outwardly accepts the Ministry of Health’s leadership role and states that it is willing to support the ministry’s policies. But when pushed on controversial issues, it sides with doctors’ interests. It supports postings to deprived areas, for example, with the caveat that certain “essentials”—such as decent accommodation—be in place so that doctors can function in such areas.

The Ghana Registered Nurses Association. The Ghana Registered Nurses Association is another powerful player in policy making. One

member boldly stated that no health care personnel policy should be made without detailed consultation with the association. Although such consultations are extensive, the Ghana Registered Nurses Association sometimes finds them inadequate.

How the Ghana Registered Nurses Association's power compares with that of the Ghana Medical and Dental Association is debated. Some observers place the Ghana Medical and Dental Association on top, thanks to the prestige of doctors and the placement of its members in leadership positions. Others (including some doctors) believe the Ghana Registered Nurses Association may be just as powerful, given its size (registered nurses comprise the largest cadre of health workers) and the extent to which the health system relies on nurses for its basic functioning. A nurses' strike can be more disruptive to the health system than a doctors' strike because the number of nurses is greater than the number of doctors, and because doctors refuse to cover for striking nurses (to some extent, nurses cover for doctors during doctors' strikes). The Ghana Registered Nurses Association believes strongly in "equal pay for equal work," a perspective that can easily conflict with the traditional hierarchy of the health sector. There is also some evidence that the Ghana Registered Nurses Association is less disciplined than the Ghana Medical and Dental Association.

Development Partners

Development partners comprise United Nations agencies, such as UNAIDS; global programs, such as the Global Alliance for Vaccines and Immunization and the Global Fund to Fight AIDS, Tuberculosis and Malaria; bilateral foreign aid agencies; and other international partners in the health sector. The most important development partners for health care personnel policies are the World Bank, the World Health Organization, the Danish International Development Agency, the Dutch Embassy, the U.K. Department for International Development, and the U.S. Agency for International Development.

The government views development partners as very important players, thanks to the financing and the substantial technical assistance on policy issues they provide. It consults these partners through institutionalized monthly, quarterly, and annual meetings. Their views are taken seriously when presented respectfully and constructively, but they are likely to be ignored when presented as attacks.

There is mixed evidence on the depth and breadth of these dialogues. It is not clear that development partners are interested in structural

health care personnel problems beyond the rules that govern the way their funds can be used. And it is difficult to assess how seriously the government takes their views. Some observers believe that the government earnestly and respectfully discusses issues with development partners—but then proceeds to do as it likes, regardless of the partners' objections.

Development partners raise a number of concerns:

- Formal budget declarations and actual expenditures are not consistent.
- Recent salary increases were much higher than expected and did not seem to improve productivity.
- The quality and productivity of health care personnel are not high enough.
- There is insufficient attention paid to alleviating the health workforce shortage in rural areas.
- The deans of medical training institutions do not appear to play a direct or major role in policy making.
- Health investments often focus on more urbanized and richer areas and regions than on more marginalized regions.
- Turnover of their own staff makes it difficult for development partners to have sustained effects on policy making.

Outside Consultants and Advisers

Discussions later in this chapter on the process of policy development reveal that private consultants hired from outside Ghana were key stakeholders in policy making in at least two recent policy cases. With remarkable access to key government leaders and offices, consultants directed the research and designed policy. Their work was cut short and significantly altered after political controversies flared.

Other Stakeholders

In many countries, the most important additional stakeholder is the Ministry of Finance, which often plays an important role in the health sector. But reports in Ghana are mixed on this ministry's importance. For many policies, it is limited to providing the Ministry of Health with a budget ceiling (which is determined by the cabinet, not solely the Ministry of Finance), and it takes a hands-off approach on how funds are used. Of course, the more a policy has important macroeconomic implications, the more likely it is that the Ministry of Finance will play a role. In negotiations over salary consolidation, the Ministry of Finance was

reportedly persuaded to substantially raise the budget ceiling for salaries after lobbying by the outside consultant who designed the new system.

Other key stakeholders not interviewed for the study include the following:

- The Office of the President, which led the single spine salary structure (the process of reforming salaries for all civil servants, including health workers)
- The Ministry of Education, which has authority over training institutions
- The Ghana College of Physicians and Surgeons (Ghana's main medical school), which enjoys a great deal of independence over its curriculum and other operations
- CHAG, a key deliverer of health care, which operates closely with the GHS
- Private sector entities, such as physicians in private practice and multinational companies that donate equipment to teaching hospitals (thus affecting the distribution of health care personnel)
- Local governments and district-level health managers, who frequently lobby central decision makers for resources or policies that benefit their districts
- Parliament and the parliamentary subcommittee for health (though most stakeholders reported that Parliament plays a weak role in health care personnel policies)
- Opposition political parties, which play an indirect role by influencing the decisions of the ruling party
- The media, which affect public opinion by publicizing criticisms by the opposition party, demands by striking health workers, and negative effects on patients from strikes

The Policy Process

Given the issues and actors described, how should decision makers design and implement effective health care personnel policies? Interviews with key respondents point to a spectrum of potential processes that range from an official (or formal) transparent and predictable process to a non-transparent and hard-to-predict one in which individuals matter a great deal and perceptions of the process vary substantially.

This section first spells out how the official process unfolds and provides some examples of issues that are more likely to follow this path. It

then describes a very consequential health care personnel policy that deviated substantially from the official path.

To develop some of the interventions, such as those discussed in chapter 6, stakeholders need to consider which path is more likely to yield results and strategize accordingly. The official process is divided into seven phases (table 8.1).⁶

Two of the most important health policies in Ghana—the termination of the additional duty hours allowance scheme for doctors and the consolidation of, and increase in, salaries of all health care personnel—deviated dramatically from the official process. The additional duty hours allowance scheme was instituted in 1999, mainly at the request of the Ghana Medical and Dental Association. It was cumbersome to manage, costly, and de-linked from actual extra hours worked. The GHS called for abolishing the scheme and hired a British consultant to lead a job evaluation and recommend a new salary structure. For several months, a team of mid-level technocrats helped the consultant study job descriptions, interview workers about their duties, and create two pay scales with several bands of seniority as the foundation of a new, consolidated salary structure for all health workers. The technical work attracted much attention, and political problems soon surfaced. As a result, the goal was broadened to replacing the additional duty hours allowance scheme with a new system for objectively determining compensation levels and promotions. Some stakeholders—such as local managers, who enjoyed discretion in promoting staff—found this change threatening. The Ministry of Health initially viewed the scheme to be an operational issue under the GHS's authority, but the ministry took over when the work moved toward systemic change.

During design work, the consultant started negotiating directly with a high-level group of decision makers from the GHS, the Ministry of Health, the Ministry of Finance, the International Monetary Fund, teaching hospitals, and the Office of the President. Such access would normally be helpful, but group members thwarted the process, ending the consultant's work prematurely. Some of the friction was highly personal—for example, the chief executives of the teaching hospitals reportedly objected to being placed in the same grade as the heads of regional hospitals. The consultant, who refused to back down, was ordered by the Ministry of Health to stop work before completing the performance-based pay schemes and managing to replace the old salary structure with the new. New “internal” consultants allegedly abandoned the proposed structure, used “their own intuition” about appropriate salaries, and

Table 8.1 Proposed Phases of the Official Process of Policy Making on Health Care Personnel

<i>Phase</i>	<i>Description</i>
1. Generate ideas	An array of stakeholders can provide ideas. Top-down ideas can come from the Minister of Health, the Director General of the GHS, party manifestos, the president, and the Ministry of Finance. Bottom-up ideas can come from the Ghana Registered Nurses Association (which lobbied for better working conditions), the media (which have reported on staff shortages), and local officials (who pressed central decision makers to increase enrollment at midwifery schools in their regions).
2. Incorporate ideas into the policy agenda	For ideas to be incorporated into the national policy agenda, proponents must share their ideas at regular government meetings with stakeholders and at monthly, quarterly, and annual meetings with development partners. The most important forums for dialogue are the health summits held twice a year in April and November. Recent issues discussed at these meetings included many of the ideas discussed in this book.
3. Analyze ideas and design policy solutions	The Ministry of Health appoints a technical working group to research the issue, seek input from stakeholders, and design policy options. The extent to which lobbying, political strategizing, or negotiating begin at this stage is not easily generalized. In some cases, technical groups are left to do their work “objectively.” In most cases, as one official put it, “politicians let the group do its work while monitoring them at arm’s length, and then intervene at critical stages.” Other stakeholders lobby for problem definition and policy design that best advance their interests. Such involvement reduces surprises but provides opponents greater opportunity to thwart an idea.
4. Reach a decision	The Ministry of Health determines whether the recommended policy is within its authority or requires cabinet or parliamentary actions. In this phase, policy options may also be discussed with development partners or other stakeholders.
5. Declare official policy	A decision is normally expressed publicly through a minister’s speech, a report from the president’s office, or some other public documentation process. The Ministry of Health’s Director for Policy, Planning, Monitoring, and Evaluation drafts operational guidelines and determines the bodies (such as the GHS and CHAG) responsible for implementing the policy. The GHS is normally responsible for crafting a detailed operational plan for carrying out the policy within its ranks; the extent to which such plans apply to the semiautonomous teaching hospitals, CHAG, and military hospitals is not clear.
6. Implement	We address phases 6 and 7 together because respondents interviewed by Blanchet (2009) were not informative about the implementation and the monitoring and evaluation phases, suggesting that these phases are the “black boxes” of the health care personnel policy process. There was some follow-up to the aide memoires produced by the April health summits, but it largely involved communicating the policy to lower-level actors. There seems to be little monitoring of actions beyond convening more meetings. There are also often design-based obstacles to implementing a policy, such as unclear staffing norms that are prerequisite to implementing a new posting system. The thoroughness of a policy’s implementation is also constrained by the limited enforcement capacity of the Ministry of Health, especially over semiautonomous and private providers.
7. Monitor and evaluate	

offered new, consolidated salary levels to the professional associations as take-it-or-leave-it offers.

The government proceeded to pay the wage bill based on these new levels, but much turmoil ensued. Nonphysician health workers protested the large gap between the salaries of doctors and those of other workers. Nurses complained that the government had abandoned the objective process. Unable to resolve their disputes with the GHS and the Labor Commission, some nurses went on strike. Eventually, the Ghana Registered Nurses Association leadership convinced the nurses to accept the new salaries, but the tension and dissatisfaction lingered, influencing some of the problems and solutions discussed in this book.

Conclusion

This chapter has considered the results of a stakeholder analysis of human resources for health policy making in Ghana, identifying the players, their perspectives, and policy-making processes used in the country. A motivation for the chapter was that, even if human resources problems are identified and technical proposals to address them exist (this book includes many such problems and proposals), there is often insufficient understanding of exactly how problems and ideas make it onto the policy agenda, become adopted, and get implemented and evaluated—or why they fail to do so. Further research is needed, but the findings here suggest that multiple actors, often with divergent interests, influence the policy-making process both in official, transparent ways, and in ways that are more informal, less transparent, and more difficult to predict. Health policy reformers can ill afford to ignore either possibility in strategizing about how to turn proposed technical solutions into successfully adopted and implemented policies. The capacity of health sector leaders in Ghana to bring about meaningful improvements in human resources for health will depend at least partly on further analysis of players and processes and consequent strategy development.

Notes

1. For more on stakeholder analysis, see Bossert et al. 2007; Brugha and Varvasovszky 2000; Reich 2004; Varvasovszky and Brugha 2000.
2. Blanchet (2009) provides methodological details and limitations not covered here.

3. There is broad consensus in Ghana about who the most relevant health care stakeholders are.
4. One teaching hospital reportedly employs about 20 percent of the country's general practice physicians.
5. The counterpart medical council lacks such authority over the main medical schools.
6. No assumption is made here about whether this process is an ideal one—it is simply the consensus view among respondents in the study informing this chapter about how policy making is supposed to occur.

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APPENDIXES

**Analysis of Decision-Making
Authority, Training Institutions,
and Compensation**

APPENDIX A

Allocation of Decision-Making Authority Regarding HRH at the Various Levels of the Health System

Christophe Lemiere, Angela E. Micah, Christopher H. Herbst, and David Haddad

Human resources for health (HRH) management depends partly on there being sufficient decision-making authority available for managers across all levels of the health system. This appendix reviews the decision-making authority of various actors at all levels of HRH management. A summary of the bodies and organization of HRH management agencies was discussed in chapter 5. The appendix is based on interviews with the deputy director of the planning unit of the Ministry of Health's Human Resources Directorate; the director of the planning unit of the Ghana Health Service (GHS); the human resources manager of the Christian Health Association of Ghana (CHAG) Secretariat, the director at the Korle Bu Teaching Hospital, the human resources manager of the Komfo Anokye Teaching Hospital (through an e-mail questionnaire); the chief executive officer of the Tamale teaching hospital; the executive secretary of the Catholic Secretariat's health unit; and the health coordinator of Presbyterian Health Services.

Summary of Findings

Decision-making authority over health care personnel management is highly centralized, especially for GHS facilities. Overall, human resources management decisions are much more decentralized (to the benefit of facility-level managers) in CHAG facilities than in GHS ones (table A.1). For instance, CHAG facility managers have full control over recruitment, and within CHAG, facility managers have a major influence on decisions except for posting and transfers (these decisions are made regionally). Conversely, within the GHS, all decisions are made centrally (and rarely regionally).

Decision-Making Authority for the Management of HRH

This section examines the extent of decision-making authority for key human resources management functions at all levels of the health system.

Central Level

Some types of decisions are not within the formal authority of Ministry of Health managers at the central level. Indeed, although the ministry often plans recruitment and is involved in decisions on postings (for agencies), performance assessments (in collaboration with agencies), promotion (of select cadres), and salary negotiations, the Human Resources Directorate does not have the authority to allocate training, authorize leave dates, initiate or approve transfers, or take disciplinary action. It can terminate some cadres without approval but has to seek approval for others (table A.2).

The GHS headquarters makes decisions on regional postings and assesses individual worker performance. It also makes decisions on training schedules, promotions, disciplinary action, and termination. It shares decision-making authority over recruitment and salary increases with the Ministry of Health, the Ministry of Finance, and other agencies (table A.3).

At the central level, CHAG has very little decision-making authority over human resources (table A.4). It submits recruitment requests to the Ministry of Health and posts new staff allocated to the ministry. It also prepares salary increases and decides who receives training awards, based on the number of slots allocated by the Ministry of Health.

Table A.1 The GHS and CHAG: Decision-Making Authority over Health Workers

	GHS				CHAG		
	<i>Minsitry of Health headquarters</i>	<i>GHS headquarters</i>	<i>GHS Regional Health Manager</i>	<i>GHS Health Facility Manager</i>	<i>CHAG Secretariat</i>	<i>CHAG Regional Health Officer</i>	<i>CHAG Facility Manager</i>
Recruitment (for civil servants, selection to entry in civil service)	■	■	■	□	■	□	■
Posting	■	■	■	□	■	■	□
Performance assessment	□	■	■	■	□	■	■
Promotion	■	■	■	□	□	■	■
Salary increase	■	■	□	□	□	■	■
Training (decision to offer training to an employee)	■	■	■	■	■	■	■
Leave and sick days (authorization)	□	□	■	■	□	□	■
Transfer (to another facility within a district)	□	□	■	□	□	□	□
Transfer (to another district)	□	□	■	□	□	□	□
Disciplinary action	□	■	■	□	□	■	■
Termination	■	■	□	□	□	■	■

Key

■	Has final decision-making authority on that matter.
■	Has some influence on the decision (must be consulted).
□	Has no influence on this decision.

Table A.2 Ministry of Health Headquarters: Decision-Making Authority in HRH

<i>Task</i>	<i>Decision-making authority</i>
Recruit civil servants; select who enters the civil service	Can determine the number of permanent central-level workers to be recruited and seek approval from the Ministry of Finance
Post employees	Can post workers only to agencies
Assess performance	Can assess performance only of agencies, not individuals
Promote employees	Can promote employees in cadre categories A, B, and C
Raise salaries	Is involved in salary negotiations, but approval comes from Ministry of Finance
Determine which employees are given opportunities for training	Coordinates and allocates fellowships, but the decision of who to train is left to agencies
Authorize leave and sick days	None
Transfer employees to another facility within a district	None
Transfer employees to another district	None
Take disciplinary action	None
Terminate employees	Can terminate categories D and E health workers but must seek approval for terminating all other categories of health workers

Note: Categories are those determined by the Ministry of Health's Human Resources Department. Category A comprises director-generals, deputy director-generals, directors, and consultants. Category B comprises council secretaries, senior specialists, specialists, deputy directors, principal medical officers, and last graduate grades (chiefs) in the health/general professions. Category C: at headquarters, this includes senior professionals below their last grades (such as accountants, administrative managers, architects, anesthetist assistants) (headquarters cannot employ Higher National Diploma holders); in the regions, this includes all grades for which a Higher National Diploma or its equivalent is a minimum entry requirement. Category D: at headquarters, this includes all junior staff in the health/general professions (such as community health nurses, cooks, enrolled nurses, audit/accounts officers); in the regions, it includes grades for which a secondary education or a General Certificate of Education, Senior Secondary School Certificate Examination, or West African Senior School Certificate Examination is required. Category E: at headquarters, this includes all utility staff; in the regions, it includes grades requiring basic education: a Middle School Leaving Certificate or a Basic Education Certificate Examination.

Table A.3 The GHS: Decision-Making Authority in HRH

<i>Task</i>	<i>Decision-making authority</i>
Recruit civil servants; select who enters the civil service	Can determine the number of permanent regional-level workers to be recruited and seek approval from the Ministry of Health and the Ministry of Finance
Post employees	Can determine quotas for health staff at the regional level
Assess performance	Can prepare and launch the process for assessing health workers' performance

(continued next page)

Table A.3 (continued)

<i>Task</i>	<i>Decision-making authority</i>
Promote employees	Can decide and approve the promotions to be granted
Raise salaries	Must negotiate with the Ministry of Health, the Ministry of Finance, and other agencies
Determine which employees are given opportunities for training	Can decide which employee will benefit from training
Authorize leave and sick days	None
Transfer employees to another facility within a district	None (but the GHS has to be informed that transfer took place)
Transfer employees to another district	None
Take disciplinary action	Can decide, approve, and enforce disciplinary actions
Terminate employees	Can decide, approve, must be consulted on, and implement employment termination

Table A.4 CHAG: Decision-Making Authority in HRH

<i>Task</i>	<i>Decision-making authority</i>
Recruit civil servants; select who enters the civil service	Can receive requests, and compile and submit those requests to the Ministry of Health, which then submits them to the Ministry of Finance and Economic Planning for financial clearance
Post employees	Can prepare postings when the Ministry of Health allocates new staff to CHAG
Assess performance	None
Promote employees	None
Raise salaries	Can prepare salary increases to be sent to the Ministry of Health
Determine which employees are given opportunities for training	Can distribute training awards based on the number of slots allocated by the Ministry of Health; the training itself is administered by the Ministry of Health
Authorize leave and sick days	None
Transfer employees to another facility within a district	None
Transfer employees to another district	None
Take disciplinary action	None
Terminate employees	None

Teaching hospitals have considerable decision-making authority, despite the fact that they fall under the overall management of the Ministry of Health (table A.5). Teaching hospitals can decide on the number of employees to recruit (although they need approval from the Ministry of Health and the Ministry of Finance); they also decide on postings, can conduct performance assessments, and decide on promotions. Although HRH management in teaching hospitals is involved in salary negotiations of its staff, final salaries are dependent on approval from the Ministry of Finance. In addition, teaching hospitals' management teams can determine who receives training, can grant leave and sick days, can decide on transfers to another facility, and can propose disciplinary action (to be approved by the Ministry of Health). Moreover, management at the teaching hospitals can terminate some lower-level health cadres, but must seek approval from the Ministry of Health for terminating all other cadres.

Table A.5 Teaching Hospitals: Decision-Making Authority in HRH

<i>Task</i>	<i>Decision-making authority</i>
Recruit civil servants; select who enters the civil service	Can decide on the number of employees to recruit and seek approval from the Ministry of Health and the Ministry of Finance
Post employees	Can decide on postings
Assess performance	Can conduct performance assessments
Promote employees	Can decide on promotions
Raise salaries	Is involved in salary negotiations, but approval comes from the Ministry of Finance
Determine which employees are given opportunities for training	Can determine who receives training
Authorize leave and sick days	Can grant leave and sick days
Transfer employees to another facility within a district	Can decide on transfers to another facility
Transfer employees to another district	None
Take disciplinary action	Can propose disciplinary action
Terminate employees	Can terminate categories D and E cadres but must seek approval for terminating all other cadres

Note: Categories are those determined by the Ministry of Health's Human Resources Department. Category D: at headquarters, this includes all junior staff in the health/general professions (such as community health nurses, cooks, enrolled nurses, audit/accounts officers); in the regions, it includes grades for which a secondary education or a General Certificate of Education, Senior Secondary School Certificate Examination, or West African Senior School Certificate Examination is required. Category E: at headquarters, this includes all utility staff; in the regions, it includes grades requiring basic education: a Middle School Leaving Certificate or a Basic Education Certificate Examination.

Regional Level

Human resources management authority varies in regional GHS health directorates and regional CHAG facilities (table A.6). Specific information on the decision-making authority of regional hospitals was not available. At the regional level, the GHS seems to have more decision-making

Table A.6 CHAG and the GHS: Regional Decision-Making Authority in HRH

<i>Task</i>	<i>GHS</i>	<i>CHAG</i>
Recruit civil servants; select who enters the civil service	Can recruit lower-level cadres, such as maintenance workers, and approve all recruitment	Can coordinate recruitment
Post employees	Can post employees at the district level	Can coordinate postings to church facilities
Assess performance	Can conduct performance assessments	Can coordinate performance assessments of facility managers
Promote employees	Can promote employees	Can coordinate promotion of senior staff and managers
Raise salaries	None	Can coordinate salary increases of senior staff and managers
Determine which employees are given opportunities for training	Can determine which employees are given opportunities for training	Can provide external training per recommendation from facility manager
Authorize leave and sick days	Can determine and approve leave and sick days	None
Transfer employees to another facility within a district	Can approve transfers	None
Transfer employees to another district	Can approve transfers	None
Take disciplinary action	Can take disciplinary action	Can determine whether to sanction facility managers and senior officers
Terminate employees	Must be consulted	Can determine whether to terminate facility managers and senior officers

authority than CHAG, which is limited to coordination and training (table A.6). The only decision-making authority that CHAG regional managers hold is the authority to discipline and terminate facility managers. GHS regional health managers are responsible for recruiting some cadres; posting employees; conducting performance assessments; handling promotions; and determining who should be trained, transferred, or disciplined. Unlike CHAG regional managers, GHS regional managers cannot terminate employees.

District Level

The GHS district health directorate and district hospitals carry out some health management functions. Although detailed information on decision-making authority for CHAG does not exist either at the district level or for district hospitals, it does for the GHS, and such information suggests that the GHS has limited authority (table A.7). The decision-making authority of the district health executive officer includes areas related to posting, performance assessments, training, leave and sick days, and disciplinary action. In all other areas, the executive officer does not have authority, nor is there an explicit requirement to consult with management at higher levels.

Table A.7 The GHS: District Decision-Making Authority in HRH

<i>Task</i>	<i>Decision-making authority</i>
Recruit civil servants; select who enters the civil service	None
Post employees	Can decide postings, but only at the facility level
Assess performance	Can decide on performance assessments
Promote employees	Must be consulted
Raise salaries	None
Determine which employees are given opportunities for training	Can decide which employees will be trained
Authorize leave and sick days	Can decide on leave and sick days
Transfer employees to another facility within a district	Must be consulted
Transfer employees to another district	Can approve transfers
Take disciplinary action	Can decide to take disciplinary action
Terminate employees	Must be consulted

Facility Level

At the facility level, there are health centers and polyclinics for both the GHS and CHAG. Decision-making authority at the facility level is extremely limited, though CHAG facility-level managers have more authority than GHS facility-level managers (table A.8). On the whole, at the public-sector facility level, facility managers in Ghana have only limited authority to manage their staff. In the GHS facilities, managers' decision-making authority is limited mostly to assessing performance, approving training, approving sick and leave days, and taking minor disciplinary action. CHAG managers have more authority for recruiting, promoting, and increasing salaries of junior staff, as well as disciplining and firing them.

Table A.8 Facility Managers in the GHS and CHAG: Decision-Making Authority in HRH

<i>Task</i>	<i>GHS</i>	<i>CHAG</i>
Recruit civil servants; select who enters the civil service	Can prepare for recruitment as decided by regional health manager	Can make decisions and either recruit directly or submit request
Post employees	None	None
Assess performance	Can decide on performance assessments	Can prepare and conduct performance assessments with supervisors
Promote employees	Can approve promotions	Can decide to promote junior-level staff
Raise salaries	None	Can decide to increase salaries of junior-level staff
Determine which employees are given opportunities for training	Can decide and approve training	Can approve workshops and training at both basic and post-basic levels
Authorize leave and sick days	Can decide and approve leave and sick days	Can approve leave and sick days
Transfer employees to another facility within a district	Must be consulted	None
Transfer employees to another district	Must be consulted	None
Take disciplinary action	Can decide on minor disciplinary actions	Can decide to sanction junior-level staff
Terminate employees	Must be consulted	Can decide to terminate junior-level staff

APPENDIX B

Capacity of Health-Training Institutions

Hortenzia Beciu, Alexander Preker, Seth Ayettey, Aaron Lawson, and James Antwi

This appendix examines the physical, technical, and organizational capacity of Ghana's health care training institutions. At the time of the study, Ghana had a total of 82 health-training schools and training centers; most of these facilities were public (Ghana Ministry of Health, Nursing and Midwifery Council).¹ This appendix draws on the findings of a background study of a sample of 29 health-training institutions conducted in 2008–09 (table B.1) (Beciu et al. 2009).

Table B.1 Sample of Schools Assessed in Background Study

<i>Category of health institution</i>	<i>Level of education</i>	<i>Number of schools</i>	<i>Ownership</i>
Medical and dental schools	MB ChB degree (medicine);	5	Government
Schools of health sciences and allied health sciences	DBS degree (dentistry) Undergraduate degree, master's degree, doctorate	6	Government

(continued next page)

Table B.1 (continued)

<i>Category of health institution</i>	<i>Level of education</i>	<i>Number of schools</i>	<i>Ownership</i>
Nursing and midwifery schools	Diploma, advanced diploma	11	Government (8); private (2)
Community health and health assistants training school	Professional certificate	7	Government
Total		29	

Source: Beciu et al. 2009.

Summary of Findings

For many schools, the health-training institutions cannot accommodate further increases in enrollment because their physical capacity is inadequate. For example, many laboratories lack sufficient equipment and on-demand running water. Libraries are ill-equipped, lacking adequate pedagogical and information communication materials.

In terms of technical capacity, substantial variations exist in the adequacy of the academic staff, in both numbers and qualifications. Although some of the medical and top nursing schools have instructors with at least a master's degree, many of the faculty at schools for community health and health assistants have no more than a bachelor's degree. Training and teaching materials, such as professional journals, are often unavailable.

For organizational capacity, all the sampled medical, dental, and pharmacy schools have functional boards of governors. These schools also have a process in place for upgrading curricula that lies with the professional regulatory bodies, but fewer nursing and midwifery schools, and even fewer schools for community and health care assistants, have this process. Finally, most training institutions lack software for managing human resources, appraising performance, offering online courses, and conducting other management functions. Fewer than half of institutions use electronic accounting systems.

Physical Capacity

As of June 2009, 82 schools were involved in training health workers in Ghana. Of these schools, 76 were public and the rest were private (table B.2).² About 19,400 students (excluding most postgraduate students, in-service short-term courses, and training in traditional medicine

Table B.2 Number of Health-Training Institutions and Students, 2008

<i>Institution</i>	<i>Number of schools</i>		<i>Number of students</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Medical schools (undergraduate medical degree) ^a	4		2,015	
Pharmacy schools	2	1	688	
Dental schools	1		151	
Nursing schools (all including post-basic and specialist as well as some midwifery programs within these schools)	23	4	6,944	185
Midwifery schools	12	1	929	
Schools of hygiene and public health	3		1,096	
Community health care (certificate) schools	9		1,944	
Community health care (diploma) schools	2		135	
Schools for health assistants	19		3,834	
Schools for technicians, technologists, and all other cadres at the Kintampo rural health training school	1		1,457	
Total	<u>76</u>	<u>6</u>	<u>19,194</u>	<u>185</u>
	82		19,379	

Source: World Bank analysis, based on data from Beciu et al. 2009 and databases of the Ministry of Health and the Ministry of Education.

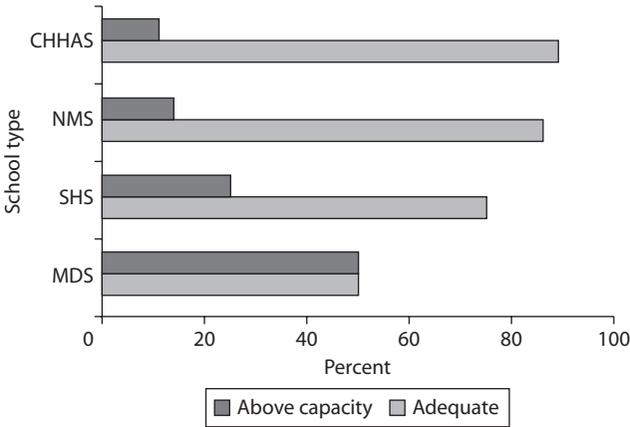
a. Data from Ministry of Education database (2007/2008).

other than herbal medicine) were enrolled in these institutions, almost all of them in public institutions.

Drawing on a random sample of 29 health-training institutions (which included all four medical schools and a random selection of all other schools), Beciu et al. (2009) identified a mixed picture of the capacity of health-training institutions to accommodate students. As reported by the schools in the study, the medical school at the University of Ghana and the Kwame Nkrumah University of Science and Technology were functioning above capacity. The two other medical schools—the University for Development Studies and the University of Cape Coast, especially the new school in Cape Coast—had the capacity to increase their enrollment. For the other levels of education (nursing, midwifery, technicians, and the like), the situation varied across schools. Some schools were operating at maximum capacity and above, and others could have accommodated more students (figure B.1).

Asked to identify the main challenges they face, school directors cited a lack of space, followed by inadequate equipment (laboratory), a lack of instructors, and poor infrastructure, including inadequate practical training sites (figure B.2).

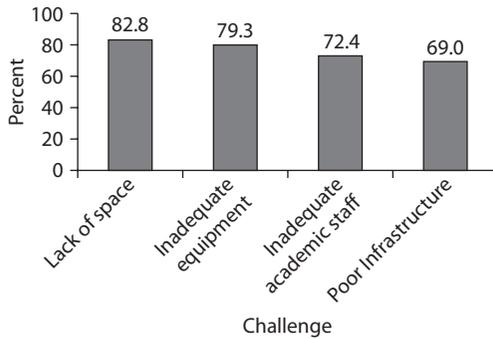
Figure B.1 Schools Operating at and above Physical Capacity, 2008–09



Source: Beciu et al. 2009.

Note: CHHAS = community health care and health care assistant schools offering certificate programs; NMS = nursing and midwifery schools offering diploma programs; SHS = schools of health sciences offering bachelor’s degrees; MDS = medical and dental schools.

Figure B.2 Major Challenges for Schools, 2008–09



Source: Beciu et al. 2009.

The survey also collected data on the age and condition of buildings. Of the schools surveyed, the nursing, laboratory-training, and medical schools are the oldest, and the schools for community health assistants and schools of health and allied health sciences are the newest. Among the schools surveyed, 13 opened during the past 10 years: 1 medical school; 4 schools of health sciences and allied health sciences; 3 schools of nursing and midwifery; and 5 schools of community health and health assistants training.

More than 30 percent of all types of facilities needed minor repairs, and 3–10 percent needed major repairs (table B.3). Among the schools included in the study, the ratio of recurrent to capital investments was lower than international standards, except for newly built schools (Beciu et al. 2009).

Of the sampled schools, 79 percent had on-site laboratories and a large percentage reported that their laboratories were functional, meaning that the labs were used for the purposes for which they were created (table B.4).

Despite this, insufficient equipment in many laboratories is a major concern. Among school directors, 79 percent reported that, in existing laboratories, laboratory equipment was inadequate (see figure B.2).

Table B.3 Status of Administrative, Teaching, and Residential Facilities, 2008–09
percent

<i>Condition</i>	<i>Administrative</i>	<i>Teaching</i>	<i>Residential</i>
Good	50	51	55
Minor damage	40	46	34
Major damage/destroyed	10	3	11

Source: Beciu et al. 2009.

Table B.4 Availability of Laboratories, 2008–09

<i>Status</i>	<i>Medical and dental schools (n = 5)</i>	<i>Health care sciences schools offering bachelor's degrees (n = 6)</i>	<i>Nursing and midwifery schools offering diploma programs (n = 11)</i>	<i>Community health and health care assistant schools offering certificate programs (n = 7)</i>	<i>Total</i>
Laboratory available	3 ^a	6	7	6	22
Percentage of all schools	60	100	64	86	79
Laboratory functioning	3	5	7	6	21
Percentage of available laboratories	100	83	100	100	96

Source: Beciu et al. 2009.

a. Two of the three medical schools were somewhat unique cases. One medical school was new and just furnishing its laboratories; the other medical school was struggling to deliver preclinical and clinical laboratory training.

Only 33 percent of medical and dental schools, 50 percent of schools of community health science, 40 percent of schools of health sciences, and 43 percent of schools of nursing and midwifery reported adequate lab equipment.

Lack of access to running water and electricity in many health-training institutions is also problematic. Large numbers of institutions reported a lack of running water (table B.5). Lack of regular and reliable access to electricity was a problem, especially in residential facilities (table B.6).

Table B.5 Access to Running Water by School and Facility Type, 2008–09

<i>Type of facility</i>	<i>Medical and dental schools (n = 5)</i>	<i>Health care sciences schools offering bachelor's degrees (n = 6)</i>	<i>Nursing and midwifery schools offering diploma programs (n = 11)</i>	<i>Community health and health assistant schools offering certificate programs (n = 7)</i>	<i>Total</i>
Teaching	3 (60.0)	4 (66.7)	7 (63.6)	6 (85.7)	20 (68.9)
Administrative	4 (80.0)	4 (66.7)	8 (72.7)	7 (100.0)	23 (79.3)
Residential	4 (80.0)	3 (50.0)	7 (63.6)	3(42.9)	17 (58.6)

Source: Beciu et al. 2009.

Note: Figures in parentheses are percentages.

Table B.6 Access to 24-hour Electrical Power Supply by School and Facility Type, 2008–09

<i>Type of facility</i>	<i>Medical and dental schools (n = 5)</i>	<i>Health care sciences schools offering bachelor's degrees (n = 6)</i>	<i>Nursing and midwifery schools offering diploma programs (n = 11)</i>	<i>Community health and health assistant schools offering certificate programs (n = 7)</i>	<i>Total</i>
Teaching	5 (100.0)	2 (33.3)	10 (90.9)	6 (85.7)	23 (79.3)
Administrative	5 (100.0)	4 (66.7)	10 (90.9)	6 (85.7)	25 (86.2)
Residential	4 (80.0)	6 (50.0)	7 (63.6)	4 (57.10)	18 (62.1)

Source: Beciu et al. 2009.

Note: Figures in parentheses are percentages.

Technical Capacity

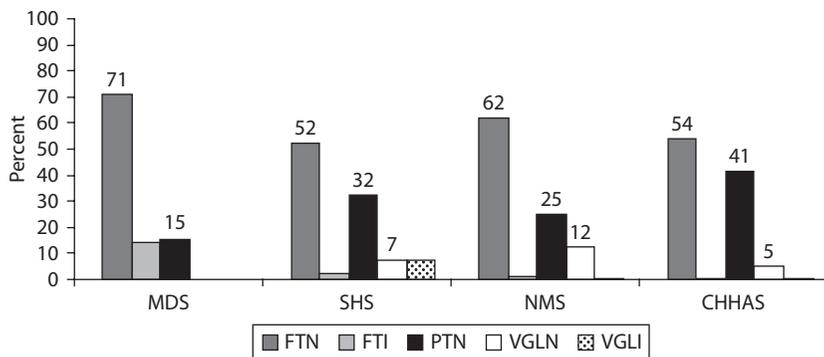
Both the quantity and quality of academic staff vary (figure B.3). Many instructors are employed part time, though there are substantial variations across schools. Schools of health care and allied health care sciences have fewer full-time academic staff than do nursing and midwifery schools or schools for community health care and health care assistants. Schools of medicine and allied health care sciences have some full-time staff from outside Ghana.

All instructors at medical schools have at least a master's degree (Beciu et al. 2009). By contrast, many faculty members at schools for community health care and health care assistants have no more than a bachelor's degree (figure B.4).

At the time of the study, the University of Ghana had introduced a policy requiring lecturers to have a doctorate or equivalent degree. Clinical instructors had to have completed a postgraduate fellowship. This policy affected the nursing schools affiliated with the University of Ghana immediately, because most instructors at these institutions did not hold doctoral degrees.

Discussions with stakeholders reveal that, in many programs, instructors also lacked adequate clinical experience, pedagogical skills, or both.

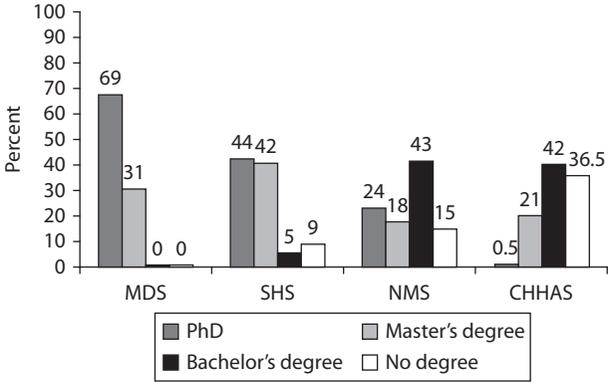
Figure B.3 Full- and Part-Time Faculty by School Type, 2008–09



Source: Beciu et al. 2009.

Note: MDS = medical and dental schools; SHS = health care sciences schools offering bachelor's degrees; NMS = nursing and midwifery schools offering diploma programs; CHHAS = community health care and health care assistant schools offering certificate programs; FTN = full-time national; FTI = full-time international; PTN = part-time national; VGLN = visiting guest lecturer national; VGLI = visiting guest lecturer international.

Figure B.4 Faculty Education by School Type, 2008–09



Source: Beciu et al. 2009.

Note: MDS = medical and dental schools; SHS = health care sciences schools offering bachelor's degrees; NMS = nursing and midwifery schools offering diploma programs; CHHAS = community health care and health care assistant schools offering certificate programs; PhD = PhD or equivalent.

Because a doctorate is not a substitute for either, opinions differ on the relevance of the new requirement in health professional schools, such as those of medicine and nursing. Analysis of the skills, qualifications, and experience of instructors is needed to understand the requirements necessary for teaching staff.

Of 29 schools sampled in the survey, 20 (71 percent) had varying levels of academic staff vacancies (table B.7). Rapid increases in student enrollments without parallel recruitment of staff resulted in low staff-student ratios in medical schools (75 percent). At that time, the Ministry of Health's failure to follow through on appointments was viewed as a major reason for delays in running programs at some other schools, especially at schools of health care sciences (57.1 percent) and schools for community health and health care assistants (33.3 percent). An inability to attract qualified staff was cited as a major reason for faculty vacancies at medical schools (25 percent) and schools of nursing and midwifery (50 percent).

The survey revealed very different student-teacher ratios, depending on the school and type of program. On average, schools of nursing and midwifery had ratios of 15:1. Schools of medicine had ratios of 8:1, taking into account the international lecturers. For schools of community health

Table B.7 Reasons for Faculty Vacancies by School Type, 2008–09

<i>Reason</i>	<i>Medical and dental schools (n = 5)</i>	<i>Health care sciences schools offering bachelor's degrees (n = 6)</i>	<i>Nursing and midwifery school offering diploma programs (n = 11)</i>	<i>Community health and health care assistant schools offering certificate programs (n = 7)</i>	<i>Total</i>
Too few lecturers to meet rising student populations	3 (75.0)	1 (14.3)	1 (16.7)	2 (66.7)	7 (35.0)
Appointment delays by Ministry of Health	0 (0.0)	4 (57.1)	1 (16.7)	1 (33.3)	6 (30.0)
Lack of qualified candidates	1 (25.0)	1 (14.3)	3 (50.0)	0 (0.0)	5 (25.0)
Hold on employment by government	0 (0.0)	1 (14.3)	0 (0.0)	0 (0.0)	1 (5.0)
Low salaries and other benefits	0 (0.0)	0 (0.0)	1 (16.7)	0 (0.0)	1 (5.0)
Total	4	7	6	3	20

Source: Beciu et al. 2009.

Note: Figures in parentheses are percentages.

and health assistants, the ratio varied from 13:1 to 43:1. Discrepancies existed by type of course and discipline, especially in science and pre-clinical courses such as anatomy, which have one or two teachers for a cohort of several hundred students.

The problem will worsen if the many full-time instructors close to retirement age are not replaced. Replacing full-time instructors might not be easy, given the increases in the number of students and the years needed to become an effective instructor.

The availability of training and teaching materials varies (table B.8). All medical, dental, and nursing and midwifery schools have access to professional journals; all medical and dental schools and three-quarters of nursing and midwifery schools have access to books. Access to professional materials is lower for other types of institutions and for online or videotaped materials.

Table B.8 Access to Professional Teaching Resources by School Type, 2008–09
percent

<i>Type of resource</i>	<i>Medical and dental schools (n = 5)</i>	<i>Health care sciences schools offering bachelor's degrees (n = 6)</i>	<i>Nursing and midwifery schools offering diploma programs (n = 11)</i>	<i>Community health and health care assistant schools offering certificate programs (n = 7)</i>	<i>Total</i>
Journals	100.0	66.7	100.0	83.3	82.6
Books	100.0	77.8	75.0	66.7	78.3
Magazines	100.0	25.0	75.0	66.7	57.1
Videos	66.7	12.5	33.3	16.7	25.0
DVDs	66.7	12.5	0.0	16.7	20.0
Maps/posters	33.3	50.0	0.0	40.0	36.8

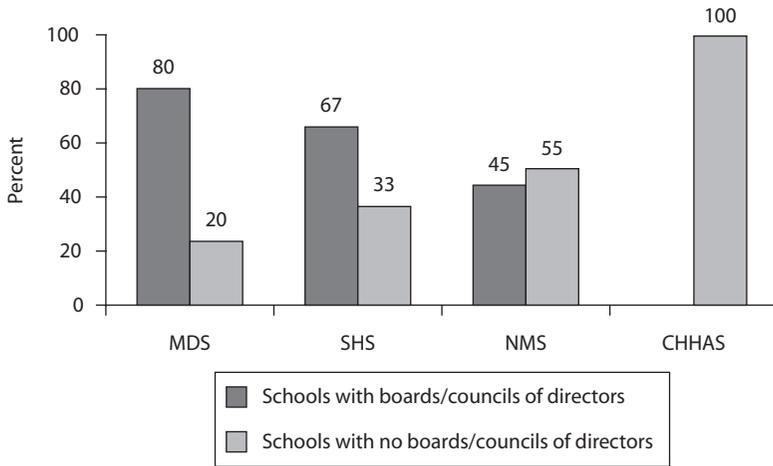
Source: Beciu et al. 2009.

Organizational Capacity

The Ministry of Health started working on boards of governors for all health-training institutions in 2006. In 2008, it sent a directive to all schools spelling out the composition and duties of the boards. In 2009, the boards were launched, and those in the mission schools were reconstituted to include members from the public sector. Today, all schools have functional boards of governors.

At the time of the study, most medical, dental, and pharmacy schools had strong governance councils and boards (figure B.5). This was not surprising, as they belong to the university system in which governance is a major feature of autonomy. Among the 13 institutions with boards, 10 had fully functional boards. The specific data from the study might no longer be relevant, but questions remain about board composition, how board members are appointed, and the boards' relationships with the political environment. Moreover, none of the community health or health-training schools had management boards or councils.

The responsibility for revising curricula lies with professional regulatory bodies and the National Accreditation Board. For example, the Nurses and Midwifery Council is responsible for the nurses, midwifery, and community health and health assistant curricula.

Figure B.5 Schools with Boards/Councils of Directors, All Sampled Schools, 2008–09

Source: Beciu et al. 2009.

Note: MDS = medical and dental schools; SHS = health care sciences schools; NMS = nursing and midwifery schools; CHHAS = community health care and health care assistant schools.

All medical and dental schools and schools of health care sciences had processes for updating their curricula (incremental internal revision). Fifty-five percent of schools of nursing and midwifery and just 29 percent of schools for community health and health care assistants had such processes in place.

Factors that influence curricula revisions include periodic mandatory updates, feedback from student evaluations, initiatives by staff, suggestions by external experts, and requirements set by the accreditation process (table B.9). Medical schools rely on end-of-class student evaluations to make incremental changes. By contrast, the Nurses and Midwifery Council has a more specialist-driven approach for curricula revision, using external experts and accreditation norms.

At the time of the study, most training institutions lacked software tools for managing their human resources, appraising performance, offering online management courses, and conducting other management functions (figure B.6). Less than half use electronic accounting systems, and less than 20 percent have an electronic record of staff location, situation, and performance. The lack of accessible databases makes some decisions within each institution and at the national level difficult.

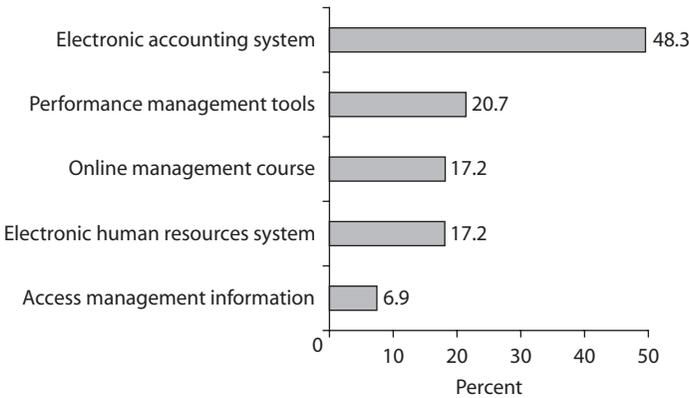
Table B.9 Institutional Drivers of Curricula Revisions by School Type, 2008–09

<i>Driver</i>	<i>Medical and dental schools (n = 5)</i>	<i>Health care sciences schools offering bachelor's degrees (n = 6)</i>	<i>Nursing and midwifery schools offering diploma programs (n = 5)</i>	<i>Community health and health care assistant schools offering certificate programs (n = 3)</i>	<i>Total (n = 19)</i>
Curriculum revised at regular intervals	5 (100)	6 (100)	2 (40.0)	2 (66.7)	15 (78.9)
Student evaluation	5 (100)	3 (50.0)	3(66.7)	3(100)	14 (73.7)
Academic staff suggestion by external expert	3 (60.0)	5 (83.3)	4 (80.0)	3(100)	15 (78.9)
Accreditation process	4 (80.0)	5 (83.3)	2 (40.0)	3(100)	14 (73.7)

Source: Beciu et al. 2009.

Note: Figures in parentheses are percentages.

Figure B.6 Access to Basic Electronic Management Tools, All Sampled Schools, 2008–09



Source: Beciu et al. 2009.

Notes

1. Since the study took place, more schools have been opened, both public and private. Currently, Ghana has 114 schools and training centers, 78 percent of which are public (GHWO 2011).
2. Many private, faith-based schools in Ghana receive substantial financial support from the government.

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APPENDIX C

Health Worker Wages before and after the Salary Rationalization Program of 2006

**David C. Phillips, Christopher H. Herbst,
David Haddad, and Agnes Soucat**

This appendix looks at the health worker wages and allowances in Ghana. It reviews the base salary for wages and compares that with wages in other countries in Africa and the West. It also considers how salaries vary across cadres and how they compare with salaries of competing professions and those in the private, for-profit sector. Finally, it examines the salary rationalization program implemented in 2006, which is widely perceived to have significantly increased health worker compensation. In reality, our findings here show that this may not necessarily have been the case.

Summary of Findings

Wages for health workers in Ghana are low compared with wages for similar work in developed countries, but high compared with wages in other sectors in Ghana and with wages for health workers in other African countries. Salaries for health workers increased significantly between 1998 and 2006, thanks to various policies.

Since 2006, real wages have fallen because of wage freezes and inflation. As a result, real wages were not higher in 2009 than they were in 2003. Policies other than the 2006 salary rationalization program—especially supplements provided under the additional duty hours allowance—were the main source of increases in remuneration in recent years. Much of the apparent salary increase in 2006 disappears when allowance payments are accounted for under the new health salary structure.

Top-ups to salaries have been much less common since the additional duty hours allowance was folded into the base salary. The few remaining allowances for (some) health workers today are for transportation, fuel, and accommodations.

Base Salary

Health workers in Ghana receive much lower salaries than their counterparts in high-income countries. Average physician salaries are three times as high in the United Kingdom as they are in Ghana, and more than four times as high in the United States. Salaries for nurses are three times as high in the United Kingdom and five times as high in the United States. Relative to gross domestic product (GDP) per capita, however, salaries in Ghana are almost seven times higher than they are in the United Kingdom or the United States (table C.1).

Table C.1 Annual Salaries in Ghana, the United Kingdom, and the United States by Cadre, 2003

<i>Cadre/country</i>	<i>Annual salary (US\$ PPP)</i>	<i>Salary to per capita GDP ratio</i>
<i>Physicians</i>		
Ghana	33,145	21.48
United Kingdom	100,901	3.67
United States	142,636	3.79
<i>Dentists</i>		
Ghana	33,145	21.48
United Kingdom	99,533	3.62
United States	126,963	3.38
<i>Professional nurses</i>		
Ghana	11,459	7.42
United Kingdom	35,306	1.29
United States	52,208	1.39

(continued next page)

Table C.1 (continued)

<i>Cadre/country</i>	<i>Annual salary (US\$ PPP)</i>	<i>Salary to per capita GDP ratio</i>
<i>Auxiliary nurses</i>		
Ghana	8,610	5.58
United Kingdom	21,472	0.78
United States	31,844	0.85
<i>Physiotherapists</i>		
Ghana	13,845	8.97
United Kingdom	35,681	1.30
United States	59,009	1.57
<i>X-ray technicians</i>		
Ghana	15,067	9.76
United Kingdom	42,632	1.55
United States	42,619	1.13

Sources: Data for the United Kingdom and the United States: International Labour Organization, LABORSTA database; data for Ghana: GHS Human Resource Department 2008, 2009, data from the Integrated Personnel Payroll Database.

Note: Salaries for Ghana include estimated additional duty hours allowance. PPP = purchasing power parity.

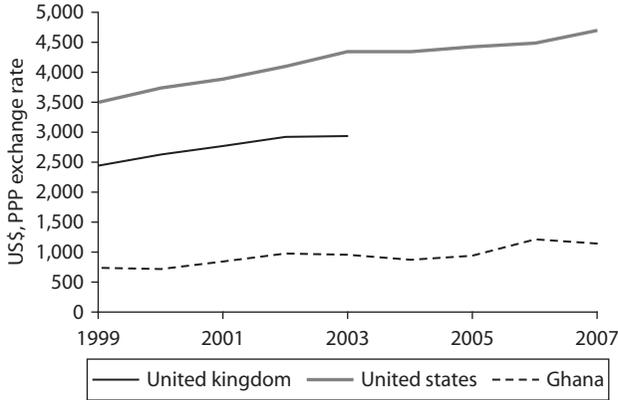
The large wage gap between professional nurses in Ghana and those in higher-income countries has persisted over the past few years, despite wage increases in 2005 that slightly decreased that gap (figure C.1). Salaries for different cadres exhibit very similar wage ratios and changes in the wage ratio over time (figure C.2). Also notable is that, for most cadres, the ratio of wages in Ghana to wages abroad rose between 1999 and 2007.

Ghanaian health workers receive higher salaries than workers in some other African countries. Figure C.3 compares Ghanaian wages in 2000 with available International Labour Organization data on salaries in Eritrea and Malawi. Salaries in Ghana are up to three to four times higher for some cadres.

Data from 2007 show that Ghana, compared with other African countries with similar incomes, has relatively lower salaries for nurses, but that it fares quite well for physicians (figure C.4). The basic salaries of Ghanaian physicians were almost three times that of nurses, while in most other countries in the region, physicians earned 1.5 to 2.0 times that of nurses.

Data from 2009 show that salaries vary significantly across cadres (table C.2). The highest monthly wages are paid to medical specialists

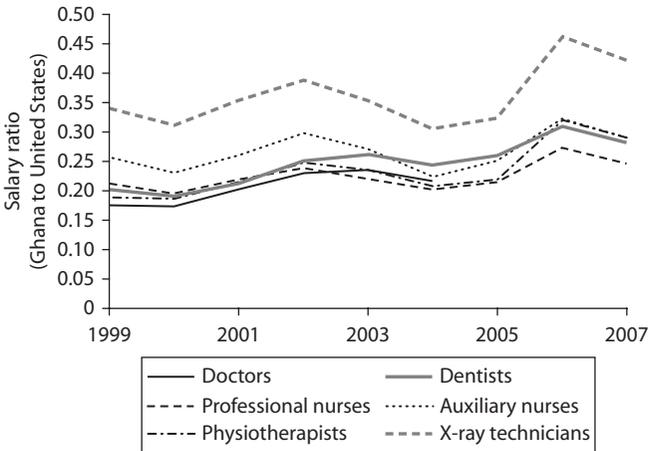
Figure C.1 Monthly Salaries of Professional Nurses in Ghana, the United Kingdom, and the United States, 1999–2007



Sources: Data for the United Kingdom and the United States: International Labour Organization, LABORSTA database; data for Ghana: GHS Human Resource Department 2008, 2009, data from the Integrated Personnel Payroll Database.

Note: Salaries for Ghana include estimated additional duty hours allowance. Data for the United Kingdom were not available beyond 2003. PPP = purchasing power parity.

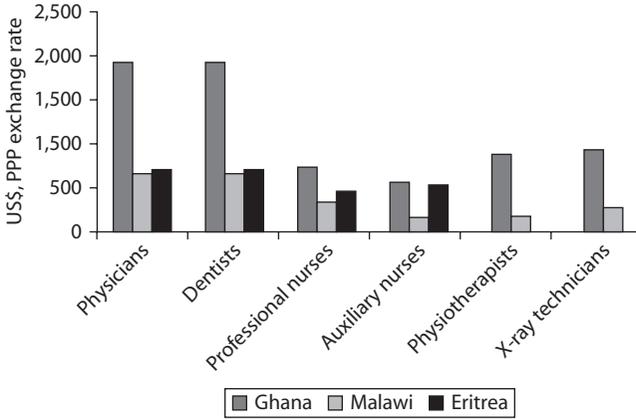
Figure C.2 Ghana–United States Salary Ratios, Various Cadres, 1999–2007



Sources: Data for the United States: International Labour Organization, LABORSTA database; data for Ghana: GHS Human Resource Department 2008, 2009, data from the Integrated Personnel Payroll Database.

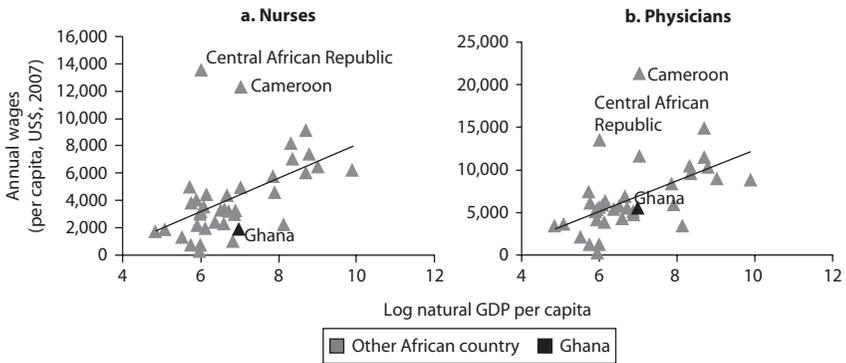
Note: Salaries for Ghana include estimated additional duty hours allowance.

Figure C.3 Monthly Salaries of Health Workers in Eritrea, Ghana, and Malawi, 2000



Sources: Data for Eritrea and Malawi: International Labour Organization, LABORSTA database; data for Ghana: GHS Human Resource Department 2008, 2009, data from the Integrated Personnel Payroll Database.
Note: Salaries for Ghana include estimated additional duty hours allowance. PPP = purchasing power parity.

Figure C.4 Annual Wages of Health Workers in Ghana and the Africa Region, 2007



Source: Produced by K. Saleh using data from Scheffler et al. 2009; Ministry of Health, Human Resource Department; World Bank 2010.

(US\$1,500), followed by dentists (US\$945) and medical officers (US\$912). Professional nurses earn about US\$400 a month. Most skilled allied health professionals earn US\$300–US\$600 a month. For all cadres of skilled health workers, salaries remain much higher than GDP per capita. On average, specialists earn 26 times, medical officers 15 times,

Table C.2 Monthly Salaries, Various Cadres, 2009

<i>Cadre</i>	<i>Monthly salary (US\$)</i>			<i>Ratio to per capita GDP</i>		
	<i>Minimum</i>	<i>Mean</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Mean</i>	<i>Maximum</i>
Medical specialist	1,359.80	1,506.10	1,722.55	23.63	26.17	29.94
Dentist	752.89	945.49	1,274.08	13.08	16.43	22.14
Medical officer	752.89	912.59	1,301.22	13.08	15.86	22.61
House officer	633.15	693.85	832.01	11.00	12.06	14.46
Occupational therapist	428.53	599.19	769.86	7.45	10.41	13.38
Medical assistant	181.70	593.08	1,143.42	3.16	10.31	19.87
Anesthetist assistant	369.65	545.62	978.47	6.42	9.48	17.00
Radiographer	416.05	545.44	1,055.59	7.23	9.48	18.35
Physiotherapist	152.72	525.77	1,084.09	2.65	9.14	18.84
Dental technologist	181.69	515.72	927.69	3.16	8.96	16.12
Biomedical scientist	148.27	503.89	1,055.59	2.58	8.76	18.35
Nursing tutor	416.05	446.83	713.61	7.23	7.77	12.40
Professional nurse	192.73	416.23	1,032.02	3.35	7.23	17.94
Optometrist	265.84	415.18	772.99	4.62	7.22	13.43
Technical officer (nutrition)	265.84	414.52	655.57	4.62	7.20	11.39
Technical officer (orthopedics)	265.84	348.50	599.94	4.62	6.06	10.43
Technical officer (X-ray)	265.84	327.94	582.47	4.62	5.70	10.12
Technical officer (other)	222.64	315.37	599.94	3.87	5.48	10.43
Technical officer (lab)	258.10	303.87	599.94	4.49	5.28	10.43
Physiotherapy assistant	124.18	226.20	299.21	2.16	3.93	5.20

Source: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database.

and professional nurses 7 times the average income in Ghana. Salaries within cadres also vary considerably, mostly as a result of experience and promotion over time (box C.1). For instance, an entry-level staff nurse would earn about US\$300 a month, while a principal nursing officer may earn three times that.

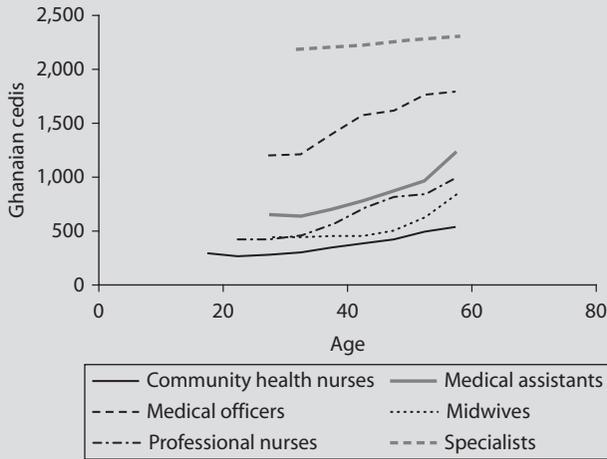
Average salaries between 2000 and 2009 of health care workers are higher than those of teachers employed by the Ministry of Education (figure C.4). In 2003, teachers were paid ₵82–₵166 (\$95–\$193). The

Box C.1

Salaries by Cadre with Career Progression

Salary progression may explain why health workers in Ghana reported more years of service than health workers in other countries (Witter, Kusi, and Aikins 2007). Data from the Integrated Personnel and Payroll Database show that working longer means that salaries increase: late-career specialists earn twice as much as medical officers. Late-career medical officers who do not specialize earn 1.5 times as much as medical officers; the most experienced professional nurses earn 2.4 times as much as the least experienced.

Figure C.1.1 Monthly Salaries of Health Workers by Age and Cadre, 2009



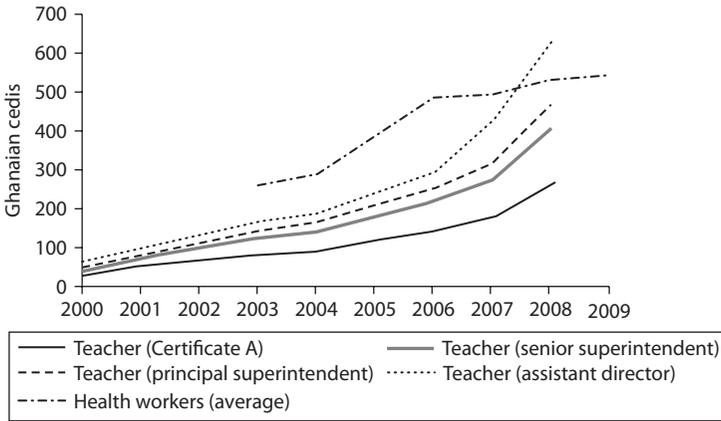
Source: GHS Human Resource Department, 2009, data from the Integrated Personnel Payroll Database.

average employee of the Ministry of Health was paid c259 (\$301) a month—1.5–3.0 times the average teacher. Because of wage freezes in the health sector since 2006, this gap has narrowed (figure C.5). Nominal salaries for educators rose significantly, with one cadre of teachers earning more than the average health worker.

A quick case study of a clinic in Ghana found that medical specialists were paid more in the private, for-profit sector than in the public sector, with and without any remaining allowances, whereas medical officers

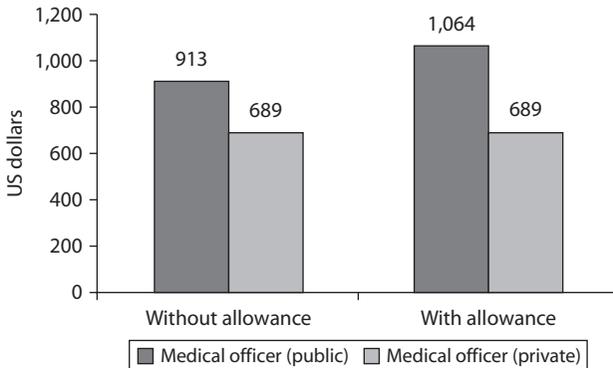
earned more in the public sector. Specialists in the private, for-profit sector were found to earn 26 percent a month more than their counterparts in the public sector (figure C.6). Nevertheless, often not captured in such data is the fact that high-level and professional cadres in the public sector often earn extra money by moonlighting in the private

Figure C.5 Nominal Monthly Salaries for Teachers and Health Workers, 2000–09

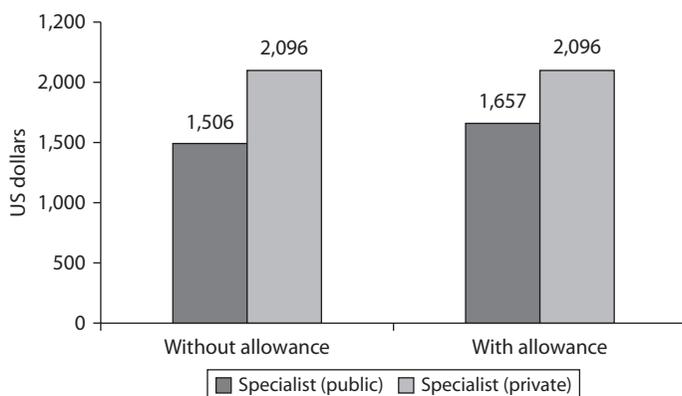


Sources: Ghana Education Service for data on teachers; GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database for health workers.

Figure C.6 Stated Monthly Earnings of Medical Officers and Specialists, with and without Allowance, Public and Private Sectors, 2009



(continued next page)

Figure C.6 (continued)

Source: Haddad 2009.

sector, and lower-level cadres earn extra money by farming and managing pharmacies and other retail outlets. Doctors and professional nurses are more likely to have *locum* practice (a second clinical practice). Compensation for *locum* is usually by the hour, with no benefits (Lievens et al. 2011).

The Additional Duty Hours Allowance

From 1998 to 2006, wages in Ghana were supplemented by an additional duty hours allowance, raising compensation for many health workers far above their base wages (box C.2). Although the allowance was enacted as a means to pay health workers for unusually long hours, its main goal was to provide salary bonuses to skilled cadres.

In 1998, the additional duty hours allowance became a simple salary supplement. The Ministry of Health assigned a fixed number of hours to each cadre of health worker; all workers in the same category received payment for the same number of hours. Because these hours were paid at the worker's hourly rate, the allowance amounted to a percentage bonus of a worker's base salary. Figure C.7 combines payroll data, the number of allowance hours, and the allowance formula to estimate monthly additional duty hours allowance payments for 2003–05 (deflated to 2004 real [new] Ghanaian cedis).¹ These payments amounted to more than half of the payments to health workers in 2003 (Phillips and Jack 2009).

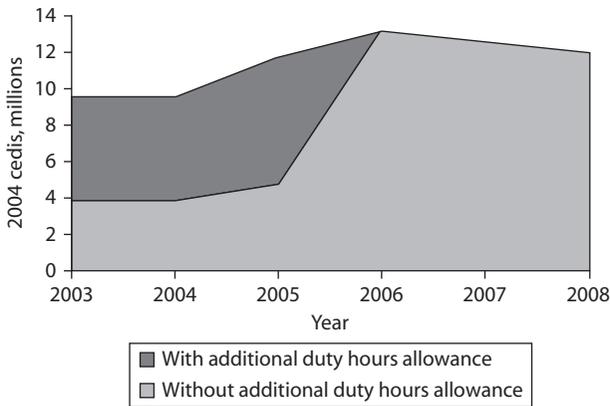
Box C.2

Doubling Physician’s Salaries and Increasing Salaries of Other Cadres

Pressure from physicians throughout the 1990s (through lobbying and strikes) secured the adoption of the additional duty hours allowance. The allowance was quickly extended to all doctors, regardless of the number of daily hours they worked, more than doubling physicians’ compensation. Base salaries constituted only 31 percent of total pay for doctors in 2006. Nurses and other health professionals also received pay increases, though direct salary compensation continued to constitute a much higher proportion of total pay for them than for doctors—for example, 76 percent of medical assistants’ pay came from salaries.

Source: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database.

Figure C.7 Total Payroll for Public Sector Health Workers, 2003–08



Source: Authors’ calculations, based on payroll data from the Controller and Accountant-General’s Department and hours from the Ghana Health Service.

The New Health Salary Structure

In 2006, a new health salary structure folded the additional duty hours allowance into the base salary structure and changed the relative baseline pay of different cadres. The cost of payroll rose 20 percent as a result of the reform.

Although the perception that overall compensation is much higher than before 2006 prevails, data do not back this up. Many health workers

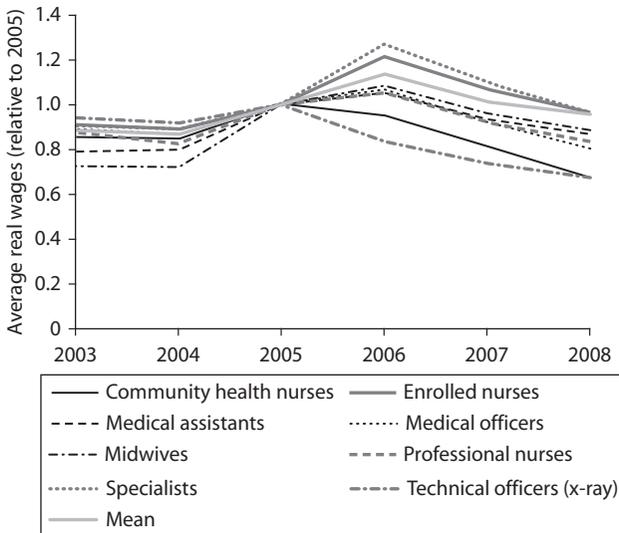
actually saw a decrease in purchasing power (Antwi and Phillips 2012). In 2004, all workers received a common percentage raise roughly equal to inflation; in 2005, all cadres received real raises, without much variation across cadres. By contrast, in 2006, enrolled nurses and specialists received the largest raises in real terms; medical officers, professional nurses, medical assistants, and midwives received smaller raises; and community health nurses and technical officers saw their real earnings fall (figure C.8).

Virtually all nonsalary and extra duty allowance payments for services were abolished in 2006 with the implementation of the new health salary structure. Today the Ministry of Health provides only three nonsalary incentives to health care personnel: allowances for transportation and car maintenance; fuel; and accommodations for some high-level managers and administrators (table C.3).²

By 2009, wages had, largely, almost returned to their prerationalization average. From 2006 to 2009, wages were frozen at their 2006 rates, allowing inflation to erode health workers' purchasing power. By 2007, average real wages of health workers had fallen back to their 2005 levels.

The dispersion of earnings of health workers did increase after 2006, but the 2006 salary changes played little direct role in this increase.

Figure C.8 Average Real Wages of Public Sector and Christian Health Association of Ghana Health Workers by Cadre, 2003–08



Source: GHS Human Resource Department 2009, data from the Integrated Personnel Payroll Database.

Table C.3 Monthly Allowances Awarded to Selected Health Personnel, 2008

<i>Transportation and car maintenance</i>	<i>Fuel</i>	<i>Accommodation</i>
15 percent of Ministry of Health health care staff receive ₵40	Medical specialists and officers, dentists, and managers and administrators (directors, directors-general, regional directors, district directors, and medical superintendents) receive 20 gallons of gasoline	Administrators receive 20 percent of their base salary for housing, 20 percent of their base salary for entertainment, and ₵40 for housekeeping services
10 percent of Ministry of Health health care staff receive ₵15		
5 percent of Ministry of Health health care staff receive ₵5		

Source: GHS Human Resource Department 2008, data from the Integrated Personnel Payroll Database.

Note: There is no mechanism in place to distribute maintenance allowances equitably. ₵ = Ghanaian cedis.

Table C.4 Dispersion in Health Worker Wages, 2003–09

<i>Year</i>	<i>All categories of workers</i>		<i>Skilled potential migrants</i>	
	<i>Composition of the workforce</i>	<i>Composition of the workforce in 2003</i>	<i>Composition of the workforce</i>	<i>Composition of the workforce in 2003</i>
2003–09	0.9320143	0.8155389	1.316074	1.166104
2003	0.7454472	0.7454497	1.077453	1.077457
2004	0.7886140	0.7374445	1.171844	1.053223
2005	0.8754891	0.7614924	1.306263	1.097759
2006	0.8850652	0.7912692	1.313394	1.177426
2007	0.9381304	0.7912692	1.311748	1.177426
2008	1.0232590	0.7912692	1.322537	1.177426
2009	1.0320630	0.7912692	1.308003	1.177426

Source: Authors' calculations, based on data from Controller and Accountant-General's Department payroll database.

Note: Statistics reported are the variance of log-wages (including the additional duty hours allowance) over the specified population. *Skilled potential migrants* comprise mainly doctors, nurses, and medical assistants. See Phillips and Jack (2009) for more details.

Instead, the changing skill mix of the workforce has driven most of the increase in dispersion. Although differences in wage rates across cadres widened in 2006, there is no evidence of decompression of the wage structure—that is, the largest raises are awarded to the workers who are already paid the most.

The dispersion in wages is measured by the variance in the log of total earnings across the population of health workers.³ Between 2003 and 2009, the dispersion in the wage structure rose from 0.75 to 1.03, a 38 percent increase (table C.4). But most of the increase came as a result of the change in the composition of the workforce. The second column

in table C.4 calculates how dispersion in wages would have changed if wage rates had changed but the composition workforce remained the same in 2003. This scenario would have increased dispersion to 0.79, an increase of only 6 percent (Phillips and Jack 2009).

Notes

1. The formula uses the real (new) Ghana cedis rather than the old ones. The exchange rate of old to new cedis is 10,000 old cedis to 1 new cedi.
2. Health care personnel allowances are funded under item 2 of the Ministry of Health budget. Health care personnel who work for the Ministry of Education but whose salaries are paid by the Ministry of Education continue to receive personnel allowances from item 2 of the Ministry of Health's budget.
3. Log-earnings are preferred to earnings because the variance of log-earnings is invariant to scaling—that is, a 5 percent raise given to all workers increases the variance of earnings but leaves the variance of log-earnings constant. A common percentage increase should not be labeled “decompression” of the wage structure.

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Despite some recent successes in Ghana, further improvements in health outcomes are in part hampered by the lack of skilled service providers—or human resources for health (HRH)—particularly in rural areas, where critical health services are needed most. To address the lack of information and guide the development of policies and programs on HRH, *Toward Interventions in Human Resources for Health in Ghana: Evidence for Health Workforce Planning and Results* aims to paint a comprehensive picture of HRH, consolidating new and existing evidence on the stock, distribution, and performance of health workers to focus on the *what*, as in *What is the situation on HRH?* and the *how*, as in *How is this situation explained?*

The book highlights new evidence on some of the underlying determinants affecting the stock, distribution, and performance of health workers in Ghana, including production and attrition, capacity to manage HRH, the capacity of health training institutions, and compensation. Policy options on HRH are also discussed, as is the fiscal and political environment needed to develop and implement such interventions.

The data and findings presented in this book are the result of extended and close collaboration between the Ghana Technical Working Group on HRH (led by the Ministry of Health) and the World Bank's Africa Region Technical Team on HRH. The information in this book will provide a better basis for Ghanaian decision makers and external partners to have a dialogue on HRH and related policies. More broadly, *Toward Interventions in Human Resources for Health in Ghana: Evidence for Health Workforce Planning and Results* will be of interest to all those working to improve HRH in Africa and beyond.



ISBN 978-0-8213-9667-4



SKU 19667



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