DIRECTIONS IN DEVELOPMENT
Human Development

The Health Sector in Ghana

A Comprehensive Assessment

Karima Saleh

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Cover photo: Volunteer nurses and Motoko clinic staff working with children. Kudorkopey, Ghana. Photo by Randy Olson/National Geographic/Getty Images.

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Foreword

Ghana has committed politically, legislatively, and fiscally to providing universal health insurance coverage for its population with the intent of reducing financial barriers to utilization of health care. In 2005, we launched a publically financed comprehensive health benefits package that included within it preventive care and treatment for communicable and noncommunicable diseases. We have committed to improving both physical and financial access to health services, using public monies to finance the population's use of both public and private sector health providers.

To attain universal coverage requires addressing the health system holistically. The Ghana health sector is going through a comprehensive set of reforms. The National Health Insurance Scheme (NHIS) is a major step forward. Reforms in the area of human resources have helped reduce attrition, especially of physicians. Decentralization and a policy on retention and use of internally generated insurance funds have ensured a better availability of drugs and incentivized staff in health facilities.

The Ghana health sector, like those in all emerging market countries, is, however, facing challenges on many fronts. Health outcomes are not on track to meet several of the health-related Millennium Development Goals, reflecting the need for both better targeting of public health programs and improvements in the functioning of the health delivery

system. Increases in NHIS coverage, while significant, have been slow, and half of the country's population still lacks formal coverage. The primary challenges have been improving the risk pool, including informal sector workers, and redefining the stringent definition of the contribution-exempt poor. However, under current cost and enrollment projections the system will not be financially sustainable in the long term, so there is more work to do.

To advance its reform agenda, the government of Ghana will need to undertake significant reforms in the areas of decentralization, governance, health service delivery, public health, and health financing. These reforms will need to be embodied in a comprehensive and accountable health reform process to facilitate Ghana's transition to universal health coverage.

This book provides an important evidence-based review of the current performance of Ghana's health system and options for reform. As such, it provides an overall picture of the Ghana health sector, how things were and how things have changed, as well as a situational analysis of the performance of the health delivery and health financing systems using the latest available data. Finally, it discusses key reform issues and options in the context of the country's likely fiscal space.

An important and valuable contribution of this book is its examination of how Ghana is performing compared to its neighboring countries and compared to other countries with similar incomes and health spending, providing global benchmarks for Ghana's health system performance.

The book is targeted toward those who want to learn about the Ghana health sector. It is for those who want to understand what reforms have been undertaken, the results to date, and the remaining challenges that need to be addressed.

The book will be useful to policy makers and to others for many years to come, given its evidence base and short- and medium-term policy reform options.

Honorable Albin Bagbin
Minister of Health
Ghana

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About the Author

Karima Saleh is a health economist with more than 15 years of experience working in more than 15 countries. She holds a PhD in health economics from the Johns Hopkins University. She is currently a senior economist (health) at the World Bank, with work experience (including field work) on health financing policy in low- and lower-middle-income countries. She was part of the core team that developed the 1993 World Development Report, *Investing in Health*, and is a coauthor of *Health Financing in Ghana* (Washington, DC: World Bank, 2012).

Abbreviations

ACT	artemisinin-based combination therapy
ADHA	additional duties hours allowance
ALOS	average length of hospital stay
AMFm	Affordable Medicines Facility–malaria
ANC	antenatal care
ARI	acute respiratory infection
ARV	antiretroviral
BEU	Biomedical Engineering Unit
BMC	Budget Management Center
BOR	bed occupancy rate
CD	communicable disease
CHAG	Christian Health Association of Ghana
CHPS	Community-based Health Planning and Services (initiative)
CMS	Central Medical Stores
CPC	claims processing center
CWIQ	Core Welfare Indicators Questionnaire
DA	district assembly
DACF	District Assembly Common Fund
DHA	district health administration

DMHIS	district mutual health insurance scheme
DOTS	Directly Observed Treatment Short-course
DRG	diagnostic-related group
EML	Essential Medicines List
FDB	Food and Drugs Board
FFS	fee-for-service (system)
GDHS	Ghana Demographic Health Survey
GDP	gross domestic product
G-DRG	Ghana diagnostic-related group
GHS	Ghana Health Service
GLSS	Ghana Living Standards Survey
GPO	Group Purchasing Organization
GPRS	Ghana Growth and Poverty Reduction Strategy
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
HMIS	health management information system
HRH	human resources for health
HSMTDP	Health Sector Medium Term Development Plan
HW	health worker
IGF	internally generated fund
IMF	International Monetary Fund
IPTp	intermittent preventive treatment policy for pregnant women
ITN	insecticide-treated net
JLI	Joint Learning Initiative (WHO)
LEAP	Livelihood Empowerment Against Poverty
LI	legislative instrument
LMIC	lower-middle-income country
M&E	monitoring and evaluation
MBP	mission-based provider
MDG	Millennium Development Goal
MESW	Ministry of Employment and Social Welfare
MICS	Multiple Indicator Cluster Survey
MLGRD	Ministry of Local Government and Rural Development
MMR	maternal mortality ratio
MOH	Ministry of Health
NCD	noncommunicable disease
NGO	nongovernmental organization
NHA	National Health Account
NHIA	National Health Insurance Authority

NHIF	National Health Insurance Fund
NHIS	National Health Insurance Scheme
OOP	out-of-pocket (costs)
OTC	over-the-counter (drugs)
PMI	President's Malaria Initiative
PMTCT	pregnant mother-to-child transmission
PPP	public–private partnership
RBM	Roll Back Malaria
SSNIT	Social Security and National Insurance Trust
STEPS	STEPwise approach to surveillance (WHO)
TB	tuberculosis
TFR	total fertility rate
TMS	transport management system
UNICEF	United Nations Children's Fund
VAT	value added tax
VCT	voluntary counseling and testing
WHO	World Health Organization

Overview

What Are Ghana's Health, Nutrition, and Population Challenges as It Continues Its Transition to Universal Health Insurance Coverage?

Ghana has come a long way in improving health outcomes. It performs reasonably well when compared with other countries in Sub-Saharan Africa. However, on a global level, when its health outcomes are compared with those of other countries with similar incomes and health spending levels, its performance is more mixed. For example, Ghana's health outcomes for child health and maternal health are worse than those of other countries with comparable incomes and health care spending, but life expectancy is better in Ghana.

Ghana's demographic profile is changing; however, demographic, epidemiological, and nutritional transitions are well under way. The dependency ratio is expected to be favorably affected by the growing number of individuals entering the labor force. Although fertility is still high, it has continued to decline. Now is the right time for Ghana to take advantage of this demographic dividend. Taking appropriate steps to improve employment opportunities is critical. If these are not taken, the country will face economic pressures as well as political unrest.

Many of the needs for birth control are unmet, and yet the prevalence of contraception is low. An effort must be made to sustain the momentum of a declining population. Families want the ability to space births or to have fewer children. Often, however, they do not have the means to control their pregnancies. Better access to contraceptives would have multiple benefits: it would positively affect the health of women, and it would give children an opportunity for an improved quality of life.

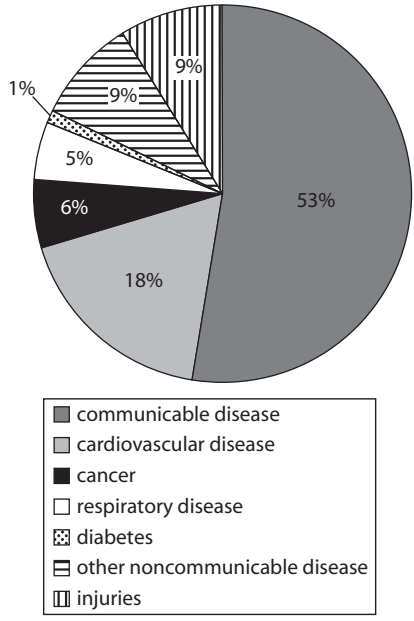
A funding shortage exists for public health goods. In general, many public health services, such as immunization and family planning, are heavily subsidized with tax or donor financing. However, Ghana has allocated few public funds to meet the demand for family planning commodities (for example, condoms or birth control pills). The private sector has responded somewhat to this failure by selling family planning commodities in private pharmacies, and the supply has increased. However, many of the poor are unable to afford and therefore unable to access these commodities. The government has not come up with a feasible solution to improve access and affordability of these commodities to the population.

Communicable diseases (CDs), highly prevalent in Ghana, make up 53 percent of deaths (figure O.1). Although cost-effective interventions are offered, a significant proportion of morbidity and mortality is still related to CDs. A need exists to take a fresh look at programming. Health systems issues and challenges are a key bottleneck. A quick reduction in CDs would free up resources for treating new and emerging diseases and for improving the quality of care.

Because of its demographic, epidemiological, and nutritional transitions, Ghana is facing a dual disease burden. Noncommunicable diseases (NCDs) are increasingly being reported among adults, and a need has been identified to address the prevention of NCDs. A plan exists, but no clear implementation strategy or sustainable financing is in place. Furthermore, little effort has been made at the district level to extend the program to prevent and control NCDs. Granted, NCD treatment is expensive. Therefore, now is the time to introduce such a program so in that way the country will not have to experience high expenditures for treating NCDs later. Ghana has included treatment of several (but not all) NCDs within its National Health Insurance Scheme (NHIS) benefits package.

In terms of Ghana's nutrition, rates of stunting and wasting are high, but obesity is also increasing among children. Poor nutrition—whether

Figure O.1 Ghana, Causes of Death, 2008 Estimates



Source: WHO 2011.

malnutrition or obesity—can be a factor leading to acute health problems. Obesity is becoming a growing urban concern among women; it can lead to chronic health problems, such as diabetes or hypertension. These outcomes can be mitigated if Ghana steps up its efforts toward community-based behavioral change interventions.

What Are Some Health System Challenges?

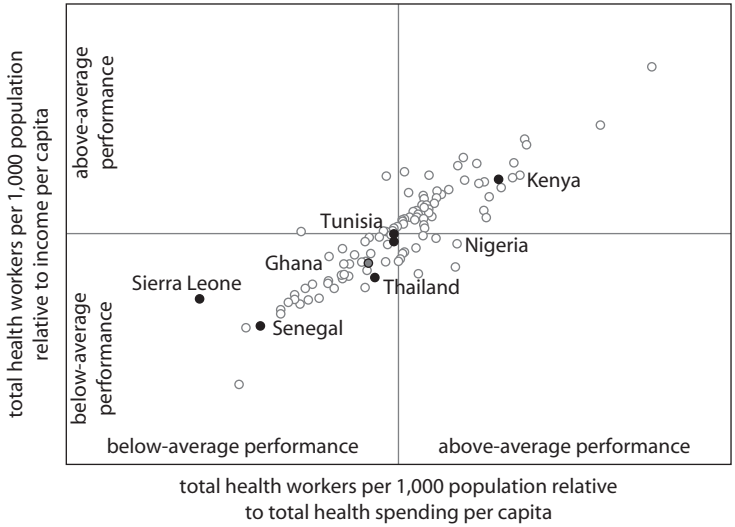
Ghana has a well-developed health system, but it faces critical bottlenecks. Policies and plans are in place, and innovative reforms are under way. However, in some cases, standards have not been established; in others, implementation is weak and variable along geographical lines. Although in many cases quantity and access have increased, quality of care remains problematic.

Capital investment is increasing; however, these investments have not been based on need or equity-based principles. Capital investment in hospital construction has increased recently, but that has not been true of investment in Community-based Health Planning and Services

(CHPS) or primary health care clinics; in fact, both of these investments have been below target. Capital investment in hospitals is based on administrative levels (regions, districts) rather than on need-based standards. Furthermore, planning for the location of these hospitals has been poorly coordinated with the nonpublic sector. Several districts have multiple hospitals whereas other districts have none. Shortage exists of both lower-level health facilities as well as equipment at the subdistrict level. Capital investment maintenance on a recurring basis is also inadequate.

When compared with other countries of similar income and health spendity, Ghana does not fare too badly in its overall health worker (HW) ratios (figure O.2). Overall, access to HWs has improved. However, the distribution is skewed in favor of urban instead of rural areas, and hospitals instead of clinics. As a result, access is uneven. Recruitment of HWs, especially physicians, remains a challenge, although the present situation represents a reversal of an earlier emigration trend. Training of physicians is low relative to the country's needs,

Figure O.2 Number of Health Workers in Ghana Compared with Other Countries with Similar Incomes and Health Spending Levels, 2009



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators and from the WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639

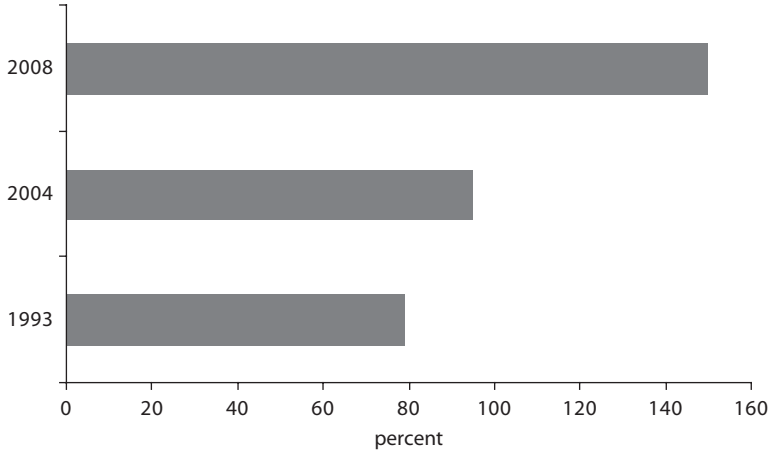
Note: Physicians and gross domestic product per capita data are for 2009 or the latest available year. Health workers include physicians, nurses and midwives, dentists, and pharmacists, as well as lower-level cadres.

and a shortage of midwives also exists. As HWs age and recruitment remains low, many lower-level facilities, including CHPS, face shortages. Retention of HWs, especially in rural and remote areas and in the northern regions, has also been a challenge. The government has offered several incentive packages, including housing, additional allowances, and career opportunities; however, it still faces shortages outside large cities. A more egalitarian distribution exists among nurse–midwives; preservice nurse–midwife training institutions are more widely distributed in the country. However, preservice training for physicians is concentrated in a few cities. To rectify that, the government is setting up training grounds for physicians in regions and districts in addition to tertiary teaching hospitals. The human resource challenge is magnified by a complex system that is made more so because of where students are recruited, where they are trained, where they are deployed, what motivates them, and what systems are in place to ensure appropriate supervision, skills development, and accreditation.

Quality of care and HWs' competencies and productivity are rated as low. These factors also deter patient access. Although absenteeism is modest, HWs' attitudes toward clients are poor, and motivation is low. The government increased salaries to improve worker productivity; however, the impact is uncertain. We find many HWs are not performing up to standard, particularly in rural areas, among the poor, and especially in the northern region. The competencies of private providers are even worse than those of public providers.

Access to drugs has improved in both public and private facilities, and yet, drug prices are high, which creates cost inefficiencies. The Ministry of Health (MOH) policy that enables districts and health facilities to retain internally generated funds (IGFs) and the flexibility to use IGFs for procurement of drugs are expected to improve access to drugs. The same is true of drug cost reimbursements from the NHIS. Further, providers still rely on the public system (Central Medical Stores) for procuring public health supplies. This arrangement benefits from economies of scale. However, decentralization has also brought about a demand for a smaller quantity of drugs to be procured at one time (pooling does not take place at regional or multiregional levels). As a result, drug prices have gone up. On average, certain retail drug prices in Ghana are four to five times more than international reference pricing, and they have been going up over the past decade, which is costly to the system (figure O.3). About one-half of all NHIS claims payments are for drugs. Also, the NHIS provider payment mechanism (fee-for-service

Figure O.3 Average Public Sector Procured Prices Compared with International Reference Pricing, 1993–2008



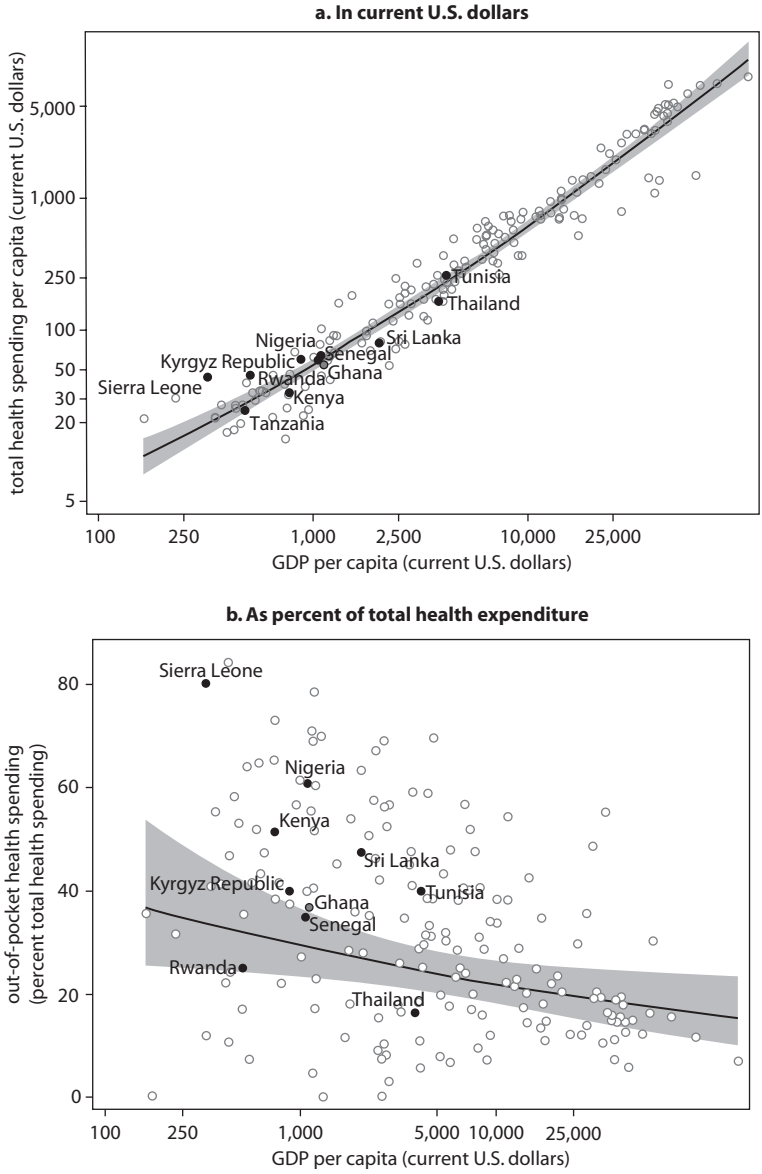
Source: Data are from Arhinful 2009. The 2008 data for Ghana are compared to 2007 international reference pricing as compiled by Management Sciences for Health.

without copayments) encourages providers to prescribe more medicines than may be necessary. It also encourages consumers to demand more medicines than they may need. (More recently, NHIS-standardized medicine prices were at the median market level.) Fewer than one-half of Ghana's population has insurance. Approximately one-half are paying for their health care out of pocket (OOP), and they are expected to pay at or above market prices. Discrimination may also be a factor in prescribing medicines and their pricing. Further, variability in the quality of drugs is also a concern because the Food and Drugs Board imposes few quality controls on the various agents that procure these drugs.

How Is Ghana Faring in the Use of Public Resources for Health?

Total per capita expenditures on health are not excessive. The public sector is increasing its share. The health cost burden on households is declining, although it is still high by World Health Organization standards. Overall, Ghana has improved its health outcomes, and yet, on average, it has not achieved the health outcomes found in other lower-middle-income countries on a global level that are comparable to Ghana's income and spending for health (figure O.4). Whether it uses its funds effectively needs to be evaluated. The goal should be to

Figure O.4 Per Capita Health Spending Compared with Countries with Similar Incomes, 2009



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators and from the WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639

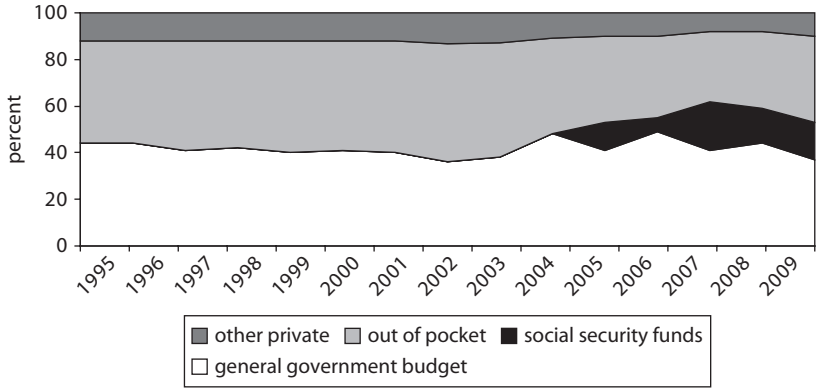
Note: Ghana's gross domestic product (GDP) was reformulated with rebased GDP from the International Monetary Fund and Ministry of Finance and Economic Planning, Ghana.

identify where Ghana is spending its resources and who is benefiting from them.

The public sector has diversified its sources of financing, but more could be done to improve the efficient use of these funds. The sector receives funds from general taxes, earmarked taxes, OOP payments, and donor funding (figure O.5). The public sector accounts for 53 percent of total health spending; NHIS accounts for 30 percent of public health spending (2009). Most of NHIS's funding comes from earmarked taxes (value added tax [VAT] and levies), Social Security and National Insurance Trust (SSNIT) contributions, and premiums and OOP payments. This funding has provided greater consistency in financing nonsalary recurrent spending for the public sector, but it has also increased public spending on health. District governments have their own District Assembly Common Funds (DACFs), but resources allocated for health from DACFs are low and variable across districts. The Abuja target of 15 percent from government budgets has not been met.

The public sector has moved toward demand-side financing, but its sustainability is threatened. With the introduction of NHIS, the government instituted better accountability by guaranteeing significant public funding for needy groups and separation of providers from payers. To ensure the affordability of care, NHIS has heavily subsidized vulnerable

Figure O.5 Total Health Spending Shares, 1995–2009



Source: World Bank staff using simulated data, based on National Health Accounts data from the WHO National Health Accounts database (http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639), the rebased GDP from the International Monetary Fund, and data from the Ministry of Finance and Economic Planning.

populations. It also set up accreditation to ensure an improvement in quality standards. The benefits package is also quite comprehensive; as a result, claims have gone up substantially. The sustainability of the NHIS program is at risk and requires urgent attention.

What Are the Population's Health Outcomes and Access to and Use of Services?

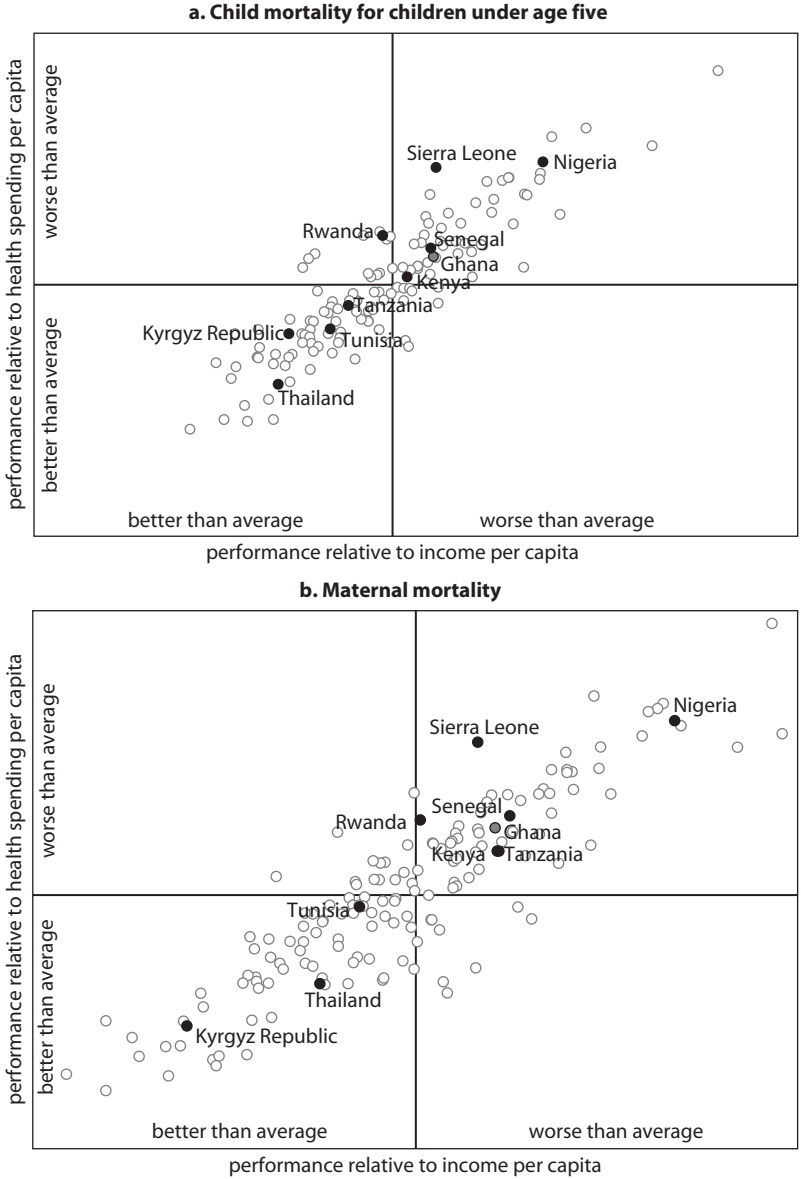
Of the four health-related Millennium Development Goals (MDGs), most are unlikely to be met in Ghana. Child nutrition is partly on track. Although child health has improved significantly, it is still not on track. In addition, two health-related MDGs are not likely to be achieved (maternal health and communicable disease control) by 2015. A particular need exists to address the latter. Ghana has developed a maternal health MDG acceleration plan. It is also assessing emergency obstetric and neonatal care. Finances are being mobilized to move the agenda to reduce poor outcomes. Allocating more resources for improving public health is critical (figure O.6).

Ghanaians are using more health services than they have in the past. There is better access to health services based on income and geography. Contributing factors are higher per capita income and increased access to risk-pooling schemes and to private health facilities. However, wide disparities exist in health outcomes and in access to the use of health care. We find that use of services is lower among the poor than the nonpoor.

The population uses public and nonpublic health facilities equally. However, in the past decade, a slight shift has been seen: patients are starting to rely more on private facilities. This may be attributed to MOH policies: (a) to expand access to services through a partnership with the Christian Health Association of Ghana mission, many of whose facilities are also located in rural and remote areas, and (b) the introduction of NHIS and the accreditation of public and private facilities, which have also opened doors for NHIS beneficiaries. These beneficiaries can access free services from any accredited health facility, whether public or private. NHIS beneficiaries have expressed satisfaction with the quality of these health services.

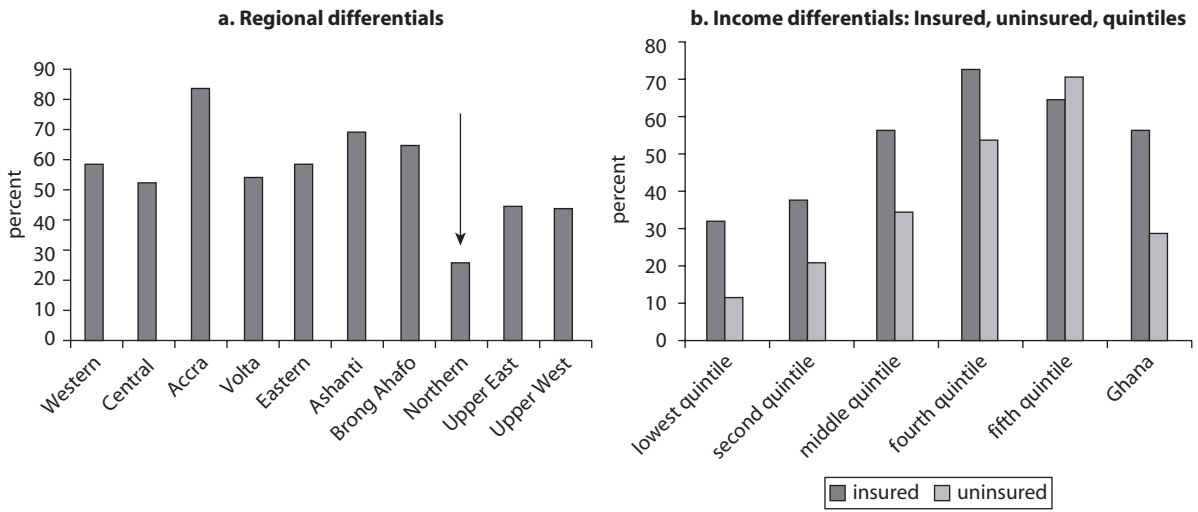
We find inequities. The nonpoor tend to use more public sector services than the poor. For example, most women from poorer households delivered their babies at home, whereas public facilities were primarily used by the nonpoor (figure O.7). Thus, a concern exists that public sector spending on health is regressive. However, our findings show that

Figure O.6 Global Comparisons of Mortality Rates Relative to Income and Spending, 2009



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators and from the WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639

Figure O.7 Regional and Income Differentials in Institutional Deliveries, 2008



Source: Ghana Statistical Service 2009.

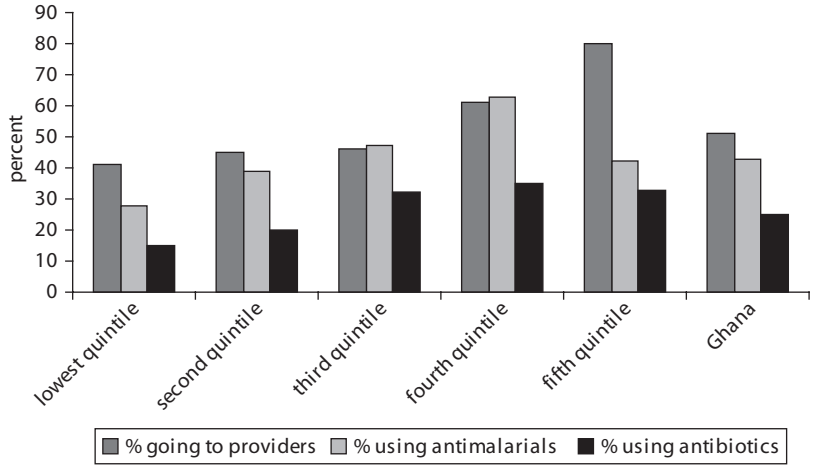
when the poor have insurance, they are more likely to use a health facility than a poor individual who is uninsured. Moreover, the former are likely to choose public over private health facilities. This finding indicates that NHIS could be having a positive effect. Benefits from public funds could help the poor when they register with NHIS.

Overall, the quality of health services has been a concern. However, it is worse in rural areas and certain regions. Most households go to a health facility that has skilled HWs, laboratory services, and drugs. However, some public facilities cannot offer this package of services at the subdistrict level; instead patients bypass clinics and go to district or regional hospitals for their consultations. This is costly because hospitals have higher overhead.

We also find that the types of services used by the poor are of relatively lower quality (figure O.8). The quality of services offered in rural areas, urban slums, and certain regions where the poor are concentrated is lower than the quality of services in urban areas and some of the more well-off regions. Therefore, it will be a difficult challenge to improve overall health outcomes in the country—unless health systems challenges are addressed with some sense of urgency.

We find inefficient targeting. Some public programs directed at the poor are reaching them; others are not. The malaria prevention and

Figure O.8 Income Differences in Households with Children under Age Five with a Fever and Seeking Care, 2008



Source: Ghana Statistical Service 2009.

control program is well targeted: insecticide-treated mosquito nets distributed by the government do reach poorer households. However, the poorer households are not as knowledgeable about health care; they are more influenced by cultural barriers and by geographical and financial constraints that limit access to care.

Public resources could be spent more efficiently. Many direct sector investments do not provide good value for the money; the same criticism can be leveled at NHIS. The population is unable to access health care that is near them. Patients are bypassing clinics in favor of hospitals because clinics may not have HWs and other amenities. More outpatient care consultations are at hospitals than at clinics, a situation that is costly to the system. Per capita costs at hospitals are higher. Inappropriate usage congests the system and diverts resources away from patients needing hospital care. Patients are bypassing district hospitals in favor of regional hospitals for the same reasons that they prefer hospitals to clinics. Per capita spending at district hospitals is higher than at regional hospitals; the former are underused. Because travel time and costs can be considerable, fewer poorer patients are able to access health care in a timely manner. Furthermore, financing of prevention and curative care is fragmented: one is controlled by MOH, the other by NHIS. Current payment mechanisms, one based on budgets, the other on ex post fee for service, have created a system with little incentive to promote prevention over curative services.

Is the Population Financially Protected against Illness?

Less than one-half of Ghana's population belongs to one of the country's handful of risk-pooling schemes. The public scheme (NHIS) has enrolled a significant part of the population. Private schemes, mostly commercial, enroll a very small group. NHIS, as a public scheme, covers vulnerable population groups and formal sector workers; it is also a voluntary scheme for informal sector workers. Encouraging informal sector workers to join has been a problem even though their premiums are subsidized. Although NHIS subsidizes the enrollment of a significant "vulnerable" population, the nonpoor represent a disproportionate number of those enrolled.

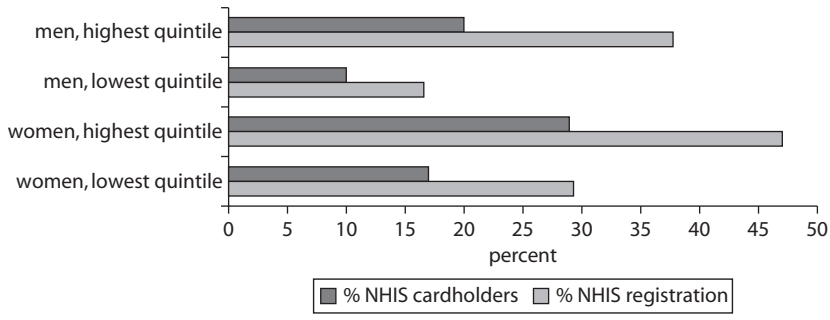
Fewer poor people are registered under NHIS, despite NHIS's mandate to focus on the vulnerable. The reason? The poor have not been easy to identify. (A common targeting approach is now under way.) NHIS defines "indigents" very narrowly. This definition could be broadened so

the poor could qualify for the NHIS exemption and be subsidized under the program. Until that happens, fewer poor people will benefit from NHIS financing (figure O.9). NHIS is mostly financed through the national VAT and the SSNIT, both of which are progressive. However, a disproportionate number of nonpoor benefit from the program.

The poor could be better protected against the cost of catastrophic illness. The poor are more likely to underutilize health services and more likely to have poorer health outcomes compared with the nonpoor. The poor are also more likely to spend a greater amount of their household income on health and be adversely affected when they incur catastrophic spending relative to the nonpoor (figure O.10). Therefore, the poor are at greater risk of having inadequate financial protection. Data from 2005–06 are concurrent with the introduction of NHIS. More recent household data are needed to show if the situation has changed since NHIS was introduced.

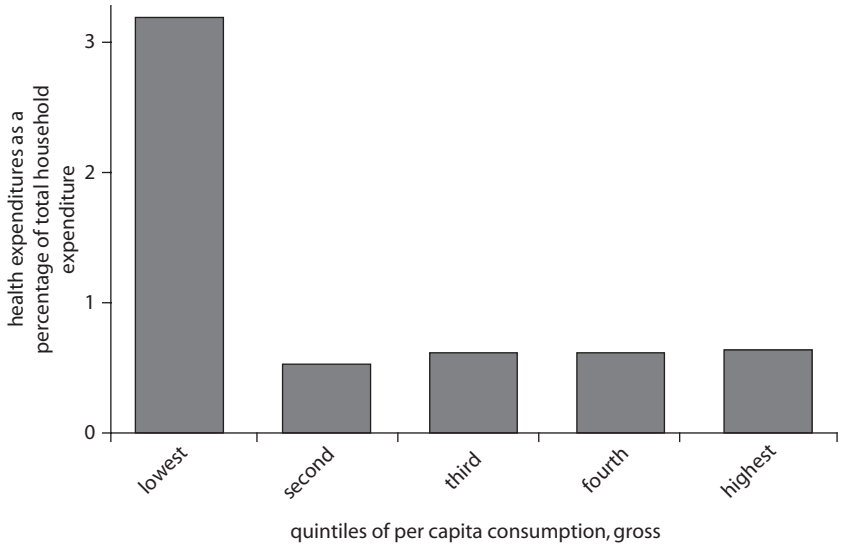
Public resources could be spent more equitably. Many services covered under public funds are accessed by the nonpoor. More public monies are spent for hospitals and for curative care than for primary and cost-effective care; both of the former cater to the health needs of the nonpoor. Also, more of the nonpoor receive subsidies for registering under NHIS than the poor, and more of the nonpoor use public facilities than the poor. In addition, public monies do not appear to be allocated equitably; the Northern region has the worst health outcomes, but this region also receives the lowest public expenditures for health per capita. No equalization fund or equity-based allocation formula is available for using the resources of the central government.

Figure O.9 NHIS Coverage by Gender and Income Quintile for Adults (Ages 15–49), 2008



Source: Ghana Statistical Service 2009.

Figure O.10 Household Spending on Health by Consumption Quintile, 2005–06



Source: Schieber and others 2012; estimated using data from the Ghana Living Standards Survey, 2005–06.
Note: The year of this study was a year before the National Health Insurance Authority was established and therefore does not capture the impact of NHIS on household spending.

What Are the Next Steps for Ghana?

Looking at Ghana's overall situation, the government has taken critical steps to strengthen its health system. It has set up regulatory institutions and developed policies and standards to guide health service delivery. It has also attempted to improve equity in access by forming partnerships with the nonpublic sector and by supporting community-based initiatives, such as CHPS. It has moved toward universal health coverage and demand-side financing to improve affordability. Ghana has agreed to subsidize health care for its population, especially the vulnerable. It has attempted to build more accountability in the system by introducing accreditation and by mandating auditing and reporting. It has attempted to improve the efficiency of resources by investing in public goods and by focusing on health issues that will benefit the poor.

That said, what are the next steps for Ghana? Although significant funds are being spent in the health sector, spending effectiveness can surely be improved with rational planning and resource allocation in favor of goods and services that improve health status and benefit the

poor. Because the rate of CDs is still high, public health remains an important priority for Ghana. Strategies should continue to support behavioral change initiatives and to promote prevention. Innovative strategies, such as conditional cash transfer programs, could be considered. Greater effort is required to improve equity and the quality of care. For this to happen, incentives to improve performance must be in place first.

Reduce fragmentation in the financing of public health. Although MOH has separated provider payer functions from the agencies responsible for them, it continues to finance some services directly. MOH has retained financing for preventive services and for public health goods (vaccines, drugs, commodities); funding for these services comes from general taxes and external financing. NHIS finances curative services and drugs, and it reimburses providers, and yet little thought is given to offering incentives for reducing costs or boosting the quality of care. Both payment systems (MOH and NHIS) have different incentives. Various ways can be identified to deal with this problem: (a) MOH retains financing for preventive and public health goods; however, NHIS offers incentives (such as through performance-based payments) to providers to focus on preventive instead of curative care, or (b) MOH pools financing for preventive and curative care under the NHIS fund, and NHIS includes these incentives in its benefit package. These options could create the right incentives for providers and consumers to demand preventive over curative care.

Incentivize providers and health care consumer to help meet MDG targets. Ghana would benefit if their publicly financed programs targeted the poor and vulnerable more than the nonpoor. These programs could target CDs, public health programs, public goods, and cost-effective community interventions as well as clinics and primary referral networks. Performance-based incentives (such as results-based financing) to providers and supervisors could create the appropriate financial incentives to focus on MDGs, prevention, and the quality of care. Further, incentives (such as conditional cash transfers) could also be offered to consumers to boost the use of MDGs and preventive services and timely access to appropriate care.

Incentivize HWs to move to venues other than hospitals and urban centers. The maldistribution of HWs is a huge challenge. In addition to a shortage of certain cadres of HWs, the distribution of HWs is skewed in favor of urban areas and hospitals. A need exists to evaluate and learn from other incentive schemes that exist in Ghana. What additional incentives could be offered?

Incentivize HWs to improve productivity. The government has offered salary increases with the goal of improving productivity. Although evaluations of this effort have been scant, evidence suggests that input-based payments with no performance agreements will not change behavior. One answer may be to test a modality of results-based financing to incentivize an increase in productivity.

Ensure improved quality of care. Several mechanisms can be employed: Licensing and accreditation are ex ante; performance-based incentives are ex post. NHIS accreditation is one step in the right direction so long as it includes a performance-based standard. Provider payment mechanisms and results-based payment can also offer incentives to improve performance.

Use equity-based principles to guide the allocation of funds to the regions. The formula used by MOH in allocating resources to regions and districts seems to be influenced by hospitals rather than by health outcomes or gaps in service. No equity-based formula is employed for the allocation of funds. For example, the Northern region has the worst health outcomes; it also receives the lowest per capita health allocations from MOH. This formula should be reconsidered.

Base public spending on rational principles and efficiency. Capital investments are skewed, medical equipment is lacking, and many vehicles are outdated and nonfunctioning. These reforms will require costly investments; however, gains in efficiency can be realized from a better rationale of capital investments. For example, a rationale of investments (such as hospitals versus primary health clinics) might include decentralization, pooling, improved standards, administrative processes, and monitoring.

Reprioritize health spending. Given the macroeconomic situation, Ghana should consider ways to improve its spending efficiency. One option is to reconsider the extensive NHIS benefit package. The country's spending patterns suggest that little is being done to improve the quality of primary health care services. Primary health care is not equitably distributed. Health personnel are heavily concentrated in hospitals and in cities instead of in clinics or in rural areas. Much can be done to improve the quality of services offered at health centers, the first line of health care. NHIS's health benefits package and payments create incentives for providers to promote curative instead of preventive care. Appropriate cost containment measures are lacking; moral hazard and supplier-induced demand prevail. Drug costs are exorbitantly high, much above international reference pricing. Ghana can gain greater efficiency by putting appropriate measures in place.

Reduce moral hazard. The provider payment system and the lack of copayments result in moral hazard—patients using unnecessary services. The introduction of copayments for the nonpoor or reimbursement ceilings could help change this behavior.

Reduce supplier-induced demand. The fee-for-service payment system often leads providers to prescribe additional services and or drugs. This practice is wasteful. A review of the Ghana diagnostic-related group and fee-for-service drug reimbursement program is warranted. The provider payment mechanism may also foster curative over preventive care. Bundling services and drugs could also be beneficial. NHIS reimbursements are strictly for curative care. This situation has led to fragmentation in the delivery system.

Improve risk pooling. Many informal sector workers are in good health. They have the financial means, but they do not enroll in NHIS (adverse selection). Having them enroll in NHIS could diversify the risk pool even more. As a way to encourage their enrollment, incentives could be offered in the form of a more attractive term under a group premium. The poor are not benefiting from NHIS. A common targeting approach, when scaled up, could help identify the poor. The district mutual health insurance scheme agents could also receive incentives to seek out the poor and enroll them in NHIS. Effective targeting is key, including geographical targeting. Given the huge investment Ghana has made in a functioning NHIS, it is likely to continue to support this initiative. However, attention must be paid to improve risk pooling by enrolling the poor, workers from the informal sector, and the nonworking population.

Increase public revenue from sources that are progressive. Ghana is looking at various options to increase revenue. It is critical to have higher-income groups contribute more than lower-income groups. The VAT in Ghana is regarded as a progressive tax. Conversely, premiums are considered regressive—unless they are income related. Except for cost sharing, revenue enhancements do little to improve spending efficiency; an increase in spending needs to be accompanied by improvements in the system's allocative and technical efficiency.

Ensure public and social accountability. Accountability in the health sector remains weak, and reporting and assessment of expenditures are limited. Reporting of health service indicators, such as user profiles and quality of care, is also limited. Further, civil society has little information about public sector activities. Mechanisms could be developed to improve accountability, including contractual agreements between purchaser and provider and payments based on results, performance, and

reporting. Civil society could also be engaged in planning, monitoring, and evaluation. Information could be widely disseminated through websites and *darbars*.

Improve access to reliable information for decision making. The private sector offers little information about quantity and quality of care. Comprehensive planning and decision making requires comprehensive information. A need exists to integrate the private sector in reporting, planning, and monitoring. A need is also seen to incentivize the private sector to carry out timely and reliable reporting. The provider and private sector associations could coordinate this effort.

To advance its reform agenda, the government of Ghana could embark on significant reforms in the following areas: (a) decentralization and governance, (b) health service delivery, (c) public health, and (d) health financing. It could also set up a holistic and accountable health reform process as it transitions to universal coverage.

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CHAPTER 1

Background and Objectives

Background

Ghana, a relatively small country with a total area of about 239,000 square kilometers, borders the Gulf of Guinea. It is bounded by Togo on the east, Burkina Faso to the north, Côte d'Ivoire to the west, and the Atlantic Ocean on the south. From the south to the north, the sandy coastline and coastal plain, the central and western forested parts of the country, and the northern savannah define three distinctive ecological zones. Annual rainfalls decline from about 2,000 millimeters in the south to about 1,000 millimeters in the north. Historically, gold, ivory, and timber attracted early exchanges with European traders, and later the slave trade and colonial occupation. The combination of these geographical and historical factors has created a south–north gradient of economic and social conditions that pose the main political and developmental challenges for this country.

The geographical size of Ghana, however, is in sharp contrast to its pioneer role among Sub-Saharan African countries. Indeed, in 1957, Ghana, the first Sub-Saharan African country to gain independence, inspired independence and nationalist movements across the continent. At independence, Ghana was the leading cocoa exporter and one of the largest gold producers in the world; it also had one of the highest literacy

rates among Sub-Saharan African countries. Starting in the mid-1960s, however, the country's regional leadership role declined because of a 15-year period of political instability that resulted from a succession of military coups and civil rule. Nevertheless, since 1992 political changes and a new democratic constitution have marked the beginning of Ghana's Fourth Republic. Democracy and power sharing have taken a strong hold on the country, as evidenced by successive competitive elections, a free press, and a growing civil society, as well as devolution of power and responsibilities to elected district assemblies. The country has enjoyed political stability over the past two decades. That stability is contributing to the restoration of its regional leadership role in politics and economics.

Among the power-sharing arrangements, territorial administration and ongoing decentralization reforms have created a vertical structure in the public sector with implications for the health sector. Ghana is divided into 10 administrative regions: Ashanti, Brong Ahafo, Central, Eastern, Greater Accra, Northern, Upper East, Upper West, Volta, and Western. The regions are subdivided into 170 districts, which constitute the country's local government units. The latter are administered by elected district assemblies. The building blocks for a truly decentralized health system are in place. Overall, political and administrative decentralization is being strengthened with common funding mechanisms and the institution of local government civil service. However, the public health sector continues to operate under a deconcentration model[1] under Ghana's Health Service regime: articulation of these two decentralization streams remains a challenge.

Ghana is a lower-middle-income country. Based on a new methodology for computing national accounts, recent rebasing of the gross domestic product (GDP) revealed a much richer economy. Revised GDP estimates went up by more than 60 percent (Ministry of Finance and Economic Planning 2010). Ghana's GDP per capita was rebased in 2010 and is at $1,150. Ghana's GDP growth rate has increased from 4 percent (2009) to 7.7 percent (2010). The real GDP growth rate is expected to peak in 2011 and to restabilize at about 6 percent per annum from 2012 onward. The macroeconomic situation in Ghana held steady in 2010. See table 1.1 and figure 1.1.

Agriculture, which was at least 50 percent of GDP in 1989, has shrunk to about 32 percent of GDP earnings. In contrast, the service sector, although still in the early stages of development, has now grown to 50 percent of GDP earnings (2009).

Table 1.1 Trends in Ghana's Macroeconomic and Fiscal Performance, 2008–10

Economic and financial indicators (annual changes unless otherwise noted)	*2008*	*2009*	*2010*
Real GDP	8.4	4.0	7.7
Real GDP per capita	5.7	2.0	3.1
Consumer price index	16.5	19.3	10.7
Current account balance (millions of $)	−3,079	−1,034	−2,252
Fiscal deficit (% of GDP)	8.5	5.8	6.5

Source: Ministry of Finance and Economic Planning and Controller and Accountant General Department reported in World Bank 2011a.

Figure 1.1 Ghana: Real GDP Growth Rate, 1989–2015

Sources: Schieber and others 2012; data from International Monetary Fund (IMF) 2011a, 2011b.

In 2010, 52 percent of Ghana's population lived in urban areas. Cities are growing fast. People are probably migrating to cities to take advantage of economic opportunities. This trend also suggests that rural areas do not have many economic opportunities; both pull and push factors are at work.

Whether cities have the appropriate infrastructure to address the needs of the population (housing, health, education, water, sanitation, electricity, and the like) is uncertain. Access to improved water sources is

high (86 percent of total population in 2010); however, access to improved sanitation is low (13 percent of total population). This leads to a poor public health environment.

Cities have a demand for skilled labor. Whether enough skilled workers are available remains to be seen. Adult literacy[2] is 67 percent, and adult female literacy is 59 percent (2010).[3] The labor force participation rate is 73.3 percent for adult males and 71.7 percent for adult females (2008). Ghana's population is growing annually at 2.4 percent, and its labor force is growing at 2.4 percent (2010). This is a good sign; and yet, when compared to Sub-Saharan African averages (2.8 percent), the growth in Ghana's labor force is below its comparators (2004–10).

The incidence of poverty has declined from 51.7 percent in 1992 to 28.5 percent in 2006. Poverty reduction, however, has been uneven across the country. With the persistence of the south–north gradient, the incidence of poverty has declined significantly from 47.9 percent in 1992 to 19.8 percent in 2006 in the south. Small changes have been observed in the north; poverty declined from 68.8 percent to 62.7 percent (World Bank 2011b). The south–north gradient is also apparent in the country's population dynamics and health conditions.

Population Dynamics and Demographic Changes

Ghana has shown a steady decline in its rate of population growth. Ghana's population is 24.66 million (2010), showing a growth rate of 2.1 percent (2005–10). Population growth has declined over the years, primarily because of a drop in the total fertility rate (TFR): from 5.34 children per woman (1990–95) to 4.34 (2005–10).[4] Ghana showed a declining trend in TFR for many years, but since 1998 outcomes have slowed. Significant fertility reductions are noted among girls less than 19 years of age, largely a consequence of increased enrollment in schools and changing economic opportunities. Significant fertility declines are also noted among women in the 45- to 49-year-old age group, largely because of the use of contraceptives or abstinence. However, slow declines in fertility and sometimes stagnation are noted, particularly among women between 20 and 34 years of age. The TFR is relatively higher among lower income quintiles, rural women, and in the Northern region of Ghana. The prevalence of contraceptives is low; it

stagnated in the past decade at about 24 percent (1998–2008). Among people who want contraceptives, 35 percent are unable to access them. See table 1.2.

Ghana has entered a demographic transition, with its lower growth in population and lower fertility rates. The crude birth rate is at 30 and the crude death rate at 7.6 for 2010–15 (World Bank population projections, 2012). Given the huge reproductive age group, Ghana's population will continue to increase from 24.66 million (2010 census) to 36.5 million in 2030, an increase of 50 percent (World Bank population projections, 2012). However, with declining birth rates and increasing life expectancy, the percentage of the population below 14 years of age will decrease, while the percentage of the population over 64 years will double between 2010 and 2030.[5] Thus, Ghana's health system and other social programs will need to grow to meet the increasing demands of its growing and structurally changing population. See figures 1.2 and 1.3.

This changing population structure relates to a "population momentum." As a result of Ghana's past rates of high population growth, large numbers of individuals will enter the "productive" labor force, which ranges from ages 14 to 64. In comparison, relatively fewer individuals will be born and relatively more will enter the 64-plus age range. Ghana's dependency ratio[6] will decrease from 0.78 dependents per productive member in 2010 to 0.60 in 2030; it is projected to continue to decrease to 0.55 by 2050 (World Bank population projections, 2012). See table 1.3.

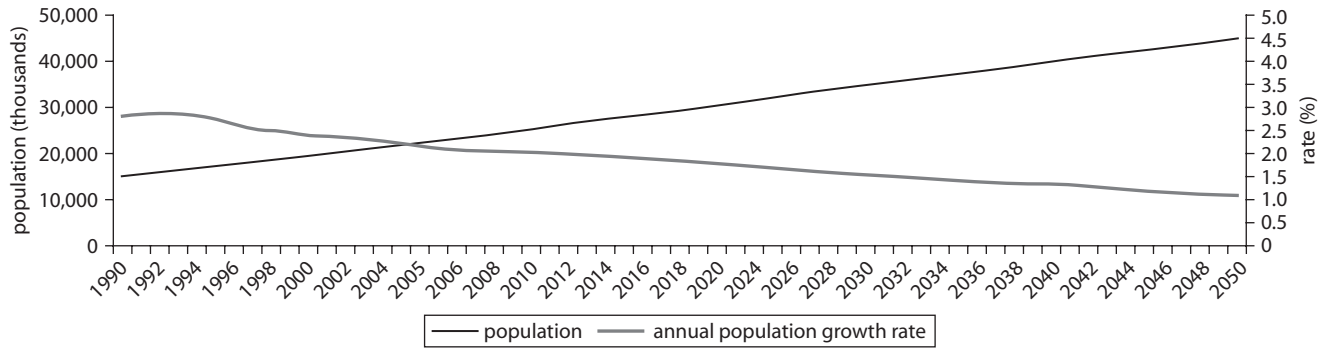
The "demographic benefit" from this falling dependency ratio will become a reality only if Ghana can employ these individuals. Employment possibilities, productivity growth, and revenue potential will also depend on the size distribution of firms as well as on the level of informality in the economy. Small firms that have fewer than five employees account for 70 percent of businesses; as much as 70–90 percent of the labor force may be in the informal sector. These factors are partially responsible for Ghana's current (and possibly future) low revenue and premium collection efforts under the National Health Insurance Scheme (NHIS), discussed later in this report. If Ghana cannot employ those entering the labor force, this demographic transition could turn into a "demographic curse." It could lead to lower growth, decreased tax revenues, and a decline in the NHIS revenue base (such as through reduction in premiums) as well as political unrest.

Table 1.2 Ghana: Population Distribution, 1984, 2000, and 2010

Population by administrative regions	*1984 census*		*2000 census*		*2010 census*		*Population growth rate, 2000–10*	*Intercensal growth rate, 2000–10*
	Millions	*Percent*	*Millions*	*Percent*	*Millions*	*Percent*	*Percent*	*Percent*
All regions	12.3	100	18.91	100	24.66	100	30	2.5
Urban	3.9	32	8.28	44	—	—	—	—
Rural	8.4	68	10.63	56	—	—	—	—
Western	1.2	10	1.92	10	2.38	10	24	2.0
Central	1.1	9	1.59	8	2.20	9	38	3.1
Greater Accra	1.4	11	2.90	15	4.01	16	38	3.1
Volta	1.2	10	1.63	9	2.12	9	30	2.5
Eastern	1.7	14	2.11	11	2.63	11	25	2.1
Ashanti	2.1	17	3.61	19	4.78	19	32	2.7
Brong Ahafo	1.2	10	1.81	10	2.31	9	28	2.3
Northern	1.2	10	1.82	10	2.48	10	36	2.9
Upper East	0.8	7	0.92	5	1.05	4	14	1.2
Upper West	0.4	3	0.58	3	0.70	3	21	1.9

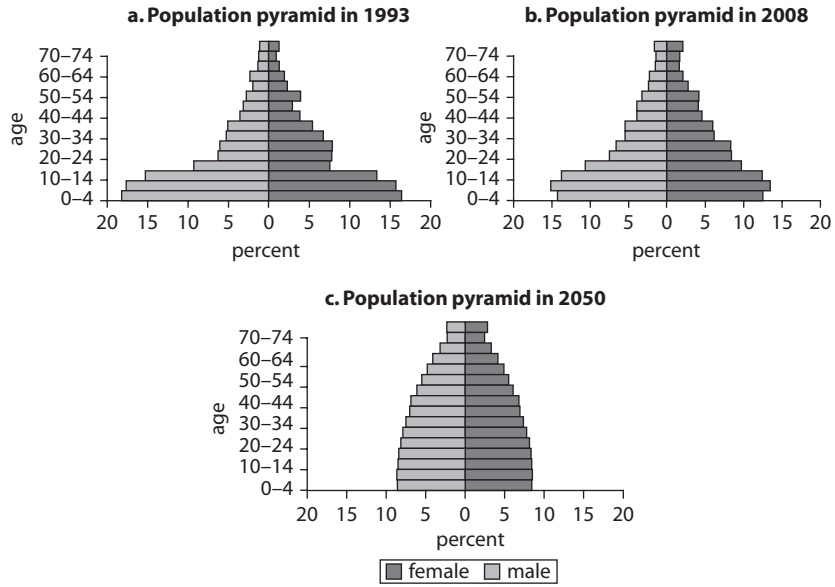
Source: Ghana Statistical Service 2012.
Note: — = data not available.

Figure 1.2 Ghana: Demographic Trend and Future Projections, 1990–2050



Source: DESA 2009.

Figure 1.3 Ghana: Changing Age Structure of the Population



Sources: Ghana Demographic Health Survey, 1993, 2008; World Bank population projections, 2012.

Table 1.3 Estimated Dependency Ratio between 2010 and 2030

Population by age group	*2010 census*	*2030 projections*
Population under 14 years (%)	38	33
Population over 64 years (%)	4.7	5
Dependency ratio	0.78	0.60

Source: Ghana Statistical Service 2012.
Note: Word Bank projections for 2030 did not use 2010 census figures; however, they estimated these numbers using a population estimate of 24.39 million and a dependency ratio of 0.74.

Epidemiological Changes

Although communicable diseases (CDs) are declining, they are still highly prevalent in Ghana. Ghana fares better than the surrounding region. And yet, despite the availability of cost-effective interventions, 53 percent of deaths in Ghana are CD-related (WHO 2011). Among children under the age of 14, infectious and parasitic diseases and perinatal conditions are the leading causes of death. Malaria and pneumonia are the leading causes of death among children under the age of five. These figures suggest a need to take a fresh look at existing programs. Health systems issues and challenges are a key bottleneck. A prompt reduction

in CDs would free up resources for new and emerging diseases and for improving the quality of care.

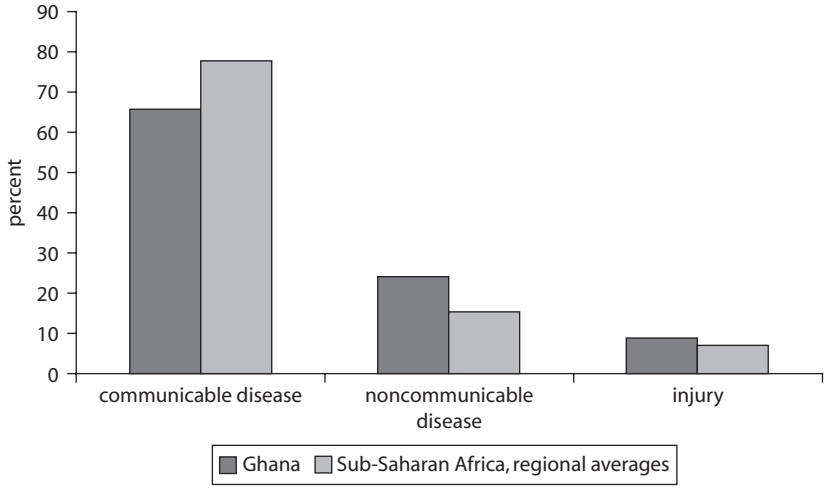
Ghana is going through an epidemiological transition. Noncommunicable diseases (NCDs) have become a growing concern. NCDs are more prevalent in Ghana than in the Sub-Saharan African region. In 2008, 39 percent of deaths in Ghana were due to NCDs. Among adults 15–59 years of age, 45 percent of the causes of death were attributed to NCDs (35 percent) or injuries (10 percent): infectious diseases, cardiovascular diseases, and injuries are leading causes of death. Among adults over the age of 60, 67 percent of deaths were attributable to NCDs: cardiovascular and infectious diseases are leading causes of death (WHO 2011). See figures 1.4 and 1.5.

Labor Market Situation

The public sector workforce has grown at an annual average growth rate of 4 percent (from about 371,000 staff in 2000 to about 501,000 staff in 2009). Ghana has 22 public sector employees per 1,000 population (2009).

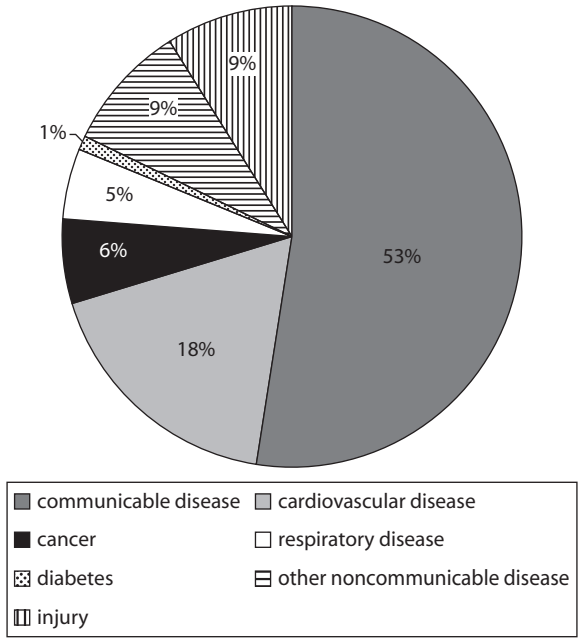
The health workforce has grown from 10 percent of the total public service workforce (2000) to 13 percent (2009), with an annual average

Figure 1.4 Distribution of Years of Life Lost by Causes, 2008



Source: WHO 2012.

Figure 1.5 Causes of Death, 2008 Estimates



Source: WHO 2011.

increase of 9 percent. The health workforce doubled (from 36,000 in 2000 to 65,000 in 2009) and grew from 1.98 employees (2000) to 2.83 employees (2009) per 1,000 population.

The public sector wage bill has increased in both nominal and real terms. A significant change occurred between 2004 and 2006. The public sector wage bill spiraled upward, most notably after the year 2000. This phenomenon reflects inflationary increases, fragmented negotiations, and political events. Although the government considered comprehensive pay reforms, overall salaries continued to increase. Since the year 2000, after adjusting for inflation, minimum wages increased almost annually. Some of these relatively higher wage increases were sector related, a result of fragmented pay scale negotiations with 20 or 30 trade unions. In other cases, the increase was a consequence of political events. These included (a) separation of the public delivery service (such as the Ghana Health and Education Services) from the civil service in the run-up to the completion of the 1992 constitution, (b) the aftermath of the 2000 and

2004 elections, and subsequently, (c) the introduction of a new health salary structure in 2006.

The overall wage bill in Ghana has grown (a) as a proportion of (rebased) GDP from 3.6 percent (2000) to 6.7 percent (2008) and (b) as a proportion of total government revenue from 32 percent (2000) to 57 percent (2008). The wage bill in the health sector has grown from 0.3 percent (2000) to 1.0 percent of (rebased) GDP (2008); it makes up about 15 percent of the overall wage bill (World Bank 2011a).

The health workforce benefited from salary increases in the past decade. The health workforce wage bill grew from 9 percent in 2000 of the total wage bill to 15 percent in 2008. In comparison, the education workforce wage bill declined from 57 percent in 2000 to 50 percent in 2008. In 2008, the largest proportion of the government wage bill went toward payroll costs for the education workforce (50 percent) followed by the health workforce (15 percent). The education workforce is the largest in the public sector (57 percent).

Overview of Ghana's Health System

The National Health Policy was developed in 2007 (MOH 2007). The current Health Sector Medium Term Development Plan (HSMTDP) 2010–13 (MOH 2011) followed. That strategy links the latest national development framework, adopted in 2010, to attainment of the Millennium Development Goals (MDGs), to the Ghana Shared Growth and Development Agenda for 2010–13 (NDPC 2010), and to earlier health sector strategies. The latter grew out of the developmental agendas of Vision 2020 under Ghana's Growth and Poverty Reduction Strategy I (2003–05) and II (2006–09) (NDPC 2003, 2005; IMF 2006). In all of these programs, the goal has been to improve the health outcomes of the people, offer financial protection, and ensure that the system is responsive, efficient, equitable, and sustainable.

To reach these objectives, public management of Ghana's health sector has undergone major policy changes. These changes have brought about a restructuring of institutional arrangements in the health sector. They have also separated the policy-making, service delivery, financing, and regulation functions of the Ministry of Health (MOH) and allocated them to relatively autonomous agencies. The latter include the Ghana Health Service (GHS), the National Health Insurance Authority (NHIA), teaching hospitals, and many regulatory bodies. Moreover, citizens' entitlements are being strengthened through the extension of health

insurance coverage; increasingly, the state has supported the financing of health services. As a result of these policy changes, the health sector is in transition from an input-based health financing system limited to public and mission health care providers to a performance-based system open to public, mission, and private health care providers. How these system changes will create incentives for curative services and high-impact preventive services deserves further investigation.

Over the past decade, the separation of service delivery, financing, and regulatory functions has created a favorable environment for organizational changes in health service delivery systems. As a result of the decentralization of health services and in recognition of the district as the locus for that, the mix of health service delivery organizations at the district level has expanded along with the role of district hospitals. Primary health care has reemerged as part of the Community-based Health Planning and Service (CHPS) initiative. Under the auspices of GHS and accreditation of private providers by NHIA, public–private partnerships (PPPs) are contributing to the expansion of private health service delivery organizations, including private hospitals, clinics, and maternity homes.

These changes in the health system have not been accompanied by a similar decentralization of management structures. Limited management autonomy is seen for public health facilities; teaching hospitals are an exception. Management of human resources for health is still centralized within MOH and GHS structures; the same is true of mission health facilities that depend on MOH for their human resources. Management of public health facilities and mission health facilities has gained flexibility in the purchase of drugs and the management of internally generated revenues. Management's flexibility in the purchase of drugs was a consequence of major weaknesses in the public drug procurement and distribution system; this situation has resulted in a greater reliance on the private sector for the purchase of drugs. In addition, reimbursements from NHIS have caused an increase in internally generated revenues among public and mission health facilities. These revenues are contributing to greater flexibility of public and mission health facility management, and these dynamics are strengthening incentives for health facilities to offer curative care services; how they affect incentives for preventive care services is not yet clear.

The government recognizes the role of health, especially public health, in its developmental agenda, and funds this sector as a priority. The bulk of resources are directed toward clinical care and basic public health

activities. Most of the basic public health activities in the health sector are managed through the Public Health and Family Health Divisions of GHS with a substantial overlapping of responsibilities.

The role of development partners has evolved over the past 20 years. After independence, it changed from a restricted role to a dynamic partnership. The government has actively engaged its development partners to maximize the support it receives from them. In 1997, this sector became one of the forerunners of the Sector-Wide Approach. This shift resulted in two new coordinating mechanisms: pooled funds and a common management arrangement. In 2002, a desire to expect greater results from aid funds led to the signing of the Paris Declaration on Aid Effectiveness and later to the Accra Agenda for Action. These documents both laid out guidelines to accomplish this goal. In the latter part of 2000, the onset of Global Health Initiatives, such as the Global Fund for HIV/AIDS, malaria, and TB and the Global Alliances for Vaccines, has increased the number of resources available to this sector.

Cross-Cutting Areas of Reform

Decentralization and Governance

Ghana supports moving the agenda on fiscal and administrative devolution. The country has developed a comprehensive legal and regulatory framework for decentralization, based on a devolution model. As part of a long process of decentralization dating back to independence, the government of Ghana has defined a form of decentralization that delegates authority to the districts (Local Government Act 452, 1993), which includes devolution of the social sectors.[7] However, MOH, GHS, and the Teaching Hospital Act (Act 525, 1996) did not support devolution. Rather, they supported delegation from MOH to GHS and deconcentration within GHS. The two acts (Act 452 and 525) were in conflict. The subsequent Local Government Service Act (Act 656, 2003) bypassed the devolution of the staff of the social sector to local government authorities. As a result, devolution of the health sector has been delayed.

Ghana has made significant progress in decentralization. Several building blocks for a devolved health system are in place (Ministry of Local Government and Rural Development 2007). These include a comprehensive legal framework for government decentralization, the establishment of district-level political and administrative structures, such as the district assemblies (DAs) and the deconcentrated GHS offices, numerous useful information systems and management tools (including planning

and budgeting systems, reporting and information systems, performance measurement, and financial transfer mechanisms to local governments), and the implementation of participation mechanisms including facility boards. However, the process has been hampered by issues related to regulatory inconsistencies, unclear policies, incomplete implementation, resistance to change, weak managerial capacity, centralized authority over key resources, weak capacity to monitor and support implementation at the central and regional levels, and a weak economic base among many districts.

The health sector lacks a comprehensive policy framework and a legal framework to support health decentralization. Recently, MOH developed policy documents that address issues of decentralization in the health sector. However, a clear and comprehensive policy framework to guide its implementation is still lacking. Further, the existing legal framework for health system decentralization is contradictory. Laws and regulations offer changing and conflicting views of what decentralization should look like; they are vague about which functions should devolve and to whom. One of the main conflicts is the contradiction between the government of Ghana's general policy of devolution and MOH/GHS's model of delegation *cum* deconcentration. Additional regulatory conflicts have built up over the years.

The health sector has made some strides, but other areas lag behind**.** Decentralization in the health sector has strong support in the following: information systems and supportive services, including the procurement of drugs and supplies, and maintenance of capital investments. Some decentralization is evident in human resources for health, although remunerations are still centralized; finances are somewhat decentralized. Fiscal decentralization in Ghana is more apparent than real. More than 50 percent of public health expenditures are allocated to districts. Nevertheless, the greater part of these resources is controlled by the central government (MOH or Ministry of Finance and Economic Planning). Local authorities have little real decision-making authority over the allocation of resources. Substantial delays and unpredictable transfers and releases of funds diminish the districts' powers even further.

As a result, decentralization in the health sector has not been fully realized. This situation has weakened governance and decentralization, policy and planning, and the organization and provision of services. Governance and accountability of local health institutions are weak. Lines of authority and accountability are blurred; overlaps and duplications exist. Responsibilities for resource allocation and management are fragmented.

According to a survey of regional and district officers (Couttolenc 2012), a major obstacle to effective implementation has been that many stakeholders in the health sector have limited awareness and understanding of its objectives, prerequisites, and implications. This lack of awareness makes it difficult to build consensus and support; it also constitutes a potentially important obstacle to the government's devolution policy on health. See table 1.4.

The Private Sector

Ghana continues to support the government's partnership with the private sector. The policy environment for Ghana's health sector is business friendly and encourages private activity. Ghana recognized the private health sector's importance and its potential when it fashioned a Private Health Sector Policy in 2003 (MOH 2003). Since then, representatives of the private sector have been included in annual health summits and in MOH's creation of a Private Sector Unit within itself. Regulatory bodies successfully oversee the licensing of most new facilities. Finally, NHIS's reimbursements have broadened accessibility to services for care delivered by GHS and private accredited providers.

The institutional environment and incentive structures favor the strengthening of engagement between public and private actors in the health sector. The MOH has had several institutional successes: The regulatory councils' and boards' criteria and standards for the opening of private facilities are applied and respected by private actors. The Private Sector Unit, established by MOH, has been assigned to implement the Private Health Sector Policy. The PPP works well with the Christian Health Association of Ghana (CHAG); CHAG has become an extension of GHS in underserved rural areas. The national tuberculosis program collaborates with private providers to extend its reach. Private associations represent health professions and provider groups. Private schools add significantly to the supply of nurses. NHIS's accreditation program systematically addresses many aspects of quality of care in the private sector and soon will do so for GHS providers.

Some challenges, however, remain. The 2003 Private Health Sector Policy has gaps that make implementation a challenge. It is the intent of MOH's policy to ensure access to health services for all. However, the supply of services in rural areas from private sources and GHS lags far behind the supply that exists in urban areas; and yet the majority of the population lives in rural areas. Despite a sound situation analysis and policy issues that address the role of the private sector, most of the action

Table 1.4 Mapping Out Decision Space for Ghana's Districts Regarding Health

Functions	*Responsibilities*	*Weak*	*Average*	*Strong*
Governance and accountability	Appointment of DHA director	X (GHS)		
	Collaboration with DHA		X (variable)	
	Accountability of DHA to DAs	X		
	Accountability to central level	X		
	Accountability to local community		X (committee)	
Policy and planning	Policy formulation	X		
	Health planning		X (financial constraints)	
	Program design		X	
Finance	Revenue generation		X (limited)	X (fees, IGFs)
	Budget preparation, allocation		X (in place)	
	Accounting and audit		X	
	Set user fees	X		
	Set up and manage insurance schemes			X
Service organization and provision	Define service packages	X (GHS)		
	Target service delivery		X (dialogue)	
	Set norms, standards, regulations	X (central)		
	Monitor and oversee providers	X (central)		
	Contract in/out			X
Human resources	Plan, evaluate HRH		X	
	Hire, fire civil servants	X (president)		
	Hire, fire other staff			X
	Define salaries and benefits	X (central)		
	Conduct training			X
	Pay staff	X (civil service)		X (other)
Support services	Procurement of drugs and supplies		X (some)	
	Manage drugs and supplies			X
	Maintain vehicles and equipment			X (support)
	Maintain facilities and structures			X (budget)
Information systems	Design health information systems			X
	Collect, process, analyze data			X
	Disseminate information			X

Sources: Couttolenc 2012; adapted from Bossert 1998.
Note: DHA = district health administration; HRH = human resources for health; IGFs = internally generated funds.

items in the 2003 Private Health Sector Policy have not been carried out. Much of the private sector remains outside the mainstream of MOH and GHS's thinking.

Institutional failures are associated with MOH and GHS's limited capacities at the central and local levels. Private actors also have limited capacities. The list of institutional successes is counterbalanced by numerous institutional challenges. One example is MOH/GHS's failure to develop a high-level public champion for an enhanced private role in the health sector. Since the 2003 policy went into effect, the Private Sector Unit in MOH has been unable to achieve more than a few items on its agenda.

Regulatory councils and boards have insufficient resources to conduct ongoing supervision and monitoring of private actors. Essentially they are limited to oversight of the opening of facilities. Regulations are formulated by the councils and boards without a forum for input and criticism by the affected parties. The Food and Drugs Board's regulation of pharmaceutical products is inadequate to address the issue of counterfeit and substandard drugs. At the district and regional levels, the District and Regional Health Management Teams are charged with overseeing the health sector, but GHS manages them. GHS focuses on its providers' activities, not on the sector as a whole. No specific forum exists to engage with representatives from the public and private sectors.

The Book

The book comes at a critical time for Ghana's health system development because there is a major debate about the health sector:

- Meeting MDG targets for health (an urgent matter)
- Providing financial risk protection to the poor
- Addressing the health outcome disparities within the country
- Preparing the health delivery system to respond to the demographic, epidemiological, and nutrition transition
- Addressing the NHIS budget deficit, which began in 2010 and may become unsustainable as early as 2013 according to actuarial projections

The book is based on the underlying goals and objectives of Ghana's health system (not generic models), the strong Ghanaian focus on the poor and vulnerable groups, and explicit recognition of the importance of

other aspects of the health system. The performance assessment with respect to goals is based on empirical analyses of the latest available data on underlying levels and trends in health outcomes, health system inputs, financial protection, and health spending in Ghana and other African and global comparator countries.

The book has relied on analytics and evidence. For household-level data, the following sources were used: Ghana Living Standards Survey (GLSS, 1999 and 2005–06); Ghana Demographic and Health Survey (GDHS, 2002, 2008); Multiple Indicator Cluster Survey (MICS, 2008); Maternal Health Survey (2007); and Participatory Monitoring and Evaluation Survey (2008). For health facility–level data, the National Assessment for Emergency Obstetric and Newborn Care (2011), Service Availability Mapping (2007), and other sources were used. For institutional data, the Ministry of Health's Annual Program of Work, among others; Ghana's Health Facts and Figure Report; and National Health Insurance database and reports were used. Generally, secondary data were used in the analysis. However, in some cases, additional data were collected on the basis of specific studies of health financing; decentralization; and governance, private sector, and reviews of public expenditures.

The book is organized into five chapters. Chapter 1 provides an introduction and objectives. The context and demographics are explained. Chapter 2 addresses the health delivery system (infrastructure, health workers, and pharmaceuticals). Chapter 3 gives an overview of the health financing system, including functions, programs, health insurance, and spending trends. Chapter 4 assesses financing and delivery performance, including health outcomes, efficiency, and equity. Finally, chapter 5 sets an agenda for health sector reform in Ghana and the options associated with it.

Notes

1. *Deconcentration* is defined as shifting power from central offices to peripheral offices of the same administrative structure—for example, the Ministry of Health and its district offices (Couttolenc 2012).
2. Adult literacy refers to the population above 15 years of age.
3. World Bank, Health, Nutrition and Population STATS, accessed March 29, 2012. http://devdata.worldbank.org/aag/gha_aag.pdf.
4. United Nations, Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section, 2010 Revisions, http://esa.un.org/unpd/wpp/unpp/p2k0data.asp.

5. World Bank, Health, Nutrition and Population STATS, accessed July 27, 2012. http://data.worldbank.org/topic/health.
6. The dependency ratio represents the percentage of those ages 0–14 and over age 64 relative to those in the "productive" age group of 14–64 who may be in the labor force.
7. In a subsequent Local Government Service Act (Act 656, 2003), staff members associated with education and health were left out of the act; they remain separate services under Ghana Health and Education Services.

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CHAPTER 2

Health Delivery System

This chapter offers a situation analysis of the country's health delivery system. It addresses issues of infrastructure and compares the situation of health workers to international benchmarks as well as intracountry variations. It also discusses the production of health workers and in-service competencies. A brief situation analysis of pharmaceuticals is included.

Key Messages

Infrastructure

- Hospital bed ratios do not meet comparable income and health spending global comparators. Although they are fairly adequate for the time being, bed occupancy rates are low.
- The distribution of health facilities and hospital beds is skewed in favor of urban areas. Rural hospitals receive limited investments in human and physical capital.

- Although investment in hospitals has increased, investment in primary health care has suffered. Investment and continued inequity in the primary health care network are limited; this is also true at the community level.
- The private sector makes an important contribution to services. Partnerships can be beneficial, especially in underserved, remote, and rural areas.
- Shortages are seen in medical equipment, especially at lower-level facilities. Medical equipment and vehicles are limited and aging. These shortages adversely affect access and quality of care and lead to further inequity. Innovative approaches including public–private partnerships could be beneficial in addressing these gaps in services.
- Regional differentials are evident. The Northern region stands out as having the least amount of infrastructure.
- Attention must be paid to setting standards, planning, budgeting, and coordinating with the nonpublic sectors.

Human Resources for Health

- Human resources for health (HRH) do not meet international benchmarks. The production of health workers, although one of the best in Sub-Saharan Africa, is a challenge. In the past, migration contributed to staffing shortages. In the future, shortages may be due to retirement.
- The missions and private sector have formed partnerships with the public sector to deliver health services, especially in rural and remote areas.
- Staff salary increases have resulted in less migration among certain cadres, but the distribution of staff has still not been addressed.
- Although many health workers are more or less equally distributed, the distribution of highly skilled professionals (for example, physicians) is skewed in favor of urban areas and certain regions such as the Greater Accra and Ashanti regions. The location of preservice training can be a significant factor in the redistribution of health workers.
- Overall, the quantity of health workers is increasing, but quality still suffers. Health workers' performance is low and varies by region. Health workers' competencies were often rated low. In-service training programs coupled with supportive supervision programs could help ensure that guidelines are followed and standards maintained.
- The private sector is engaged in the production of health workers; nevertheless, more encouragement is needed. In addition, accreditation standards should be strictly enforced to ensure quality.

- Attention must be paid to setting and enforcing accreditation standards for preservice training, and to providing appropriate (financial and nonfinancial) incentives for a more egalitarian distribution of workers and for a more performance-oriented staff.

Pharmaceuticals

- The availability of medicines has improved at the facility level and brought about an increase in the use of health services.
- Drug prices are significantly higher than international reference pricing.
- The private sector is a key contributor to the delivery of services and to the provision of drugs.
- The quality of drugs varies. Regulatory controls are weak. Prescribing behavior does not follow clinical practice guidelines.

Health Infrastructure and Other Capital Investments

Infrastructure

Ghana has a comprehensive health service delivery system. It encompasses community-based programs, such as the Community-based Health Planning and Services (CHPS) initiative (GHS 2002); subdistrict health centers and clinics; district general hospitals; regional general hospitals; and specialized tertiary hospitals. The public sector has the largest share of the market when it comes to health facilities, hospital beds, and health providers.

The non–public sector is as important in providing health services as the public sector. The non–public sector includes the for-profit and the not-for-profit health providers. Of the 2,441 health facilities, almost half belong to the non–public sector. At least 34 percent of hospital beds belong to the non–public sector. The Christian Health Association of Ghana (CHAG) represents a significant proportion of beds in the non–public sector with equal representation in urban and rural areas. For-profit facilities are concentrated in urban areas. Rural areas are served by the public sector and under public–private partnership arrangements between missions and the public sector.

The growth in health facilities is remarkable; however, the scale-up of these facilities has not necessarily always kept up with population growth, nor have they responded to regional needs, as illustrated in tables 2.1 and 2.2.

Table 2.1 Types of Ownership of Health Facilities and Health Care Providers, 2009

	Health facilities				*Hospital beds*	
Facility type	*Total*	*Hospitals*	*Centers and clinics*	*Percent of total*	*Total*	*Percent of total*
Total	2,441	358	2,083		22,164	
Public sector	1,217	111	1,106	50	12,830	58
Teaching hospitals	3	3				
Psychiatric hospitals	3	3				
Regional hospitals	9	9				
District hospitals	96	96				
Subdistrict	1,106		1,106			
Quasi-public	91	22	69	4	1,748	8
Christian Health Association of Ghana	227	59	168	9	5,903	27
Islamic	18	10	8	1	306	1
Private for-profit	888	156	732	36	1,377	6
Percent of total		15	85			
Percent private for-profit	36	44	35		6	
Percent private and missions	46	63	44		34	

Source: GHS 2010.

Table 2.2 Regional Distribution of Health Facilities, 2008

Region	*Hospitals per district*	*Beds per district*	*Beds per 1,000 people*	*Health centers (+) per district*	*CHPS per district*
Western	1.15	156	0.79	10.69	4.31
Central	1.00	139	0.94	6.08	3.31
Greater Accra	2.33	767	1.07	12.17	0.67
Volta	1.33	148	1.14	13.47	1.27
Eastern	1.06	157	1.12	11.29	2.59
Ashanti	1.90	196	0.84	8.76	0.19
Brong Ahafo	0.89	97	0.81	7.26	0.58
Northern	0.72	73	0.56	8.22	0.56
Upper East	0.75	102	0.81	8.75	6.88
Upper West	0.75	88	1.05	9.25	4.88
Ghana	1.17	160	0.91	9.41	2.07
Falls short of national average			5/10	6/10	5/10

Source: GHS 2009.

At the community level, Ghana has scaled up its community-based health initiatives to reach rural and remote areas. CHPS grew from a mere 15 (2005) to 376 (2009), but it is still below the desired target of 1,162 (2013). The greatest density of CHPS was evident in the Upper East and Upper West; in contrast, the Ashanti, Northern, and Brong Ahafo regions were among the worst. However, the greatest growth of CHPS was reported in the Northern region (95 new CHPS between 2005 and 2009). CHPS started as a community-based initiative. However, that has changed. The emphasis has been to invest in CHPS compounds. It will be important to return to the original concept. Much effort is still required to reduce inequity in access to care at the community level.

At the subdistrict level, Ghana still lags behind in meeting its targets for health centers and health clinics. In 2009, Ghana had 1,600 health centers. Health centers are an important first level of care. However, several subdistricts did not have a full-fledged health center or health clinic. The highest density of health centers was in the Volta; next was Greater Accra and the Eastern and Western regions. Brong Ahafo and the Northern regions were below the regional average (GHS 2009). This concern about limited access to full-fledged health centers will need to be addressed.

Ghana offers several standalone pharmacies (1,915) and chemical sellers (11,430). Pharmacies must have a qualified pharmacist, which permits them to sell prescription drugs; chemical sellers do not need to have a qualified pharmacist, but they are not permitted to sell prescription drugs. These belong to the private sector, and all pharmacies (primarily in urban areas) and chemical sellers (primarily in rural areas) must be registered by the Pharmacy Council of the Ministry of Health (MOH) (Makinen and others 2011). The growth in chemical sellers especially is remarkable, and there seems to be good access to pharmaceutical products; however, the quality and price of these products vary widely.

Ghana had 153 district hospitals; 62 percent of them were under the Ghana Health Service (GHS), and the rest were owned by CHAG in 2009. Overall, 42 percent of districts had at least one district hospital, 11 percent had more than one, and 47 percent had none. According to the World Health Organization (WHO) recommendations, Ghana has too many district hospitals, and many of them are underused.[1] The planning and scaling up of hospitals could have been more efficient. GHS and CHAG activities were not coordinated enough to bring about economies of scale. Private sector contributions were not taken into consideration in planning and implementation.

Several facilities are, however, inadequate in providing basic services. Access to facilities varies across regions, as does the availability of basic amenities, such as laboratories, pharmacies, and operating theaters. Health facilities in Ghana are expected to have appropriate diagnostic services. However, laboratories are not licensed. Several facilities were found not to have laboratories and therefore face a constraint in conducting appropriate and timely diagnostics. Rural areas were more constrained. Although hospitals had laboratories, maternity homes (28 percent) and health clinics (36 percent) had limited access to such services in 2010 (MOH 2011a).

Although hospitals generally have operating theaters, the lower-level facilities did not have one. Even among hospitals, operating theaters for obstetric care were absent (only 14 percent of district hospitals had one in 2010). This raises concerns because emergency patients cannot be referred to district hospitals and must be referred to regional or teaching hospitals.

Basic needs of electricity and water have been addressed in most health facilities. In 2010, most health facilities had electricity (91 percent in 2010 compared to 70 percent in 2005) (MOH 2007e, 2011a). Of those with electricity, 91 percent relied on power lines, and 8 percent relied on solar power. Brong Ahafo region (41 percent), several maternity homes (31 percent), and CHPS (45 percent) used solar power as a primary source. In 2010, most health facilities had access to water (92 percent in 2010 compared to 48 percent in 2005); however, most of them relied on potable water (88 percent of those with water in 2010). Facilities in the Upper West (25 percent) and Northern (21 percent) regions had the worst access to water, as did CHPS compounds (26 percent) and health clinics (11 percent).

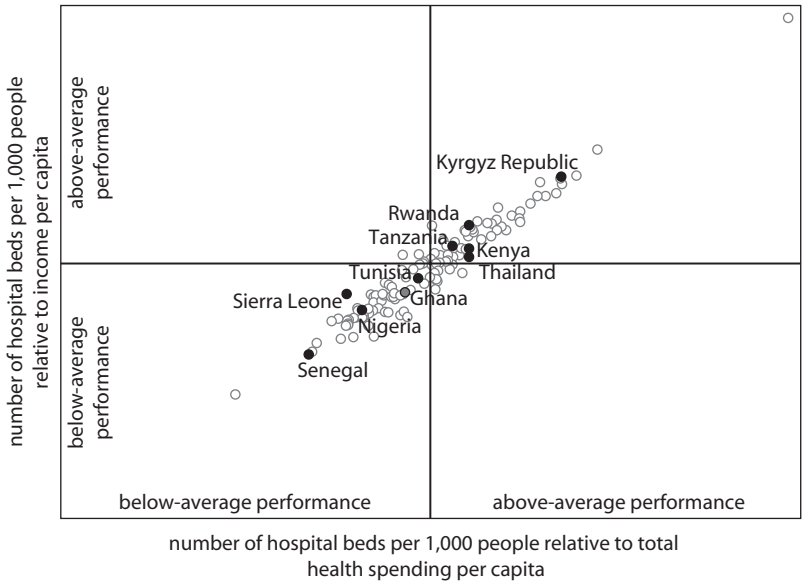
Available data suggest that the primary care uptake at the subdistrict level is lagging. Therefore, for reasons of planning and equity, priority should be given to investments at the subdistrict level and below.

Hospital Beds

Overall, compared with other countries with similar incomes and health spending, Ghana has slightly fewer hospital beds per capita. Kenya, Tanzania, and Tunisia fare better than Ghana, and Nigeria, Senegal, and Sierra Leone have lower ratios. See figure 2.1.

Between 2002 and 2009, almost 3,000 new hospital beds were added to the Ghanaian health sector. An estimated total of 19,687 hospital beds

Figure 2.1 Hospital-Beds-to-Population Ratios Relative to Total Health Spending and Income, 2009



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators database and the WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.
Note: Beds and gross domestic product per capita data are for the latest available year.

were in the public sector.[2] The agenda was to increase the average hospital bed capacity overall, but it did not match population growth rates, nor did it consider spatial distribution. The hospital bed ratio at the national level went down from 1.46 (1990) to 0.92 (2002) to 0.81 (2009) per 1,000 population.

However, public hospital bed growth has not been equitable across the country. Four regions fall below the national average for hospital beds. Three of these were below the national average a decade ago. The inequity in hospital bed distribution is clear: Among the most privileged regions, Volta (1.14) and the Eastern (1.12) regions improved their standards; meanwhile, the Northern (0.56) region continued to lag far behind all others. The need is urgent to reduce this inequity, particularly in the Northern region (GHS 2009).

On average Ghana was estimated to have about 26 maternity beds per 1,000 deliveries in 2010 (MOH 2011a);[3] these are close to WHO

standards of 30 to 32 maternity beds per 1,000 population for first-level referral (for example, district hospitals; WHO 1991). Nongovernmental organizations (NGOs) and private for-profit hospitals offered a high ratio of 46–54 maternity beds to 1,000 deliveries;[4] public sector and mission hospitals rank below the national average (on average about 23 maternity beds per 1,000 deliveries). Government district hospitals (19) and maternity homes (14.5) reported the lowest maternity bed ratios; government health centers (30) reported relatively higher ratios. The Upper West (42) and Volta (35) regions reported ratios above the national average; six regions reported they were slightly below the national average (ranging between 22 and 25). Rural areas had a higher ratio (39) compared with urban areas (24) because of low institutional deliveries.

Available data show that current average bed capacity is favorable for the next 5 to 10 years. The need exists, however, to improve planning standards for health infrastructure investments, to better coordinate investment efforts with the nonpublic sector, and to address inequity in distribution. See box 2.1.

Medical Equipment

Access to basic medical equipment remains dire, especially among lower-level health facilities. Although 95 percent of health facilities had access to a baby-weighing scale, few had access to a filled oxygen cylinder (less than 40 percent in 2010). The situation has improved little in the past decade. In 2003, only 30 percent of primary health care facilities had oxygen.[5] In 2003, less than 30 percent of primary health facilities had the required maternity care equipment package; in 2010 the situation was worse.

Ghana's health facilities do not meet appropriate standards of care: most health clinics, health centers, and maternity homes did not have appropriate standards for emergency obstetric and neonatal care. In 2010, for example, several facilities did not even have basic medical equipment sterilization products: although all teaching hospitals had medical autoclaves,[6] only two-thirds of regional and district hospitals had this equipment. The situation was worse among lower-level facilities: health clinics (19 percent), maternity homes (13 percent), and health centers (12 percent).

Equipment management capacity also remains low. A 2003 study reported that the Upper East and Northern regions remained the worst in equipment management, whereas the Ashanti region scored the highest.[7]

A recent study (MOH 2011a) has conducted a needs-gap analysis on the availability of medical equipment for obstetric and neonatal care. This finding will be critical in moving forward in investments

Box 2.1

Options Available to Address Shortage and Inequity in Distribution of Health Facilities

What are some of the options available for Ghana to address the shortage of health facilities and the inequity in distribution of health facilities and beds?
For hospitals, options are the following:

- Construct additional district hospitals to address the spatial gaps
- Merge district hospitals in lower population districts, thereby improving efficiencies
- Develop partnerships between public and private sectors (for planning and for service delivery)
- Build, operate, and transfer
- Improve referral networks
- Insource hospital management, diagnostic services, and pharmacies
- Outsource hospital services, such as hotel services, catering, and other ancillary services

For clinics, options are the following:

- Construct additional health centers and clinics
- Outsource or develop performance-based contracts with NGOs and mission clinics in underserved areas
- Improve referral networks
- Improve diagnostic laboratories' capabilities and access (through partnerships)

For CHPS, options are the following:

- CHPS was originally a community-based initiative; more recently, its emphasis has been on building CHPS compounds. It will be important to revive the original concept.

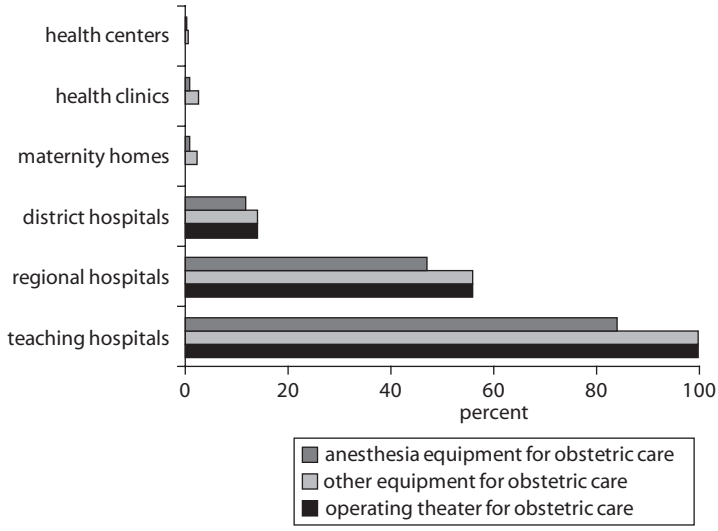
Source: World Bank staff.

and improving the situation for maternal and child health care. See figures 2.2 to 2.4.

Transport

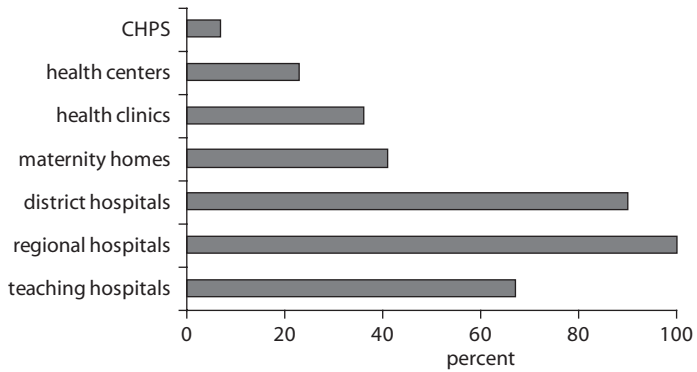
MOH has a large fleet of vehicles; 90 percent of them are used by GHS. GHS has 1,541 vehicles and 6,100 motorbikes (2008). MOH operates the National Ambulance Service with 34 ambulances (10 at the regional

Figure 2.2 Facilities with Access to Obstetric Care–Related Equipment, 2010



Source: Data from MOH 2011a.

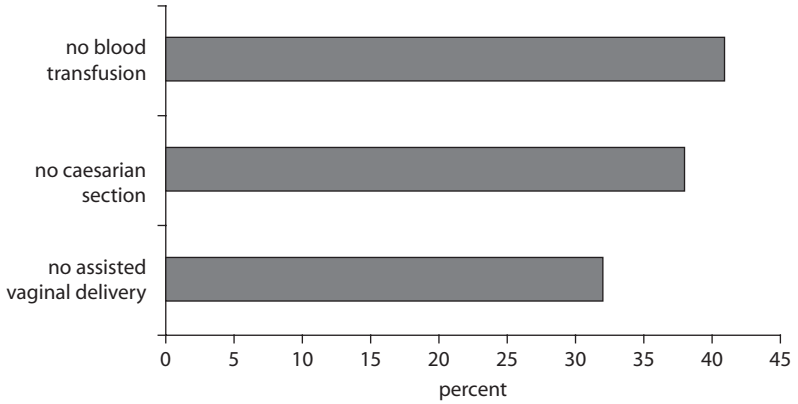
Figure 2.3 Facilities with Access to Filled Oxygen Cylinders, 2010



Source: Data from the MOH 2011a.

level and 24 covering 170 districts). However, MOH vehicles were reported to be more than 10 years old and in need of replacement. In 2009, the Global Alliance for Vaccine Initiative Health System Strengthening funds replaced some of these vehicles. Because many facilities had limited access to transportation, they made arrangements

Figure 2.4 Limited Obstetric Services Offered in Health Facilities Due to Limited Access to Equipment, Drugs, or Supplies, 2010



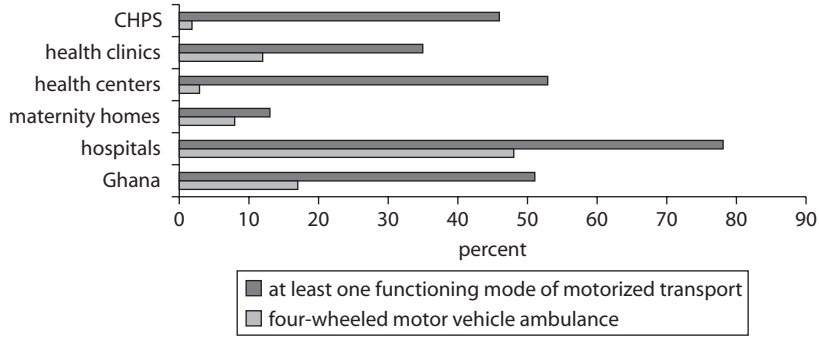
Source: Data from MOH 2011a.

with the private sector (taxis, buses). Thus far, no proper assessment has evaluated the success of this program. And, yet, according to MOH (2011a), 33 percent of facilities reported using the national ambulance system; 51 percent reported arranging for transportation for emergency referrals with private parties. The Northern region reported the greatest access to transportation, and the Central region reported the least. See figure 2.5.

Policy and Regulations

The Ghana Health Service and Teaching Hospital Act was approved in 1996. The National Strategy for Hospitals (MOH 2011b) and the National Strategy for Community Based Health Care (MOH 2005) were also developed. Given the decentralized environment, the strategy called for strengthening referral networks by having a district hospital in every district (170)[8] and a regional hospital in every region (10). The health delivery system required several community-based services to link up to primary health care clinics at the subdistrict level. The clinics, in turn, were to link up to the district hospital by offering a package of basic health services, including internal medicine, basic surgery, obstetrics and gynecology, and pediatrics. The regional hospitals would be the referral point, offering the basic health service package of the district hospital and some specialty care. The "gatekeeper" concept was also introduced at the primary health care level.

Figure 2.5 Access to Transport at Health Facilities, 2010



Source: Data from MOH 2011a.
Note: At least one functioning mode of motorized transport includes ambulances and nonambulances, and two- and four-wheeled vehicles.

Since 1997, MOH has set up five-year capital investment plans, which correspond to the five-year Programmes of Work (for example, MOH 2002, 2007c). The first such plan was developed for 1997–2001. These plans cover the construction and maintenance of health-related buildings, the provision and maintenance of equipment, and the organization of transport to help people access appropriate levels of health services. The Capital Investment Plan II (2002–06) Review (MOH 2006) noted critical regional imbalances in the capital investment program. Imbalances were evident in operational funding and human resources. Most capital investment projects (for infrastructure, equipment, and vehicles) were funded by external resources. The capital budgets went to some hospital investments but were underused. It is not clear whether the low budget allocations were a result of limited releases. MOH set new priorities for the Five-Year Capital Investment Plan III (2007–11) (MOH 2007a). The framework for the capital investment program III focuses on increasing equity and access to quality health care, shifting resource allocations to the primary level, and strengthening decentralization. It encourages the use of alternative financing mechanisms and increased engagement with the private sector.[9]

Ghana's Equipment Policy was developed in 1996 (MOH 1996). Although the policy was clear, the roles and functions of the various regulatory agencies were not. The same lack of clarity applied to procedures and financing. Furthermore, details of medical equipment are not defined. For example, medical equipment lists concentrated on regional and teaching hospitals, not district hospitals, clinics, or CHPS. The

procurement processes for high-level medical equipment were centralized at MOH; in contrast, low-cost equipment procurement was decentralized to facilities. The latter was to finance procurement through internally generated funds (IGFs) instead of from budgets (1997). Further, procurement was to be through manufacturers certified as local distributors with in-country technical support capabilities. Instead, as much as 70 percent of medical equipment was procured through agents and integrators. In addition, budgets for medical equipment maintenance and replacement were often limited, and capital replacement (depreciation) plans were missing.

Ghana Health Service developed a transport policy in 2003 (GHS 2003). Its model transport management system (TMS) has been emulated by other African countries (Malawi, Mozambique, and South Africa). The National Ambulance Service became a national-level program by 2008. However, budgeting for staff training has been a challenge, which in turn has affected the quality of service. Further, public sector vehicle workshops are often underequipped. Given its constraints, the public sector works closely with the private sector in areas such as vehicle maintenance. A proper needs assessment could inform planning and budgeting for vehicle needs and upkeep and replacements.

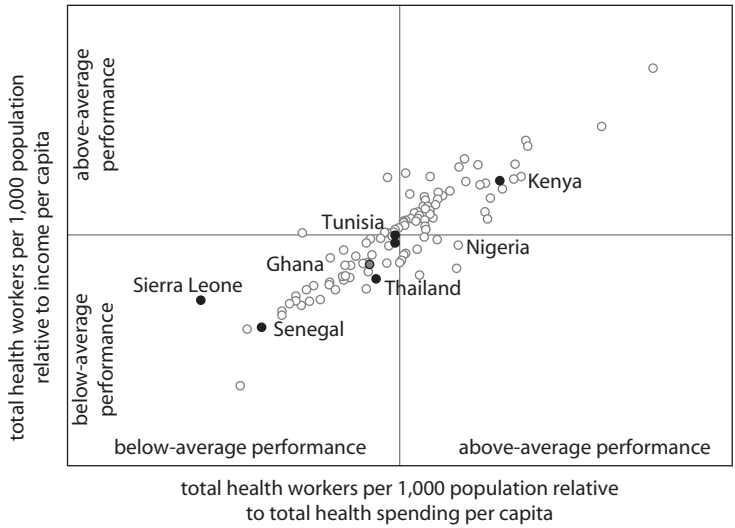
Human Resources for Health

International Benchmarking of the Health Workforce

Ghana's HRH levels do not meet international benchmarks. The WHO's Joint Learning Initiative (JLI) benchmarks recommend countries have at least 2.02 to 2.54 (average 2.3) essential health care workers (HWs) per 1,000 population.[10] In contrast, Ghana is estimated to have about 1.24 essential HWs per 1,000 population (2009).

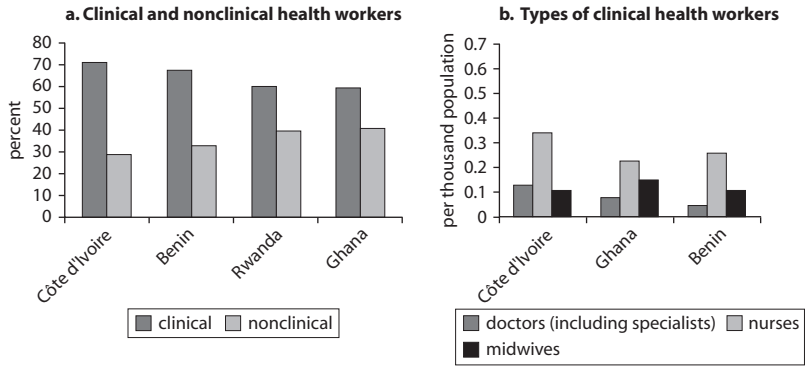
When compared with other countries, Ghana does not fare too badly in its overall HW ratios. But its clinical staff ratios fall short: Ghana has about 1.93 HWs per 1,000 population, whereas Rwanda has 1.22, India has 1.95, and Thailand has 3.0. However, a significant proportion (40 percent) of Ghana's HWs is nonclinical. Ghana's clinical staff ratios (60 percent) fall short of its neighboring countries: Zambia (0.59 nurses and 0.23 midwives per 1,000 population) and Côte d'Ivoire (0.13 physicians and 0.34 nurses per 1,000 population). Furthermore, about 50 percent of Ghana's clinical HWs are from the nursing cadre (nurses, midwives, community health nurses, or health assistants), and just 3 percent of them are physicians (2009). See figures 2.6 and 2.7.

Figure 2.6 Health-Workers-to-Population Ratios Relative to Total Health Spending and Incomes, 2009



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators database and the WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.
Note: Physicians and gross domestic product per capita data are for 2009 or the latest available year. Health workers include physicians, nurses and midwives, dentists, and pharmacists, as well as lower-level cadres.

Figure 2.7 Health Worker Profile, Selected Countries from Sub-Saharan Africa, 2009



Source: Appiah-Denkyira and others 2012.
Note: Data for Benin are from Country Status Report—Health 2009; data for Côte d'Ivoire are from Country Status Report—Health 2010; data for Rwanda are from Country Status Report—Health 2009; data for Ghana are from MOH (2009a).

Physician-to-population ratios have improved but remain low relative to the country's comparators. Ghana is one of the highest producers of physicians in Sub-Saharan Africa. But after having lost its physicians to international demands, the country changed its policy to retain physicians. Ghana's physician ratio (0.1 per 1,000 population, 2009) has improved over time. Now it lies within the HRH international benchmark (ranging between 0.1 [WHO] and 0.6 [WHO-JLI]), but it remains at the lower end of that benchmark. Ghana's nurse ratio (0.39 nurses per 1,000 population, 2009) has also improved. The nurse ratio is within the HRH international benchmark (which ranges between 0.2 [WHO] and 1.9 [WHO-JLI]), but on the lower end of that range. See figure 2.8.

Ghana's Health Workforce

The public sector employs the greatest proportion of HWs (65,000 in 2009). Over time, MOH's health staffing has increased, but more to the point, enrollment of new trainees has increased. This is a result of MOH plans to improve staffing distribution and to replace forthcoming retirements, especially of some key cadres. The increase in trainees is particularly noted subsequent to the wage reforms of 2006. See table 2.3.

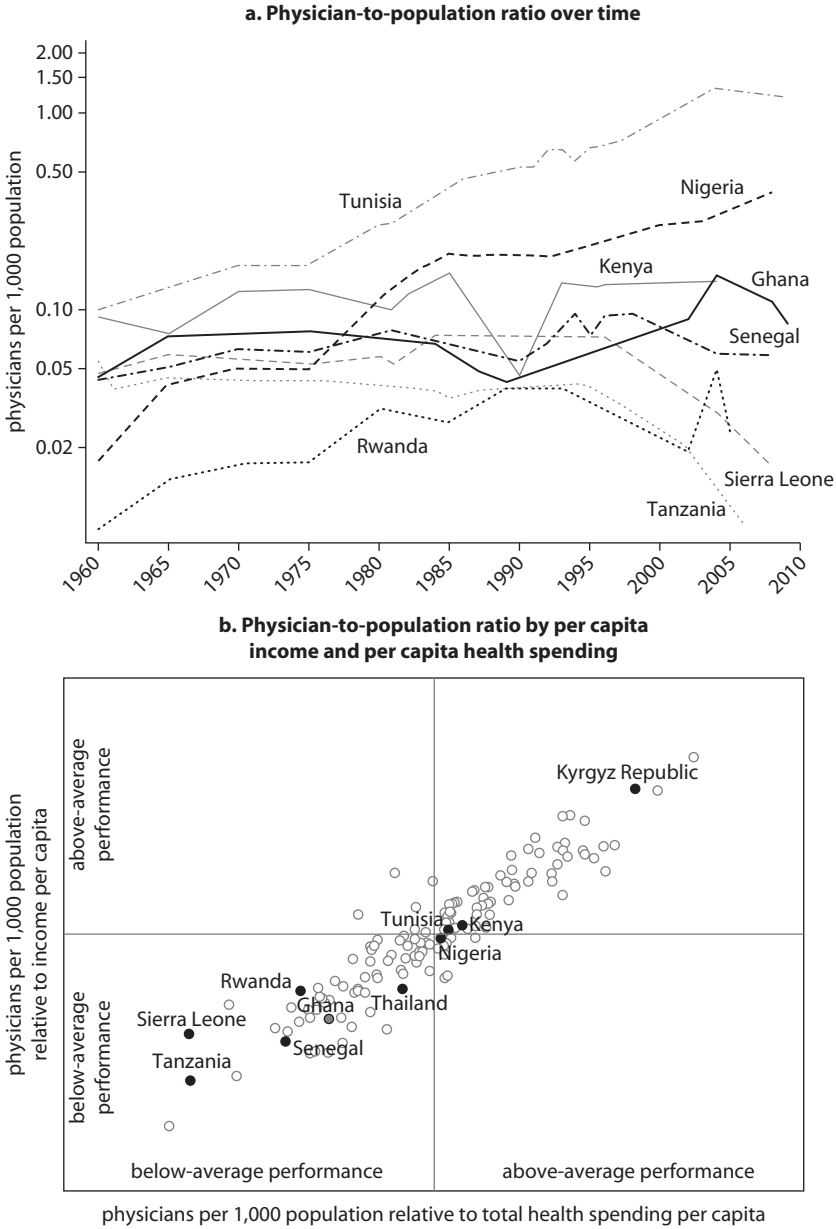
Between 2004 and 2008, retirement was the greatest contributor to staff exits from the national health sector. As HWs age, the risk goes up for losing more experienced personnel. For example, on average, midwives tend to be in their forties and fifties, closer to retirement age. Relatively few young people are enrolling in the midwifery program. See figure 2.9.

However, the growth of nonpublic sector staffing is not clearly understood. In 2006, MOH reported about 148 doctors in the private for-profit sector. Recent reports suggest that this may have grown to more than 500 (data for 2009 from the Ghana Medical and Dental Council). However, information about the non–public sector remains unclear and inconsistent according to various sources. See table 2.4.

The distribution of HWs is highly concentrated in Ghana's wealthier, urban areas. The greatest density of HWs per 1,000 population is in the Greater Accra, Ashanti, and Volta regions. Medical officers tend to locate in the Ashanti and Greater Accra regions; professional nurses, midwives, and community health nurses tend to be spread out. The Northern regions had the lowest ratios (MOH 2009a). See figure 2.10.

Critical staff is missing from many facilities. A survey found that among district hospitals 54 percent had two or more general practitioners,

Figure 2.8 Physician-to-Population Ratios, International Comparison



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators database and the WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.

Note: Physicians and gross domestic product per capita data are for 2009 or the latest available year.

Table 2.3 Ministry of Health, Workforce Growth, 2005–09

Staff category	*2005*	*2006*	*2007*	*2008*	*2009*	*Percent change, 2005–09*
MOH employment	38,720	40,289	42,279	45,114	47,464	23
Trainees	6,699	7,440	9,952	16,607	17,940	168
Total personnel on MOH payroll	45,419	47,729	52,231	61,721	65,404	44
Percent trainees	15%	16%	19%	27%	27%	

Source: Controller Accountant General Department, Integrated Personnel Payroll Database (1,2), 2010.

Figure 2.9 Selected Health Workers Distribution by Age, 2007

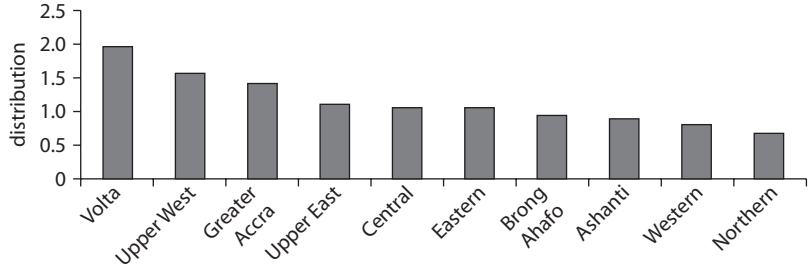
Sources: Antwi and Ekey 2008; Appiah-Denkyira and others 2012.

Table 2.4 Health Workforce, by Type of Health Care Workers and by Type of Ownership, 2006

	Types of health care providers						
Type of ownership	*All total*	*Total*	*Doctors*	*Nurses*	*Midwives*	*Community health nurse*	*Percent ownership*
Total	42,214	15,615	967	6,286	2,510	5,852	
MOH	18,977	12,208	614	3,730	2,425	5,439	78
Quasi-public	3,749	424	107	255	54	8	3
CHAG	6,211	1,100	98	885	31	86	7
Private for-profit	4,660	1,661	148	1,198		315	11
Others	1,028	222		218		4	1
Percent of total			6%	40%	16%	37%	
Percent private for-profit	11%	11%	15%	19%	0%	5%	
Percent private and missions	26%	18%	25%	33%	1%	7%	

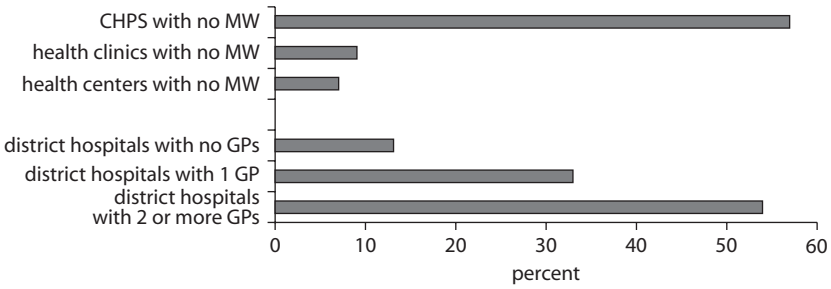
Source: MOH 2007d.

Figure 2.10 Regional Distribution of Health Workers (Doctors, Nurses, and Midwives) per 1,000 Population, 2009



Sources: MOH 2009a; Appiah-Denkyira and others 2012.
Note: Calculated from MOH (2009a), 2010 Population and Housing Census, Provisional Result, Feb. 2011.

Figure 2.11 Maldistribution of Staffing in Public Health Facilities, 2010



Sources: World Bank staff; data from MOH 2011a.
Note: GP = general physician; MW = midwife.

33 percent had one general practitioner, and 13 percent had no general practitioner (2010). Furthermore, 7 percent of health centers lacked midwives, 9 percent of health clinics, and 57 percent of CHPS were also in this category (2010). See figure 2.11. Greater Accra had the greatest per capita of midwives attending deliveries; the Central region had the least (2010) (MOH 2011a).

Most HWs are concentrated in urban areas and hospitals. Overall, the ratio of HWs per bed is higher in urban (0.89) than in rural (0.43) Ghana. Urban hospitals, particularly government hospitals, have more HWs per bed among all types of ownership. When it comes to the public sector, most GHS HWs are in urban areas: 1.11 HWs per bed in urban areas versus 0.41 HWs per bed in rural areas (Makinen and others 2011).

A higher ratio of nurses to physicians is found in urban areas. Government facilities have the best nurse-to-physician ratio (3.8 nurses

and midwives to one physician). Next are for-profit private facilities (four nurses and midwives to one physician). The ratios in rural areas vary, but they are much lower than in urban areas (Makinen and others 2011).

Public and for-profit private HWs cater to an urban clientele. In contrast, missions (such as CHAG) and private pharmacies and chemical sellers cater to a rural clientele. Government facilities have the greatest number of HWs in urban areas; for-profit facilities are next. In rural areas, CHAG facilities have the greatest number of HWs; public facilities are next. Private pharmacies and chemical sellers offer the greatest and most accessible source of services in rural and urban-poor areas.

CHAG has an equal presence in urban and rural areas. CHAG, a mission service, receives subsidies from MOH to provide services to rural and underserved areas. CHAG's staffing per bed (0.5 HWs per bed in both rural and urban areas) is higher compared to public facilities (0.41 HWs per bed). However, more of their physicians are concentrated in urban areas (19 nurses and midwives to one doctor in rural areas, versus 9.8 nurses and midwives to one doctor in urban areas). CHAG hospitals offer a broader range of services than government hospitals in rural areas (Makinen and others 2011). See box 2.2.

Quality of Health Care Workers

Little trend data are available, and therefore it is not easy to assess how the quality of HWs has changed over time. The indicators selected for assessing quality were (a) absenteeism, (b) competency, and (c) productivity.

Limited evidence suggests, however, that absenteeism may be a problem: Medical officers were more likely to be absent from work than professional nurses. Nurses, in turn, were more likely to be absent than auxiliary staff.

Total performance scores for all clinics remained well below the highest possible scores. Deficiencies in technical skills were widespread. The quality of clinical care was substandard. Although below the maximum score, generally midwives had a higher knowledge of obstetric and neonatal care, and clinical nurses/health assistants and community health nurses/community health officers the least (MOH 2011a). The private sector scored lower on quality of care than the public sector.

HW productivity is low and variable across regions and districts and across cadres. The highest productivity was in the Ashanti, Brong Ahafo, and Central regions; the lowest was in Greater Accra (2006). See figure 2.12.

Box 2.2

The Urban Bias in Human Resource Distribution

The urban bias in health worker distribution has many explanations, some of which are described here.

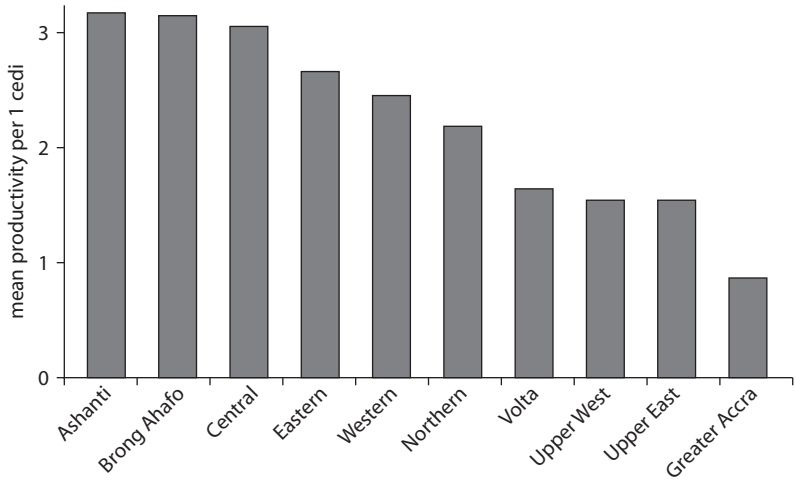
First, health training institutions in Ghana do not produce cadres that favor rural areas; however, that is changing somewhat. In Ghana medical education has traditionally been an urban experience. Each of the two oldest medical schools (University of Ghana and Kwame Nkrumah University of Science and Technology) is located in a major metropolitan area. The recent addition of two medical schools at Tamale and Cape Coast suggests that MOH is making a greater commitment to a regional distribution of training.

Second, the low number of HWs in rural areas after graduation is due to an inaccurate perception about monetary and nonmonetary compensation. Critical distinctions lie behind the motivation of doctors and nurses to choose jobs in the public sector. Medical doctors can apply for any open public sector post. Greater access to mentors and better promotion opportunities in urban areas motivate many doctors. In addition, poor tracking of GHS contracts and unclear terms of appointment offer additional reasons for many cadres to avoid rural service. In contrast, nurses are more likely to bond with the local or regional communities where they train or with districts that paid for their education. Approximately 80 percent of nurses who train in a given region stay there. Further, financial incentives are not the only motivating factor for moving to or staying in rural areas. According to one study, the opportunity to serve the community was the primary attraction for HWs, and social status was the second (Witter and others 2006).

Finally, transfers from rural to urban areas are complicated by bureaucratic procedures and delays, even though there are ways around this red tape. Because of cumbersome administrative procedures to process transfers from rural to urban areas, many HWs are unable to migrate to urban centers. Delays and a lack of transparent procedures and common guidelines are the most significant problems. MOH transfer guidelines exist, but they are not widely known or followed. Poor human resource information systems, coupled with a lack of accountability by doctors who exit their posts before completing a contract, contribute to an overarching problem with retention.

Source: François Diop, unpublished background paper, 2011.

Figure 2.12 Ghana: Regional Variation in Health Worker Productivity, 2006



Sources: Addai and Bosomprah 2007; Appiah-Denkyira and others 2012.
Note: These findings should be interpreted with caution. They make four assumptions: (a) case-mix variation is negligible or the same across facilities; (b) staff absenteeism is negligible or the same across facilities; (c) all facilities are fully functional (adequate equipment, staff, and drugs); and (d) all facilities have similar catchment areas.

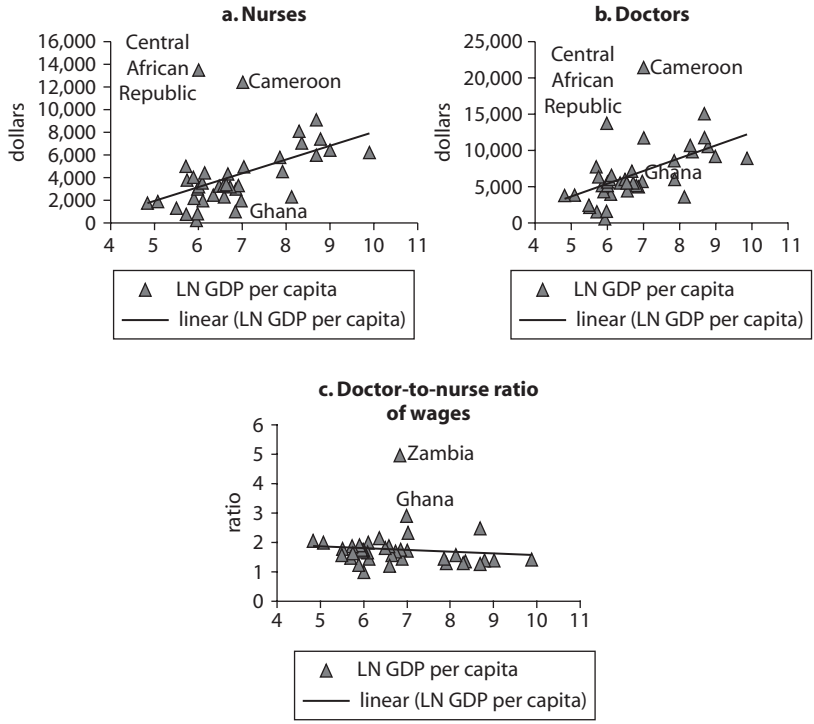
Remuneration of Health Care Workers

Data from 2007 show that Ghana, compared with other African countries with similar incomes, has relatively lower salaries for nurses, but that it fared quite well for physicians. The basic salaries of Ghanaian physicians were almost three times that of nurses, whereas in most other countries in the region, physicians earned 1.5–2.0 times that of nurses. See figure 2.13.

Data from 2009 show that salaries vary significantly across cadres (MOH 2009a). The highest monthly wages are paid to medical specialists ($1,500), followed by dentists ($945) and medical officers ($912). Professional nurses earn about $400 a month. Most skilled allied health professionals earn $300–$600 a month. On average, specialists earn 26 times, medical officers 15 times, and professional nurses 7 times the average income in Ghana. Salaries within cadres also vary considerably, mostly because of experience and promotion over time. For instance, an entry-level staff nurse would earn about $300 a month, but a principal nursing officer may earn three times that.

Salaries of Ghanaian HWs have been increasing in most cases in real terms as well. The public health sector was able to negotiate

Figure 2.13 Annual Wages of Health Workers in Ghana and the Region, 2007

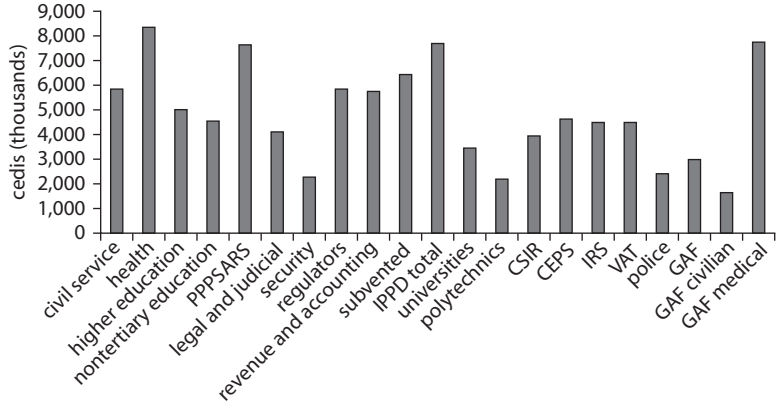


Sources: Produced using data from Scheffler and others 2009; Ghana: MOH Human Resource Department, 2010; World Bank's World Development Indicators database.
Note: LN = natural logs; GDP = gross domestic product.

higher salaries and attain a median "base" salary that was above the national median "base" salary in the public sector. This increase has helped retain some skilled HWs in the country. Salaries have increased over time. As of 2008, on average, HWs earned the highest average salary within the public sector. However, salary increases were higher for medical officers than for other HW cadres (for example, nurses). See figure 2.14.

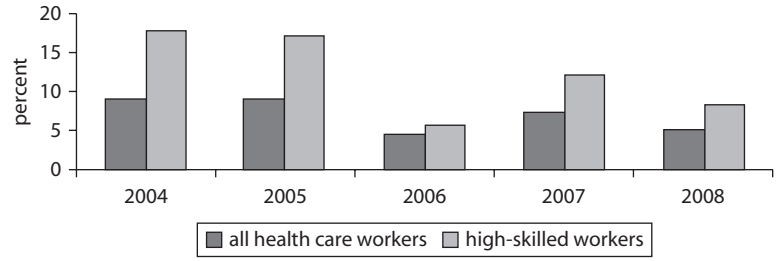
Until recently outmigration had decreased the number of HWs. Compared with other countries, Ghana has the largest number of domestically trained physicians living abroad. However, emigration among all HWs cadres has declined steadily since 2004, and the wage increases are expected to have had some influence. Attrition, although high in the past, has slowed among highly skilled HWs. See figure 2.15.

Figure 2.14 Average "Base" Salary across Different Public Sector Services and Institutions, 2008



Source: Cavalcanti 2009.
Note: CEPS = Ghana Customs, Excise, and Preventive Services; CSIR = Council for Scientific and Industrial Research; GAF = Ghana Armed Forces; IPPD = Integrated Personnel and Payroll Database; IRS = Internal Revenue Services; PPPSARS = public policy, planning, services, administration, and related services; VAT = value added tax.

Figure 2.15 Ghana: Health Worker Attrition Profile, 2004–08



Sources: Antwi and Phillips 2011; Appiah-Denkyira and others 2012; based on data from Controller Accountant General's Department payroll database.

Education

Ghana is one of the higher producers of HWs, particularly nurses and medical doctors, when compared with countries elsewhere in Sub-Saharan Africa. Ghana's production of medical doctors (264 medical graduates per year in 2008) is considerably higher than the majority of countries in the region. On average, enrollment into medical schools has increased in recent years: Ghana produces 1.20 medical graduates per 100,000 population (or 12 per million population in 2007). Enrollment in nursing programs tripled between 2000 and 2007 as a response to

international and national demands. Overall, university admissions increased by 20 percent, and HWs training school admissions increased by 50 percent (2001–06). Financial access for students is generally good; most public training institutions for medical and paramedical care offer subsidized fees. See figures 2.16 and 2.17.

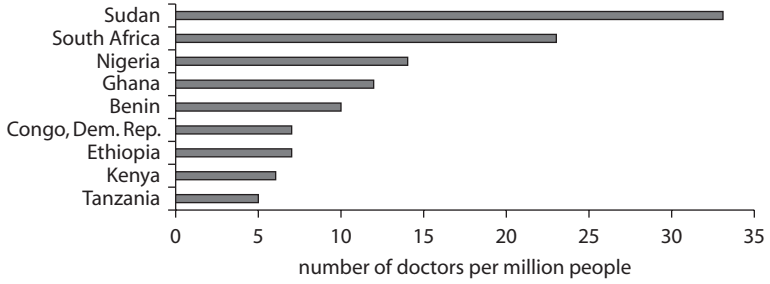
As of 2010, at least 82 schools, public and private, trained HWs. MOH is heavily engaged in HW training and developed 21 training institutions (2002–06), including postgraduate physician training and the training of health assistants. The private sector responded to the shortage by setting up preservice training institutions: seven new institutions for nursing, medical laboratory technologists, and health assistants. The nurses and midwives' councils were expected to oversee the quality of this training.

However, the number of medical schools is still insufficient, although growth has been seen in the number of schools offering preservice education for nursing, midwifery, and health assistants. Most medical schools are skewed in favor of urban areas and attract students from urban areas, who stay in urban areas. Nursing and midwifery schools are more egalitarian in their locations and therefore more egalitarian in recruitment and placement.

However, shortages still remain for certain cadres. For example, although the number of nurses enrolled increased by about 50 percent (2003–06), diploma programs for community health nurses did not see significant changes in their numbers. This resulted from low intake capacity at several preservice training institutions.

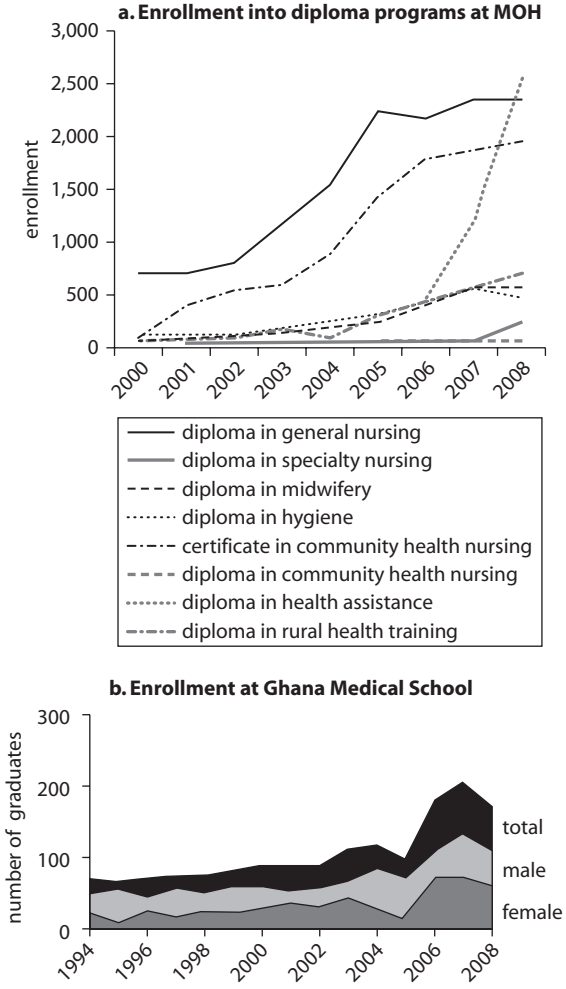
As enrollment increased at some schools, a parallel increase was not seen in investments. The lack of corresponding growth in physical and

Figure 2.16 Production of Doctors per Million People, International Comparison, 2007



Source: Appiah-Denkyira and others 2012.

Figure 2.17 Ghana: Enrollment into MOH-Run Paramedical Diploma Programs and Medical Schools, 2000–08



Sources: Appiah-Denkyira and others 2012; Beciu and others 2009. MOH, Health Human Resources Department, Enrollment in Health Training Schools 2000–08.

human capital investment has created a huge burden for the training institutions. Most of the schools in Ghana are functioning at or above maximum capacity. Capital investments are low, and buildings and equipment are not maintained. Budgets have grown little over time; training institutions rely more and more on IGFs (student fees). As budgets decline, the sustainability of these programs may be a concern.

Significant investment in the public sector has to take place before the schools can scale-up other medical disciplines and improve on current trends.

As a result, the quality of several training institutions suffered. The outcome was limited space, inadequate equipment, lower teacher-student ratios, and deteriorating infrastructure. Significant differences exist when it comes to qualifications of the academic staff and vacancies within their ranks. One study showed that higher-level institutions even experienced a shortage of lecturers (the range was from 14 percent to 75 percent) (Appiah-Denkyira and others 2012).

Policy and Regulations

The MOH updates the Human Resources for Health Strategy every five years. In 1992, MOH developed health staffing norms. In 2002, MOH developed its first Human Resources for Health Strategy (2002–06), and five years later its second HRH policy and strategy (2007–11). In the second strategy, its main concerns were the inequitable distribution of HWs and their low competency and productivity. The five-year strategy aimed to (a) improve the rational production and equitable distribution of HWs; (b) focus HWs on promotion, prevention, and regenerative health; (c) bring HWs in line with the Millennium Development Goal; (d) provide equal opportunities in training, recruitment, and deployment; (e) create an enabling environment for HWs; and (f) preserve and create improved ethical standards among HWs to ensure the rights of clients and staff. Although the first HRH strategy (2002–06) provided direction on preservice training, it did not offer clear direction to training institutions. Preservice training is shared between the Ministry of Education and MOH. However, no comprehensive training policy has been developed to clarify roles and to address training issues. MOH is now developing its third HRH strategy (2011–15).

Public sector decisions about HRH are highly centralized. HRH functions are uniquely distributed across agencies and at various levels of the health system. In Ghana core management authority related to HRH remains highly centralized. It lies with the MOH, GHS, teaching hospitals, and CHAG on a more limited basis. Limited decision-making power over HRH lies at the regional and district levels; the degree of decision making varies between CHAG and GHS. As a result, HW-related decision making is extremely limited at the facility level. Highly centralized decision making is problematic in a decentralized environment; further discussion on this topic appears in the section on decentralization and

governance (see also Couttolenc 2012). For example, a lack of responsiveness to HWs' needs is seen, because decentralized levels do not have the autonomy to hire and fire HWs. At GHS, the primary challenge faced by the human resource directorate is the lack of a standardized human resource information system.

There is little know-how on the effectiveness of the various incentives and schemes offered in Ghana to improve retention, distribution, and productivity of HWs. A review of the schemes and their effectiveness is needed. Some of the strategies adopted by Ghana are detailed below.

Strategies for HW retention in the public sector. Ghana has introduced several HRH retention strategies; most offer incentives to HWs. These include tax waivers on imported vehicles, housing benefits, payment of additional duties hours allowance (ADHA; this scheme was introduced in 1998 and existed until 2005) (Ruwoldt and others 2007), and consolidated salaries. The ADHA program ran for a few years and initially, though offered to physicians, grew to incorporate almost all HWs including CHAG personnel. It finally became a program that was financially unsustainable and was not necessarily meeting its intended objective. The program was finally discontinued at the introduction of the new health service salary structure in 2006. See box 2.3. The impact of the various incentives schemes on HW retention has not always been assessed. MOH has also instituted a bonding scheme to provide financial support for the preservice training of certain HWs. Sponsors would determine the needs and positioning of HWs. Sponsors could come from local governments, faith-based institutions, chieftains, the national government, or private or fee-based organizations. Sponsored HWs would be bonded for a maximum of five years.

Strategies to address inequitable distribution of HWs. Critical decisions were made to improve skilled HWs in rural areas: (a) to scale up the production of medical assistants, clinical officers, and physicians' assistants at public facilities so that they would be located at district- and subdistrict-level facilities and (b) to improve distribution of general physicians in rural areas. In 2009, the Ghana College of Physicians and Surgeons made rural service a prerequisite for specialization. Earlier some incentives, such as car and housing loan schemes, were offered for rural-based professionals (Dovlo and Martineau 2004). A deprived area incentive scheme, financed through the Highly Indebted Poor Country inflows, was initiated in 2004 but not sustained beyond because of limited financial sustainability of the scheme (MOH 2007d). Little is known about the effectiveness of the schemes.

Box 2.3

The Case of the Additional Duties Hours Allowance under the Ministry of Health, 1998–2005

MOH continued to face challenges in retaining medical and paramedical staff members, many of whom left the country and several went to the private sector. To retain staff, and because the government was still in the process of considering the various options on the wage bill reform, MOH introduced the additional duties hours allowance program in 1998. It is said that the ADHA scheme arose from industrial action between the government and the health care workers union.

The ADHA program was initially targeted for physicians. However, the program grew to include nurses and core clinical staff working longer hours. It was extended later to include all staff, including that at CHAG. However, the ADHA program resulted in high cost implications. For example, in 2005, ADHA was significant (825 million cedis), having risen from 3.7 million cedis in 1998, and as compared with MOH's basic salary. ADHA payments and salaries in 2005 accounted for 97 percent of total government health expenditure, and 67 percent of total government and donor health expenditure. After eight years, MOH discontinued this program at the introduction of the new health service salary structure in 2006, which consolidated all allowances into the basic salary.

The objective of the ADHA program was to improve performance and retention of staff. Reviews, however, have suggested that many unintended and adverse effects resulted: Although ADHA initially encouraged HWs and especially physicians to retain their services within the country, this trend was not maintained. Inequity may have become worse, because HWs aimed to go to urban centers where there was a likelihood of higher ADHA, and disparity in earnings grew between physicians and nurses and other HWs.

Sources: World Bank staff; information is from MOH 2007d; Ruwoldt and others 2007.

Strategies to improve access to HWs. Two critical decisions were undertaken. The first was to sign a memorandum of understanding with the mission organizations (for example, with CHAG in 2006). The goal of this partnership was to provide services in rural and remote areas. The second was to allow for public financing of private care by adopting private providers in National Health Insurance Scheme (NHIS). The private sector makes up a significant portion of HWs in the country; it caters to both urban and rural areas.

Strategies to improve competencies and staffing distribution. MOH has extended the medical residency period for physicians from one to two years and decentralized training. Residencies are shared at teaching hospitals and regional/district hospitals. MOH hopes to encourage more staff to stay in the regions and districts rather than concentrate at tertiary levels. MOH also established an interagency committee to distribute staff based on availability and annual recruitment plans.

Pharmaceuticals

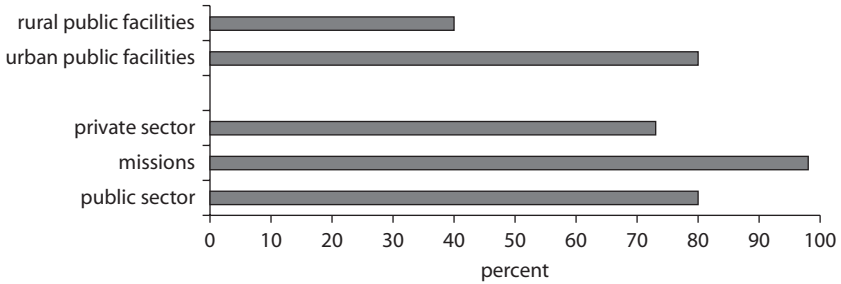
Supply

Retail pharmacies have grown exponentially in the past decade. Retail drugs are available from public (55 percent) and private (45 percent) sector facilities in Ghana (Arhinful 2009). With an estimated retail market of $300 million (Seiter and Gyansa-Lutterodt 2009), it is expected that the growth of this market will continue. The government estimates that more than 10,000 private licensed and nonlicensed chemical sellers operate in Ghana (2008).[11] By law, new pharmacies or chemical sellers need to operate at a minimum distance from existing businesses, but it is not clear whether this rule is consistently enforced. The density of these retail businesses is highest in urban areas (Greater Accra and the Ashanti Region account for more than 80 percent of all drug retail outlets in Ghana).

Overall, access to essential drugs has improved throughout the country, although effort is required to ensure continuity and streamlined supply chain. In 2008, public sector health facilities stocked about 80 percent of essential drugs, mission organizations 98 percent, and private retail pharmacies 73 percent (Arhinful 2009). In 2004, 64 percent of private retail pharmacies had stocks of lowest-priced generics, 32 percent of mission organizations, and 20 percent of public sector facilities (these are median availability; MOH, WHO, and HAI 2004). In 2008, the availability rates of certain tracer drugs among public facilities had improved to 80 percent in urban areas and 40 percent in rural areas, compared with 40 percent and 15 percent, respectively, in 2004. Annual stock-out days in public facilities had been reduced from an average of 78 days in 2002 to 30 days in 2008 (Arhinful 2009). See figure 2.18.

Access to drugs and consumables for obstetric and neonatal care has improved in public and private facilities. Most facilities reported having antimalarials, antibiotics, and oxytocins. Other drugs, such as antiretrovirals (ARVs), were not easily available. On a national level, just

Figure 2.18 Availability of Essential Drugs in Health Facilities, 2008



Source: Data from Arhinful 2009.

23 percent of facilities surveyed had ARVs. Contraceptive access was also good; district hospitals reported having the lowest (73 percent had contraceptives), but implants and intrauterine devices were uncommon (they averaged 35–39 percent). However, several facilities continued to report stock-outs of certain tracer drugs, such as oxytocin and magnesium sulfate (MOH 2011a). The primary reason for drug shortages was limited supplies from Central Medical Stores (CMS);[12] transport difficulties, financial constraints, and administrative difficulties were next. See table 2.5.

Procurement

Decentralization of procurement and introduction of the NHIS have helped improve the availability of medicines at the facility level. Over the past decade, the procurement of medicines has become increasingly decentralized. Budget Management Centers (BMCs) purchase directly from the domestic private sector. The MOH has tried to curb this practice by introducing administrative guidelines that require BMCs to obtain a "non-availability certificate" from the CMS prior to purchasing. In practice, this guidance is ignored. In 2003, a survey conducted showed that more than 50 percent of medicines came from the private sector (Sarley and others 2003). The main reasons cited were lower prices and better quality, availability, and packaging. See figure 2.19.

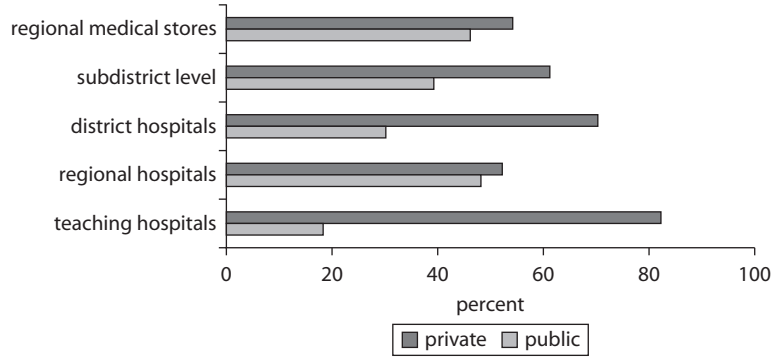
The public sector is still the main source of drugs for obstetric and neonatal care. Most health facilities, ranging from hospitals to CHPS, have pharmacies or they provide drugs. The primary source of obstetric and neonatal care–related drugs is the public sector (67 percent), followed by private pharmacies (30 percent). Teaching hospitals primarily rely on the public sector for obstetric-related drugs and medical supplies. Maternity

Table 2.5 Primary Reasons for MCH-Related Drug Stock-Outs in Health Facilities, 2010

	Percentage of respondents			
Facilities	*Drug stock-outs at CMS*	*Transport difficulties*	*Administrative difficulties*	*Financial constraints*
Public				
Regional hospitals	33			
District hospitals			21	
Health centers		18		
CHPS	19			
Nonpublic				
District hospitals				27
Maternity homes	33			
Health clinics		21		

Source: Data from MOH 2011a.
Note: MCH = Maternal and child health.

Figure 2.19 Sources of Drug Procurement: Public and Private Sectors, 2002

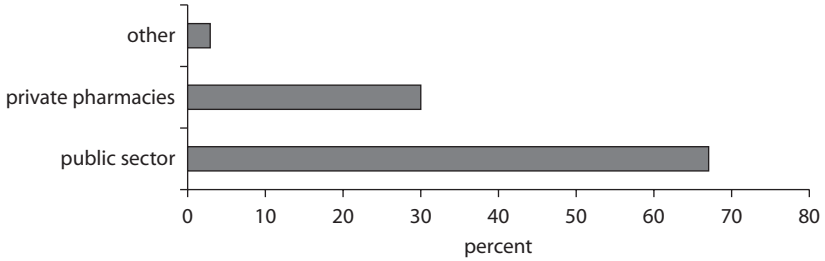


Source: Data from Sarley and others 2003.

homes look to private pharmacies. District hospitals and health clinics relied equally on public and private sources (MOH 2011a). See figure 2.20.

The CMS is still an important procurer and distributor of select public health commodities. Although nearly 50–70 percent of public sector procurement comes through the private sector, CMS plays a critical role in the procurement, warehousing, and distribution of select public health commodities (such as contraceptives and vaccines). Most donors rely on CMS to serve as the first in-bound warehouse for storing and breaking bulk orders into smaller orders for downstream distribution to facilities. In addition, CMS continues to provide at least 30 percent of the country's

Figure 2.20 Source of Procurement for Obstetric and Neonatal Care–Related Drugs, 2010



Source: Data from MOH 2011a.

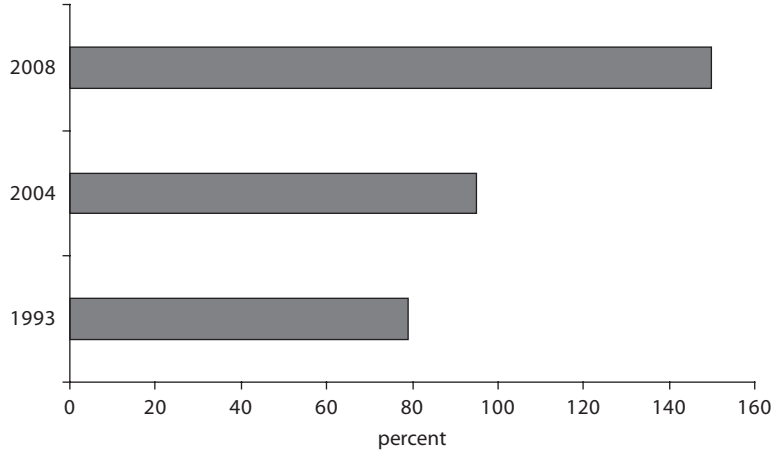
needs. However, to date, supply chain functions operated by CMS have been fragmented; a strategic approach is lacking. The policy requires direct delivery by CMS to regional stores. However, a study on the cost of logistics found that most regional stores used their own transportation to get supplies.

Pricing

The average drug price in Ghana is many times above international reference pricing. In 2007, Ghana procured drugs at 150 percent of the international drug reference price, compared with approximately 79 percent of the international reference pricing in 1993 (Sarley and others 2003). HWs cited low prices as one of the reasons for purchasing from the private sector. And yet data from several studies show that CMS (the MOH's procurement agency) was able to purchase well below international prices, mainly because of economies of scale gained through bulk orders. High prices were attributed to the facts that (a) decentralized procurement of drugs at the district and subdistrict levels did not benefit from economies of scale, (b) NHIS's drug pricing policy dictates pricing be at a "median" range of the current Ghana market rather than pegging it to MOH's markup policies or to international reference pricing, and (c) the difficulty of enforcing price regulations. See figures 2.21 and 2.22.

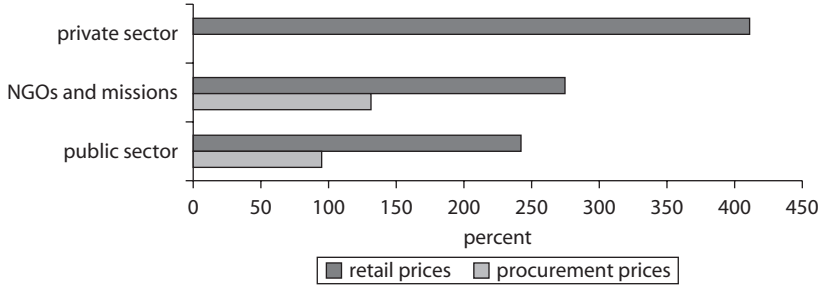
Drug price variation across facilities is significant. A survey of drug prices among different sectors (public, private, and mission) showed large differences for antimalarial drugs (provided free to the public sector by donors), but small differences for anti-hypertensive drugs. In urban areas the private sector was likely to have lower prices than the public sector, whereas in rural areas the public sector was likely to

Figure 2.21 Average Public Sector Procured Prices Compared with International Reference Pricing, 1993–2008



Source: Data from Arhinful 2009.
Note: 2008 data for Ghana are compared with 2007 international reference pricing as compiled by Management Sciences for Health.

Figure 2.22 Public and Private Sector Procured Prices versus Retail Prices of Generic Drugs Compared with International Reference Pricing, 2004



Source: Data from WHO 2004.

have the lowest prices and the mission sector the highest prices. Some of the price differentials could be attributed to delivery costs. However, much of the variation is a consequence of decentralized pricing and decisions about procurement. This situation could have a negative impact on the poor.

A high markup has increased generic drug prices even further. On average, public and private sector facilities sell their retail drugs at about 350 percent (ranging between 250 and 400 percent) of international

reference pricing. Although the public sector has a drug markup policy, price increases are significantly above that. The facilities either are not aware of the policy or do not apply. They use their discretion in setting prices. It is very possible that these price hikes are a result of drug pricing policy of the National Health Insurance Authority (NHIA), which uses "median" local market prices. NHIS-registered patients are not expected to pay for their prescription drugs, but all others do. See table 2.6 and figure 2.23.

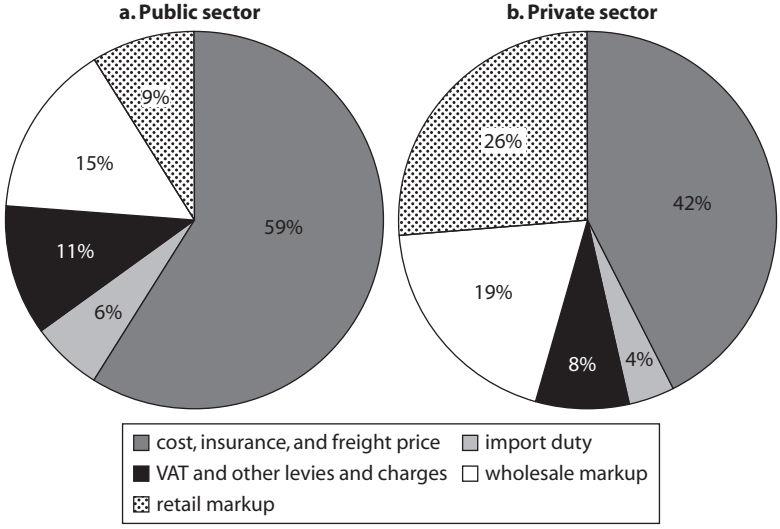
Profit margins are kept relatively high. The typical profit margins for manufacturers are in the range of 10–40 percent; wholesalers add another

Table 2.6 Ghana's Ministry of Health Drug Price Markup Policy

	Markup
Central Medical Stores	20% for international competitive bidding, plus 25% duty and value added tax adding 45% to ICB prices; 15% sourced through local procurements
Regional Medical Stores	10%
Service delivery points	10%

Source: Sarley and others 2003.
Note: ICB = international competitive bidding; VAT = value added tax.

Figure 2.23 Cost Breakdown of Drugs Procured by the Public versus the Private Sector, 2004



Source: WHO 2004.
Note: VAT = value added tax.

10–20 percent; and average retail margins are 20–50 percent, according to Cohen and others (2005). But anecdotal evidence suggests that in some cases margins can be up to several hundred percent higher, especially at the retail level. Margins in the public sector tend to be lower than in the private sector, but the picture is inconsistent. It appears that public sector providers are increasingly managing their pharmacies for profit. They benchmark their retail prices against the NHIA Medicines List's reimbursement levels or the local private competition instead of applying a consistent margin on top of their acquisition costs.

CMS played a critical role in keeping drug prices down**.** Surveys dating as far back as 1993 have consistently shown that MOH's bulk procurement of drugs resulted in cheaper prices. This was a result of two strategies: bulk procurement and the use of international tendering. However, a combination of reforms decentralized the drug budget to BMCs. BMCs owed significant funds to CMS for past services. As a result, CMS was unable to ensure an appropriate and consistent level of drugs on hand, and many facilities started purchasing directly from the retail market. That situation reduced the capital of the CMS, which made it unable to conduct its mandate of procurement and distribution.

Quality

A risk exists of noncompliance with rational drug prescribing. Health facilities surveyed by MOH showed significant deviations in procurement from the Essential Medicines List (EML). There are two givens: NHIS reimburses providers for their drug costs and regulatory enforcement is weak. As a result, adverse behaviors emerge because providers are willing to prescribe drugs that may not be necessary, or they prescribe more expensive drugs. On the basis of the Korle-bu teaching hospital case, providers are also willing to provide drugs not in the EML or NHIS's drug lists. This suggests that drug costs in the country could grow faster than necessary, as is evident from NHIS's spending patterns.

A significant proportion of prescription drugs are bought over the counter (OTC). In addition to OTC medicines (30 percent), Ghana's Food and Drugs Board (FDB) estimates the sale of prescription medicines or the sale of prescription medicines by nonpharmacists (for example, chemical sellers, who are not licensed to do so) is a major challenge. Irrational and overuse of prescription drugs is on the increase. Even more threatening is the risk of counterfeit or substandard drugs entering the pipeline. The FDB estimates almost 10–20 percent of medicines sold through the private sector may be substandard (Lukulay and Smine 2008).

The lack of compliance with rational prescribing is rampant. As a result, costs have increased for consumers as well as the government. In addition to poor compliance among retail pharmacies, a survey conducted by MOH found a lack of adherence to standard treatment guidelines, a failure to procure medicines on the EML, and an increase in the number of drugs prescribed per episode (MOH 2007b). Recently, however, NHIS has issued price lists to providers that set ceilings for drug reimbursements. This step should indirectly help control drug prices in the marketplace.

Policy and Regulations

The MOH five-year program (2007–11) emphasized the need to improve access to medicines, improve supply management systems, increase quality assurance, and promote the rational use of drugs. MOH has an EML, and NHIS has a drug list.

The Food and Drugs Law was developed in 1992 and amended in 1996 as Act 523. Specific tasks of FDB are to control manufacturing, imports, exports, distribution, use, and advertisement of drugs. FDB has six regional offices plus others at ports and airports. FDB manages a pharmacovigilance program. It also runs the official drug quality control laboratory, which participates in proficiency testing of drug quality control laboratories organized by WHO. MOH has also developed policies (National Drug Policy; MOH 2004a) and tools such as the EML and standard treatment guidelines for improving quality assurance in the drug management cycle. However, the application of these tools has fallen short. No effective enforcement is in place of existing regulations regarding price margins in the public sector. Moreover, information is scant and unreliable about margins and markups at different levels in the private supply chain.

The MOH EML has about 29 categories, including medicine, vaccines, and injectables (MOH 2004b). Most products on this list are generic or branded generics, except when otherwise indicated. Teaching and private hospitals may have their own list of medicines, which includes the EML and other branded drugs. NHIS also has its own list of medicines, which incorporates the EML and some others. NHIS does not reimburse drug costs outside of its own drug lists. Confusion exists about some drugs, such as those for the treatment of malaria, which are provided free of charge through external financing support. NHIS reimburses them as well. When issues such as this arise, they are subject to a review by NHIS's medical audits department.

CMS and supply chain challenges have made the system ineffective. CMS is responsible for procuring drugs and vaccines that are primarily financed by external financiers. It is also responsible for public goods that are financed under the central government's budgets. Economies of scale can generally be applied along with international competitive bidding or national competitive bidding, when appropriate. Governance issues are easier to administer. However, the CMS supply chain is not efficient. The fragmented supply chain brings about significant non–value-added steps (Brumburgh and Raja 2001), one of which results in higher delivery costs for the end user. It takes almost 0.02 cents of every dollar or approximately 2 percent to process every drug or non-drug consumable. The regional and district medical stores use in-house transport. These costs represent nearly 68 percent of the supply chain's total transportation costs (Huff-Rousselle and Raja 2002). CMS operates at 50 percent capacity because of high indebtedness (Seiter and Gyansa-Lutterodt 2009). Distribution to regional medical stores has been severely challenged. Therefore, many health facilities experience stock-outs, and they cannot function effectively.

Alternative approaches on decentralization and drug procurement from the non-public sector have improved drug availability. Ghana's public procurement of pharmaceuticals takes place at tier levels as defined by the Public Procurement Act (Act 663, 2003). The law allows for decentralization. With the introduction of NHIS and the split between provider and payer, NHIS reimbursements cover the cost of treatment drugs; these reimbursements go directly to the provider or to the district authorities. This law gives health facilities the discretionary authority to use IGFs for procuring drugs and consumables that appear on the EML or NHIS drug lists.

Decentralized procurement has had some positive and some negative outcomes. On the positive side, access to medicines has improved rapidly. On the negative side, drug prices have gone up significantly. Furthermore, the types and quality of drugs on the market are not assured. FDB is unable to control the quality of drugs on the market because procurement is decentralized and it is also handled by several small agents in the private sector.

MOH can advance this agenda by offering incentives to pool procurement at the national and regional and across regional levels, doing a better job of negotiating pharmaceutical prices, regularly screening market prices, and updating NHIS's reimbursable drug prices. NHIS can be a strong conduit for bringing down drug prices. NHIS has come up with

drug pricing that uses a median market rate approach. It can use MOH's (2009b) drug pricing markup policy to standardize prices. Quicker reimbursement from NHIS can also lead to gains in efficiency.

A significant proportion of drugs are imported; however, Ghana has measures to protect local manufacturing industries, including drugs on the EML and more traditional drugs. However, these protective measures have not always allowed for competition. A large West African drug distribution company with more advanced management systems (Gokal Laborex Ltd, affiliated with Eurapharma, which is part of a large French industrial conglomerate) has attempted to set up shop in Ghana, but this company has met resistance from local players. Local manufacturers are aware that their fragmented business model is not competitive in a global market. Nevertheless, 70 percent of drugs, including generic, generic branded, and branded drugs, are imported (Seiter and Gyansa-Lutterodt 2009). A duty is charged on imported drugs; little or no duty is charged on drugs that come into the country through external financing or that may classify as a public good.

Conclusion

Through this chapter, we have learned about the reform efforts in the Ghana health system and the challenges that remain to be addressed. Through the three- to four-year medium-term health development strategies, Ghana has moved toward a longer-term framework of implementing programs and monitoring results. Ghana also works in a healthy environment, having separated the roles of MOH and GHS, as stewardship and health delivery. It has also separated the roles of provider and payer, with the introduction of the NHIS in 2005. Regulatory agencies exist but need to be strengthened. Accountability mechanisms remain weak.

Ghana has relied much on external financing for capital investments, and its investments have been dictated less by standards and a sound needs-based planning approach. As in many other countries, Ghana prioritized investments in hospitals over the first level of care: primary health care centers and extended community-based programs. The latter face shortages, and many people cannot easily access basic services; this problem has multiplied given recurrent budget and staffing constraints. As a result, Ghana continues to face a relatively higher burden from communicable diseases and higher levels of infant and maternal mortality and morbidity, both of which can easily be avoided through cost-effective interventions.

Ghana has been liberal in forming partnerships with the non–public sector players. In Ghana, these entities play a significant role in health service delivery. In an effort to widen access to services, public monies have been spent to finance private health delivery services. Through public–private partnership arrangements, public providers are serving within mission health facilities (especially CHAG), and benefit from reimbursements through the NHIS for its beneficiaries care. However, there is scope to improve this engagement through a performance-based contract and a more targeted approach to reach the vulnerable underserved population. Furthermore, the market of drug retail stores (pharmacies and chemical sellers) has expanded widely and flourished, resulting in improved access to drugs at the health facility level. Although such stores are closer to the population, regulatory functions remain weak to control quality and prices of drugs.

Challenges faced by the CMS are acute and need to be addressed with some urgency, because a central system can benefit from economies of scale controlling prices and quality. Many facilities depend on an efficiently run supply chain to ensure easy and timely access to basic drugs. Ghana has explored decentralization in procurement of treatment drugs, for which funds are mostly from IGF, including from NHIS reimbursements. This effort has ensured access to drugs; however, the process could be better structured by encouraging pooled procurement at regional levels.

Globally, countries face similar challenges when it comes to HWs. For Ghana, the primary challenges are limited physicians and specialists; poor distribution of staffing across the country; and salaries that are rising, especially among physicians relative to nurses, to address the shortage in the public sector. Although the challenge of emigration is not so acute, another new challenge that is emerging is the shortage of certain cadres (such as midwives) because of retirement. Enrollment in some training institutions has not kept pace with the country's upcoming needs. Ghana has offered many programs to incentivize retention, motivation, and redistribution, but the ideal result is far from being reached. The recent reform efforts have looked at expanding the network of training grounds beyond the public sector and beyond larger cities and metropolises. It is believed that such efforts will help recruit students and train graduates from places other than the larger cities and will create opportunities for their retention in facilities outside the larger cities. This model is being tested, and its results should be monitored closely. However, accreditation of private preservice institutions and maintenance of higher education standards is much desired.

Many lessons can be learned from some of Ghana's innovative strategies, including TMSs for transport, public–private partnerships for health service delivery, and autonomy on drug procurement at the regional level, as well as the country's latest innovation: improving the distribution of health providers by spreading training institutions beyond the larger cities.

Notes

1. Ghana has 170 districts in 2009, but most (74 percent) have a population under 150,000 (WHO 2008). Definition of "health district": a typical population that justifies a district hospital would be around 150,000–250,000. If WHO's recommendations are followed, Ghana would have one district hospital for a few districts, depending on the size of the population in each district. The general recommendation is to build hospitals that can be the most efficient. The guideline says at least 150 (ranging 100–200) hospital beds per regional hospital and at least 75 (ranging 50–100) hospital beds per district hospital. In addition, hospitals and hospital beds need to have appropriately trained skilled health care workers and appropriate recurring budgets.
2. This does not include information from the private sector because there is little tracking of private sector health facilities. Further, the hospital beds reported here may include hospital beds in psychiatric hospitals and in primary health care facilities. Clinics with beds that are located in districts are often branded as district hospitals.
3. These include maternity beds and delivery tables.
4. Ratios are estimated using the following formula: maternity beds to number of institutional deliveries (international standards). See MOH (2011a).
5. This information is from an internal review carried out in April 2003 by the Biomedical Engineering Unit (BEU) of the Ministry of Health from data provided by the Regional Equipment Managers and the Outreach Technical Teams in their annual reports presented at the Equipment Development Planning forums. The outcome of this review was presented by the head of the BEU to the regional directors at their annual meeting.
6. A medical autoclave is a device that uses steam to sterilize equipment and other objects.
7. The 2003 study was conducted by MOH to review the country's medical equipment management.
8. At that time there were only 110 districts.
9. The Service Availability Mapping study (MOH 2007e) did not capture the country's capital investment needs. Subsequently, the National Assessment for

Emergency Obstetric and Newborn Care study (MOH 2011a) was commissioned; that study was expected to provide a comprehensive situation analysis of capital and human resources in facilities offering maternal and child health service, and was expected to feed into the subsequent Capital Investment Plan.

10. Essential HWs include general physicians, nurses, midwives, community health nurses, and medical assistants.
11. In 2004, there were 8,000 chemical sellers, 950 pharmacies, and 200 private health facilities (MOH, WHO, and HAI 2004).
12. The Central Medical Stores are part of the Stores, Supply, and Drug Management and include the Departments of Procurement and Central Medical Stores.

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CHAPTER 3

Health Financing System

This chapter analyzes the health financing system in Ghana. It contains details about health financing programs, the National Health Insurance Scheme (NHIS), and health spending trends. It also assesses revenue collections, risk pooling, and decentralized spending patterns. A brief fiscal space situation analysis appears at the end of the chapter.

Key Messages

Health Financing Functions

- The public sector has diversified its sources of financing. The sector receives funds from general taxes, earmarked taxes, out-of-pocket payments, and donors. The earmarking of taxes under the National Health Insurance Fund has resulted in more consistent financing of nonsalary recurrent spending and an increase in public spending for health.
- In addition to earmarking the value added tax and Social Security and National Insurance Trust to NHIS, the government has demonstrated its commitment to health by investing in health infrastructure and by making concessional loans

outside sector allocations. Furthermore, in 2010 Ghana's national budget allowed additional employment of staff exclusively for education and health.
- Public per capita expenditures for health are relatively modest. But the public sector is increasing its share at the same time that the cost burden on households for health is declining.
- Nevertheless, the Abuja target of 15 percent of government budgets allocated to health expenditures has not been met.
- Given the macroeconomic situation, Ghana is not expected to have much additional fiscal space, despite expectations associated with oil production.
- If public health spending continues to increase faster than gross domestic product (GDP) spending, then fiscal space constraints will become a serious issue.

Health Spending Trends

- Ghana's total health spending is about average for comparable income-level (lower-middle-income) countries, but its effectiveness has to be carefully assessed, given relatively low health outcomes.
- The public sector accounts for about one-half of total health expenditures. Government health spending will continue to grow in absolute terms because GDP is expected to grow; however, in real terms, health spending is expected to decline.
- Most government resources go toward paying for remuneration and benefits for its staff (55 percent).
- The government greatly relies on external financing to support some public health goods interventions. As external financing gets reallocated, it could threaten the sustainability of these programs.
- There is continuous reliance on external financing to support capital investment. Although capital investment is on the rise, the government has made little upward movement in recurrent budget contributions.
- Most recurrent government resources go toward tertiary and teaching hospitals.
- The regions showed reasonable variation in the distribution of decentralized health spending per capita. However, wide variation was evident across districts. There is no reasonable explanation for these differences.
- Income-generating funds, which are off-budget income, are growing over time. Facilities increasingly rely on them for their sustainability.

Health Insurance Providers

- To ensure affordability of care, NHIS has heavily subsidized financial access to vulnerable population groups.
- Enrollment is voluntary for informal sector workers. NHIS is subject to adverse selection from a significant portion of enrollees who have the potential to pay premiums.
- Several vulnerable groups, including some of the poor, are not specifically targeted under the exempt group. Therefore, they are unable to register. This state of affairs fractures NHIS's risk pool. It also results in high costs and limited contributions from low-risk populations and ultimately threatens the financial sustainability of the system.
- Given the nature of the payment mechanism, it is likely that efficiency gains can be realized by reducing supply-induced demand and adverse selection.
- The comprehensive NHIS basic benefits package does not require copayments and deductibles, and it does not have reimbursement ceilings by type of service. Hence, NHIS beneficiaries have few restrictions on the types of services or the quantity of services they can demand. Most services used were for outpatient care. It is possible that NHIS beneficiaries accessed primary care services more often than they would have otherwise as a result of moral hazard. Based on diagnoses, more drugs and more expensive drugs seem to have been prescribed than was necessary.
- NHIS will become insolvent by 2013—unless steps are taken to mitigate risks. Health spending is increasing exponentially; by comparison, revenue is increasing in smaller increments.

Health Financing Functions

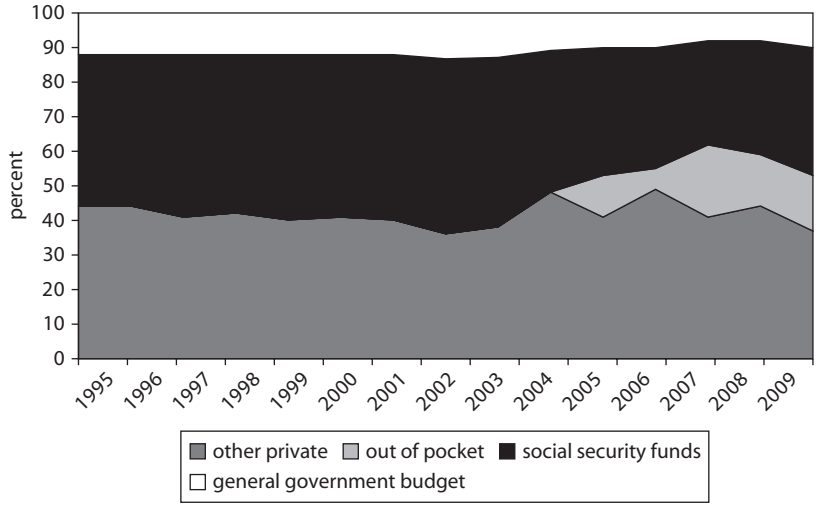
Ghana's health financing system is complex. It has multiple funding sources, multiple levels of government and nongovernment stakeholders, as well as public and private providers. Supply-side subsidies to public facilities complicate provider payment processes, which are largely not results oriented. These processes preclude the establishment of a level and competitive playing field. Partially as a result of insufficient health management information systems (HMISs), important data for decision making is lacking. Because National Health Accounts (NHAs) are not

institutionalized, evidence-based policy making and planning are even more complicated.

The government is stepping up its efforts to increase public spending on health. Public sector contributions have increased from 44 percent (1995) to 53 percent (2008) of total health spending. The big leap came with the introduction of NHIS in 2005. NHIS contributes 16 percent of total health spending (2009).

The public sector has diversified its sources of financing, but more could be done to improve the efficient use of these funds. The sector receives funds from general taxes, earmarked taxes, out-of-pocket (OOP) expenditure, and donors. Most of NHIS's funding comes from earmarked taxes (value added taxes [VATs] and levies), contributions from the Social Security and National Insurance Trust (SSNIT), and premiums and OOP payments. These sources of income have provided greater consistency in financing nonsalary recurrent spending and enabled public spending on health to increase. District governments have their own District Assembly Common Funds (DACFs), but DACF resources allocated for health are scant and variable across districts. See table 3.1 and figure 3.1.

Figure 3.1 Ghana: Sources of Financing for Health, 1995–2009



Source: World Bank staff. Simulated data, based on National Health Accounts data from the World Health Organization (http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639), the rebased GDP from the International Monetary Fund, and data from the Ministry of Finance and Economic Planning.

Table 3.1 Ghana: Sources of Financing for Health, 1995–2009

Year	*THE as a percentage of GDP*	*General government expenditures on health as a percentage of THE*	*Social security funds as a percentage of THE*	*Private expenditures on health as percentage of THE*	*OOP expenditures as a percentage of THE*	*Per capita health spending exchange rates ($)*	*Per capita health spending PPPs ($)*
1995	5.30	44	0	56	44	27	63
2000	4.89	41	0	59	47	20	71
2005	5.39	53	12	47	37	45	109
2006	5.53	55	6	45	35	53	120
2007	6.03	62	21	38	30	68	140
2008	5.49	59	15	41	33	70	137
2009	4.86	53	16	47	37	54	125

Sources: Schieber and others 2012; data from the WHO database on National Health Accounts, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.

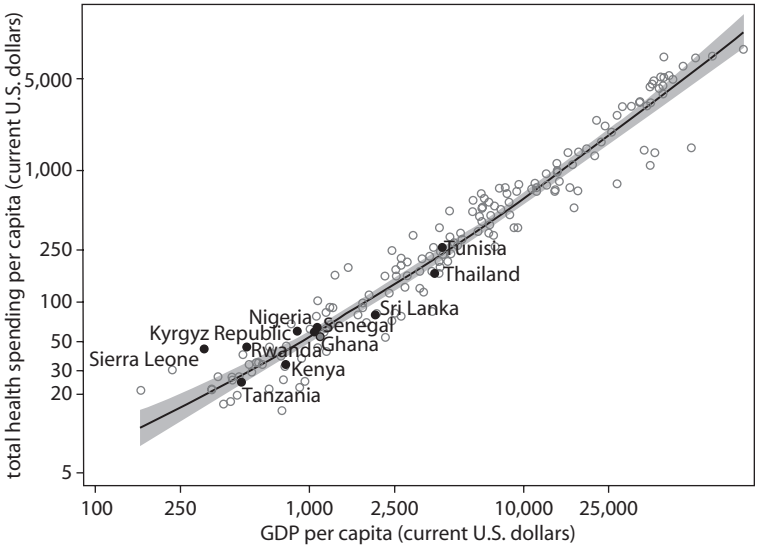
Note: Rebased GDP used. General government expenditures include social security. By establishing purchasing power parity (PPP) equivalence, where one dollar purchases the same quantity of goods and services in all countries, PPP conversions allow cross-country comparisons of economic aggregates on the basis of physical levels of output, free of price and exchange rate distortions. THE = total health expenditure.

Total per capita expenditures for health are not excessive, and the public sector is increasing its share. The health cost burden on households is declining; however, it is still high by World Health Organization (WHO) standards. Overall, Ghana has improved its health outcomes, but on average the country has not achieved the health outcomes found in comparable incomes and health spending among lower-middle-income countries (LMICs) on a global basis. How effective it is in using its funds needs further evaluation. Where is Ghana spending its resources, and who is benefiting from them? See figures 3.2 and 3.3.

The Private Sector

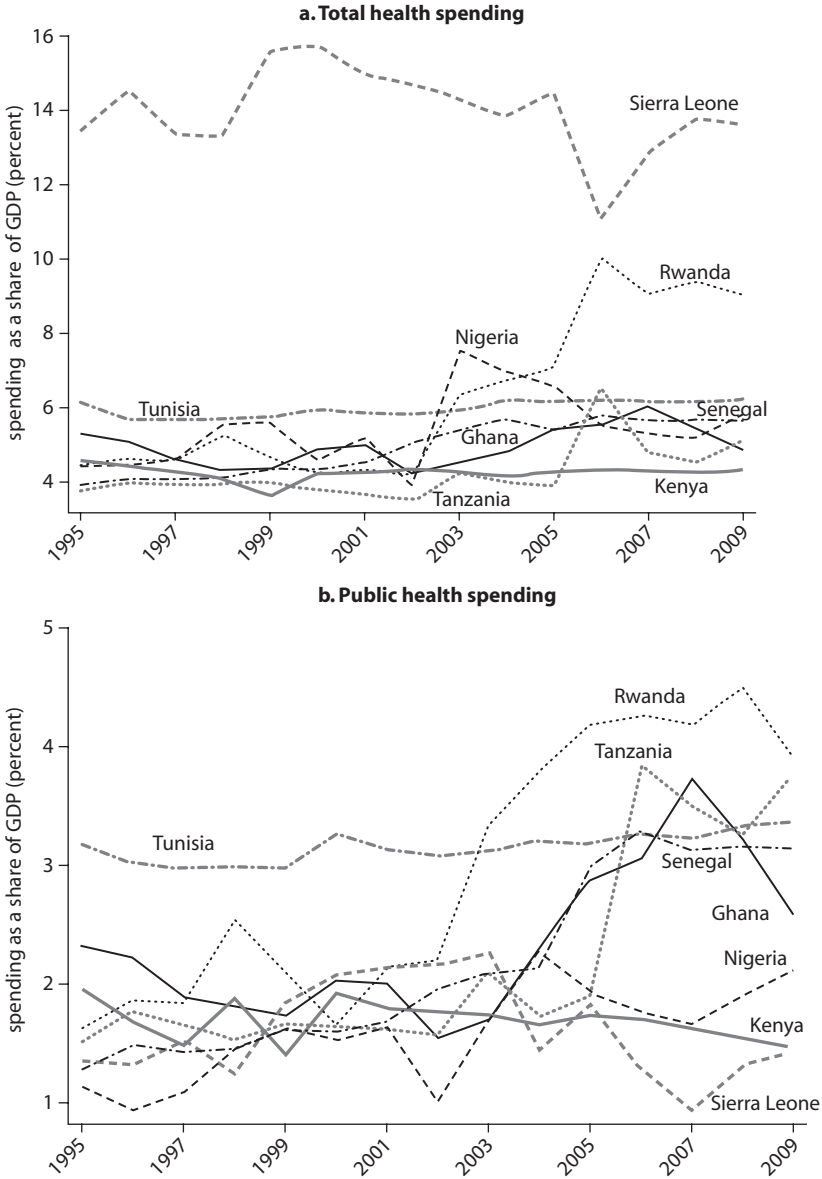
Ghana's private sector spending on health is at or above levels found in comparable income global comparators. Private sector health spending was 47 percent (2009) of total health spending; approximately 80 percent of that was OOP spending by households. With the introduction of NHIS

Figure 3.2 International Comparison: Total Per Capita Health Spending Compared with Countries with Similar Incomes, 2009



Sources: Schieber and others 2012; data from World Bank's World Development Indicators and from WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.
Note: Both axes log scale.

Figure 3.3 International Comparison: Health Spending as a Percentage of GDP, 1995–2009



Sources: Schieber and others 2012; data from World Bank's World Development Indicators and from WHO National Health Accounts, database http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.

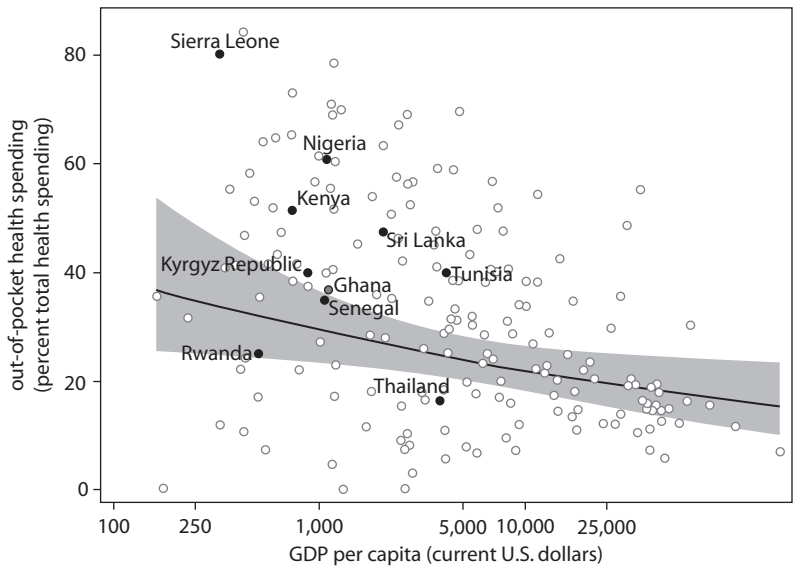
Note: Ghana's GDP was reformulated with rebased GDP (from International Monetary Fund; Ministry of Finance and Economic Planning, Ghana).

in 2005, OOP spending declined from 44 percent (1995) to 37 percent (2009) of total health spending. Although the situation is improving overall, Ghana could do better. Household spending on health remains high and well above the 20 percent threshold that WHO recommends. More recent data are required to assess the household changes post 2005. See figure 3.4.

External Contributions

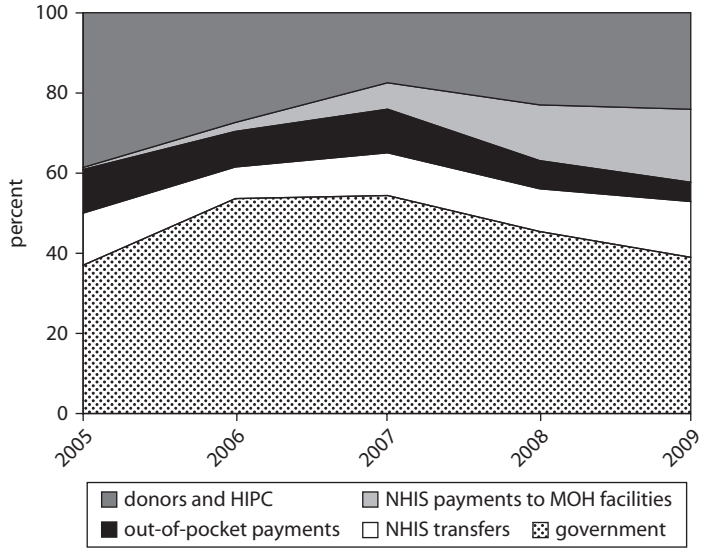
Donor assistance contributes to a significant share of resources for health in Ghana. In 2009, donors contributed more than 25 percent of total government spending on health (MOH 2011a). Although donor funding makes up a large share of government spending on health, the resources are mostly inflexible and of less value to the government as fiscal space. The share of donor funding earmarked for particular programs is more than 60 percent, which is high. Sector budget support is more flexible and represents about 30 percent of donor funding. It can be applied to government health priorities. See figure 3.5.

Figure 3.4 International Comparison: Out-of-Pocket Spending for Health Relative to Other Countries with Similar Incomes, 2009



Sources: Schieber and others 2012; data from World Bank's World Development Indicators and from WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.
Note: Both axes log scale.

Figure 3.5 Ghana Ministry of Health: Sources of Financing for Health, 2005–09



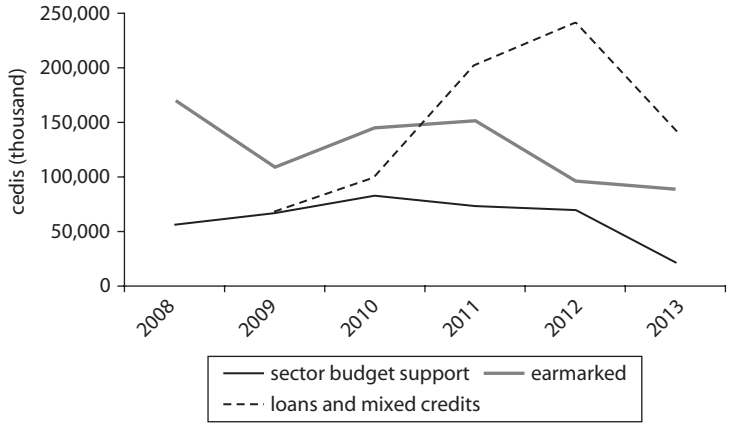
Source: MOH 2011a.
Note: HIPC = Heavily Indebted Poor Country Initiative; MOH = Ministry of Health.

Donor support for the health sector in Ghana was starting to decline in 2011. Although the projections are likely to be an underestimate, donor funding should not be considered a reliable source of future fiscal space for health in Ghana. Because the country has recently achieved LMIC status, Ghana's access to concessional lending and grants will be reduced. A recent United Nations Development Programme report suggested that Ghana would benefit from improving its credit rating and devising a clear exit strategy from aid (Government of Ghana and UNDP 2011). See figure 3.6.

Internally Generated Funds

Internally generated funds (IGFs), off-budget income, are growing. Health facilities rely on IGFs for their sustainability. IGFs include income from NHIS, other insurance, and OOP payments. IGFs, which have increased, contributed 25 percent of public sector funds for health in 2010. IGFs are becoming a critical source of income for health facilities (35 percent for subdistrict and district health facilities, 25 percent for regional hospitals). Although a formula sets priorities for the use of IGFs, it is neither followed nor monitored. The sale of drugs can bring in as

Figure 3.6 Ghana Ministry of Health: Actual and Projected Donor Contributions, 2008–13



Source: Schieber and others 2012.
Note: Estimations generated based on data from the Ministry of Health.

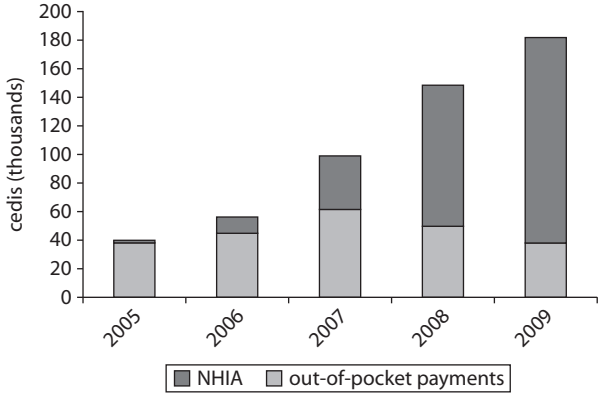
much as 50 percent of IGFs in subdistrict health facilities; the proportions are lower for hospitals (30–45 percent). Most IGFs are used to cover medical and nonmedical consumables (50 percent of total IGFs). Next in line are other recurrent nonsalary costs (less than 20 percent of total IGFs, 2010). Autonomy in the use of funds has given public health facilities greater ability to procure drugs, to conduct minor repairs of health facilities, and to recruit contractual workers. However, funds are not to be used for large capital investments, personnel remuneration, or travel. A need exists for an in-depth analysis of IGF earnings and their use by the regions and by various types of health facilities. See figure 3.7.

Trend Analysis on Health Budgets and Expenditures

Central Expenditure Patterns

Ghana, like several other countries, does not meet the Abuja target, which allocates 15 percent of the government's budget to health. Ghana's health budgets ranged between 14 percent and 16 percent (2006–09) of total government budgets. Allocations and expenditures remained at about 9 percent of total government expenditures. The Abuja target has not been achieved in recent years; health budgets declined to 11 percent

Figure 3.7 Ghana Ministry of Health: Internally Generated Fund Breakdown between National Health Insurance Authority and Out-of-Pocket Payments, 2005–09



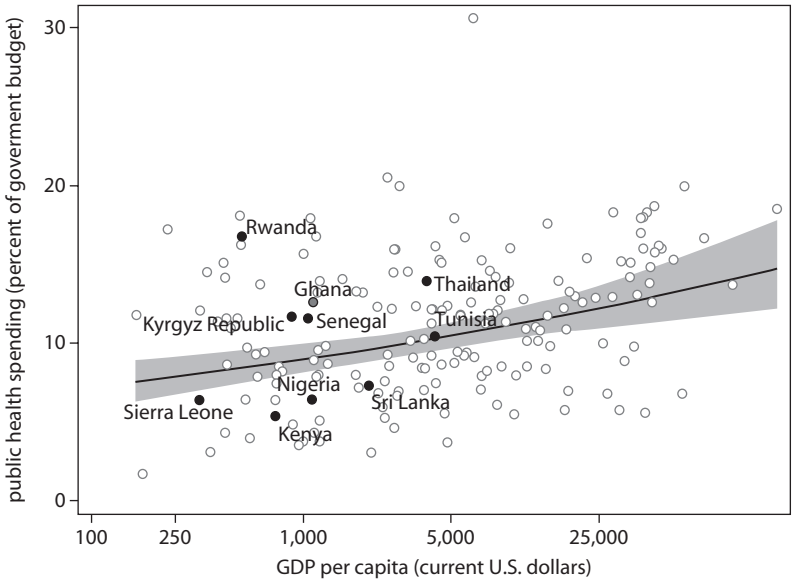
Source: MOH 2011a.

(2010) and 9 percent (2011) of total government budgets. In contrast, other countries in the region, such as Rwanda, Senegal, and Tanzania, have stepped up their efforts in the past few years. Nevertheless, budget information does not provide the complete picture. Based on a review of Ghana's public expenditures, it was evident that health spending has remained at about 9 percent of total government expenditure even though higher budgets were allocated. This stresses the importance of tracking expenditures more carefully; a need is also seen to analyze bottlenecks and discuss ways to release these bottlenecks. However, when compared with other countries with similar incomes, Ghana is above average in the amount it allocates to health. See figure 3.8.

Ministry of Heath (MOH)[1] spending on health increased from 352 million cedis (2005) to 880 million cedis (2009). On a per capita basis it went up from 17 cedis (2005) to 38 cedis (2009)[2] in nominal terms, but it did not show a significant increase in real terms. See table 3.2.

The health sector wage bill makes up at least 55 percent of MOH recurrent health spending or 40 percent of total health spending. As a proportion of total MOH recurrent spending, the amount spent on wages (budget item 1) increased from 51 percent (2005) to 55 percent (2009). It continues to be the highest budget item. The wage bill also includes allowances paid for services. Recently the government merged allowances (for example, additional duties hours allowances [ADHAs])

Figure 3.8 International Comparison: Public Health Spending as a Percentage of Total Government Spending, 2009



Sources: Schieber and others 2012; data from World Bank's World Development Indicators and from WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.
Note: Both axes log scale.

with salaries (item 1). In the past, however, ADHAs were listed separately under item 2 of the budget. In 2005, ADHAs rose to be almost one-third of remunerations (budget item 1) (Ruwoldt and others 2007).[3] ADHAs were discontinued at the end of 2005, and these benefits were consolidated under the basic salary under the health salary structure initiated in 2006. External financing generally does not cover salaries and allowances. See figure 3.9.

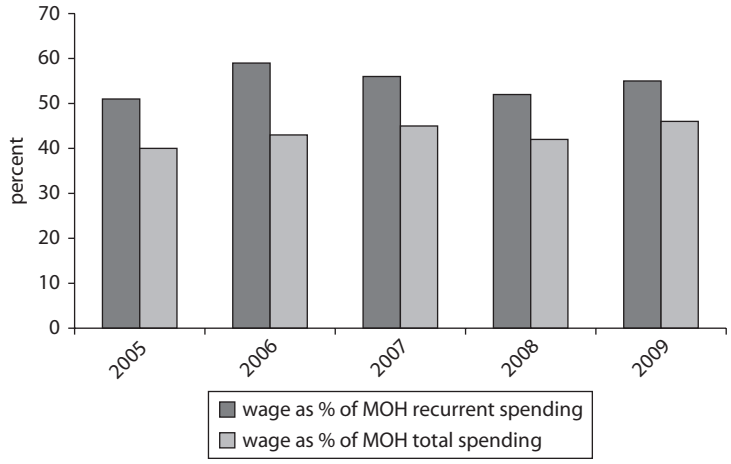
Although budget releases can be delayed, wage payments (item 1) are unlikely to be. All government employees are assured of their salaries. The Controller Accountant General's Department is responsible for the disbursement of item 1. If budgets are below the amount required, it is assumed that reshuffling will favor payroll. Budgets that have nothing to do with salaries are not ensured, and these budget releases can be delayed. Other off-budget resources are expected: Some of those resources are from NHIS in the form of claims reimbursements. Others come from

Table 3.2 Ghana Ministry of Health, Health Spending, 2005–09

	2005		2006		2007		2008		2009	
Budget items	*Cedis (millions)*	*Percent*	*Cedis (millions)*	*Percent*	*Cedis (millions)*	*Percent*	*Cedis (millions)*	*Percent*	*Cedis (millions)*	*Percent*
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 (cedis, million)	352	100	550	100	588	100	773	100	880	100
Total ($, million)	386		595		605		637		616	
Per capita (cedis)	17		26		27		34		38	
Per capita ($)	18		28		28		28		26	
Per capita ($, real, 2002)	10		14		13		11		9	

Sources: MOH financial statements, NHIS financial statements, 2005–10.
Note: The analysis is only for MOH, which includes NHIS and Ghana Health Service, and not other parastatals, such as police and army.

Figure 3.9 Ghana Ministry of Health: Spending on Wages as Percentage of Recurrent and Total Spending, 2005–09



Sources: MOH Financial Statements, NHIS Financial Statements, 2005–10.

user fees (both of these are under IGFs), and some from external financing. Over time, reliance on off-budget resources has grown for nonsalary recurrent spending.

A higher proportion of health sector staffing is in the regions and districts. When reviewing the MOH wage bill, at least 74 percent of wages are distributed through Ghana Health Service (GHS). Most of it is funneled through district health services and contributes to staffing of district health departments, district hospitals, subdistrict health centers, and Community-based Health Planning and Services (CHPS). MOH's resources for district staffing have increased from 47 percent (2005) to 57 percent (2009). At the same time, MOH's wage bills for tertiary teaching hospital staff decreased from 17 percent (2005) to 14 percent (2009). Caution is required when analyzing these data because some transfers were misrecorded in the government's system.

The wage bill may not be comprehensive because it overlooks contractual staff. The health wage bill should include all full-time or part-time employees working in the public sector. Full-time employees are covered under regular budgets (item 1); they are paid through the MOH and NHIS budget. Given the shortage of service delivery staff, MOH has given districts and facilities the authority to recruit part-time contractual staff to lower administrative levels. However, they are not covered under the

regular budgets. Rather, they are paid at the local level under budget item 3 or IGFs. Therefore, many personnel are overlooked. An analysis of district spending suggests that perhaps 2.5 percent of total financing of local health personnel are financed through IGFs. However, this study was unable to determine the wage implications of the entire contractual staff. Therefore, the wage bill may be an underestimate; by how much is unknown.

Decentralized Resource Allocation Patterns

Ghana is among the few countries that have pursued fiscal decentralization of health. District health spending is significant, and in the past three years, expenditures for district-level facilities and services have been about 50 percent of MOH spending (2006–08). However, this amount includes expenditures for the local level, but not controlled by local authorities. The degree of real fiscal decentralization is limited for several reasons. First, more than 50 percent of district-level expenditures (two-thirds in 2008) were executed at the central level on behalf of district-level offices and facilities (staff payments and investment expenditures). Second, spending by district assemblies and MOH nonpersonnel recurrent expenditures are limited. Centrally defined guidelines dictate certain allocations to be made. These earmarked allocations—which include donor sponsored programs and DACF resources—constitute the greater part of service expenditures. The 2007 Public Expenditure Tracking Survey indicated that 42 percent of DACF funds were retained at the central level for several earmarked programs or initiatives (some were related to health).[4] Third, transfers to the local level have not occurred in a consistent and timely fashion. Cash releases have been short of expectations. Overall, local authority over financial resources, within the current MOH/GHS system and district assemblies' responsibilities, is much more limited than the high proportion of fund transfers suggest.

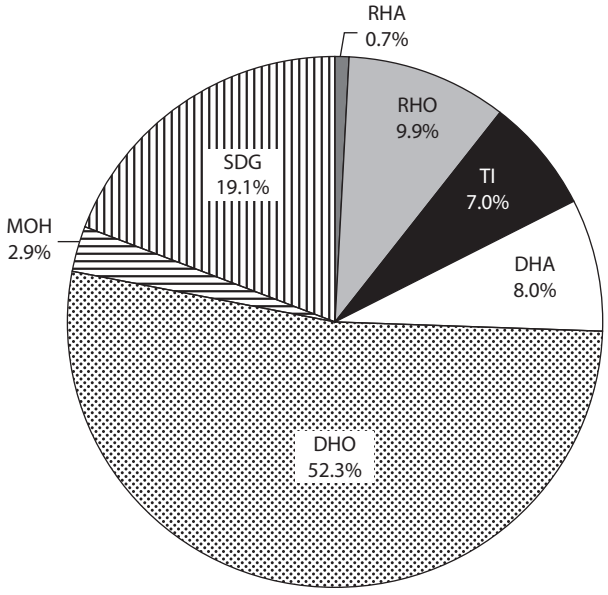
Sources of financing patterns show that local levels rely on budget, financial credits, IGFs, NHIS reimbursements, and donor-funded programs. Personnel (item 1) at the district level are almost exclusively funded by the government budget (2.5 percent are funded by IGF). Administration (item 2) is funded mostly by IGFs, with a 12 percent contribution from the government. Service (item 3) is funded by a mix of IGFs (42 percent), donor-sponsored MOH programs (33 percent), and NHIS reimbursements (24 percent). Investment (item 4) is almost exclusively funded by financial credits.[5] It is worth noting that item 3, which represents the major part of nonpersonnel recurrent expenditures at the district level, is fully funded by nonbudget sources.

Overall, a large share of regional resources is at the district and subdistrict levels. Given the large number of district hospitals, the overall spending goes to this category, followed by subdistrict groups, for clinics, and CHPS. The last can be larger, because often district health administrations manage their spending, especially for the smaller units, but this is not transparently reported. MOH contributions at the local level indicate their engagement for vertical programs. See figure 3.10.

In 2008, Ghana's consolidated public expenditures (including IGFs and donor funds) for health emphasized capital investment; personnel expenditures represented only 28 percent of the total. But as a proportion of recurrent expenses, personnel represented more than one-half of the total, which is consistent with international data. However, at the district level, personnel emoluments represented a proportion well above the national figure: Personnel emoluments accounted for 41 percent of total expenditures, a proportion of recurrent expenditures similar to the country's average (MOH audited financial statements for 2008).

Regarding the distribution of decentralized health spending per capita, reasonable variation was evident among regions, but wide variation

Figure 3.10 Ghana: Expenditure Allocation at Regional and District Levels, 2008

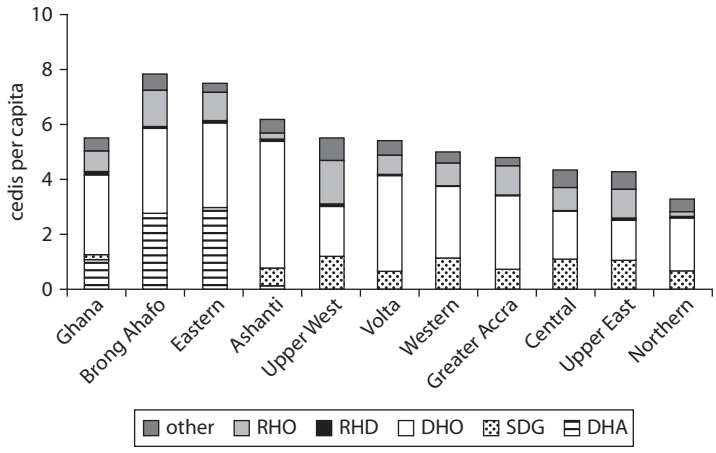


Source: Lake and Ly 2009.
Note: DHO = district hospital; RHA = regional health administration (GHS regional office); RHO = regional hospital; SDG = subdistrict group; TI = training institutions.

was evident across districts. In 2008, the regional average health spending for Ghana was about 5.52 cedis per capita, with relatively little variation across regions. That range was 7.86 cedis in Brong Ahafo to 3.23 cedis in the Northern region. Most of the resources went toward district hospital spending. Next were regional-level expenditures. District-level primary care services (reflected in spending by district health administrations [DHAs] and subdistricts) received the smallest part. Finally, health spending by central offices and facilities (headquarters and teaching and specialized hospitals) were concentrated in three regions: Greater Accra, Ashanti, and Northern. Central offices and hospitals are located there. See figure 3.11.

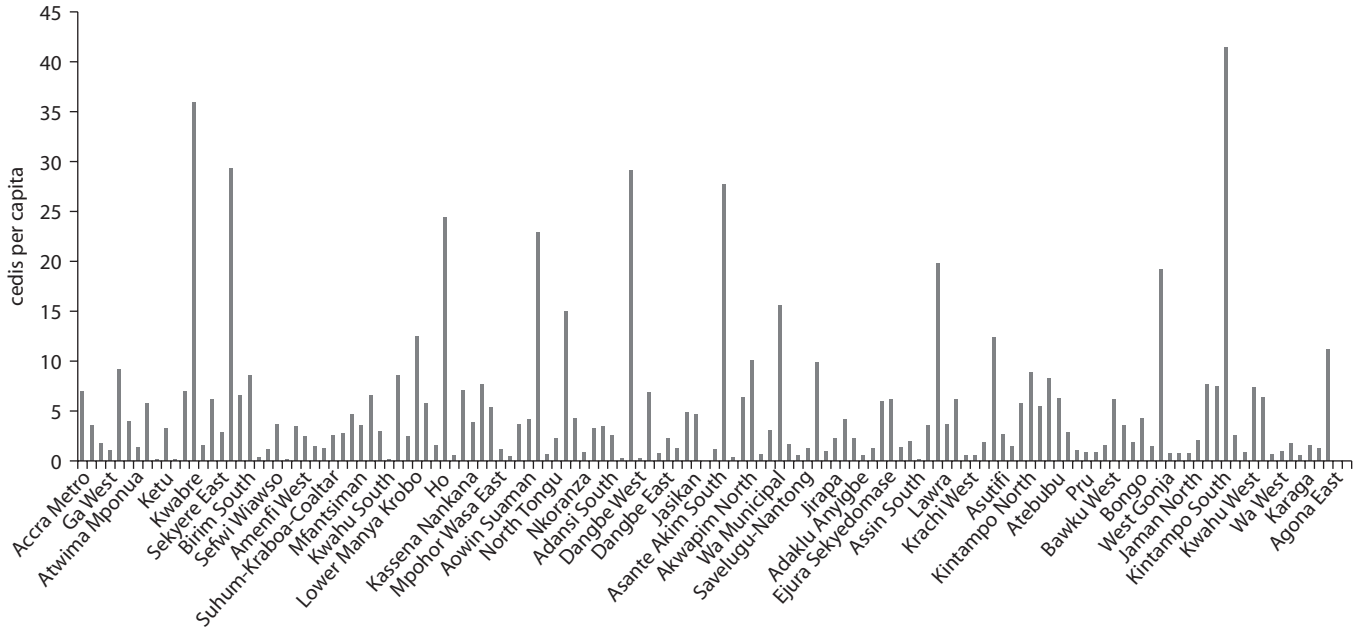
The distribution of total health expenditures does not reflect district populations. Regional differences have little impact because no regional pattern is apparent. Total health expenditures per capita—including all expenditures by MOH and GHS for decentralized administrative offices, health facilities, and training institutions—varied enormously across districts. The mean value was 5.52 cedis. However, seven districts had a value of 20 cedis or more. Kintampo South led with 41.40 cedis, yet 31 districts showed a value lower than 1 cedi.[6] See figure 3.12.

Figure 3.11 Ghana: Variations in Subnational Health Expenditures Per Capita across Regions, 2008



Source: Lake and Ly 2009.
Note: Includes spending by regions and districts (but not by MOH and GHS headquarters) "Other" includes mostly mission hospitals and training institutions. SDG allocation was not available for all districts and was often included in DHA expenditure. DHA = district health administration (GHS district office); DHO = district hospital; RHA = regional health administration (GHS regional office); RHO = regional hospital; SDG = subdistrict group.

Figure 3.12 Ghana: Total Health Expenditures Per Capita by District, 2008



Source: Couttolenc 2012.

Note: Figures do not include expenditures for mission hospitals, but they do include training institutions. Expenditures by other ministries, departments, and agencies, especially direct spending by district assemblies, are not included.

The variation in spending is not easily understood. It does not correlate with population size, poverty levels, or welfare indicators. District-level expenditures—those allocated to DHAs and district health offices, including subdistricts—show similarly large variations across districts. Among regional capitals, regional spending accounts for the majority of total expenditures. In the smaller capitals, regional spending amounts to a high level per capita; it makes these Metropolitan, Municipality, and District Administrations among the highest spenders overall.

Drugs

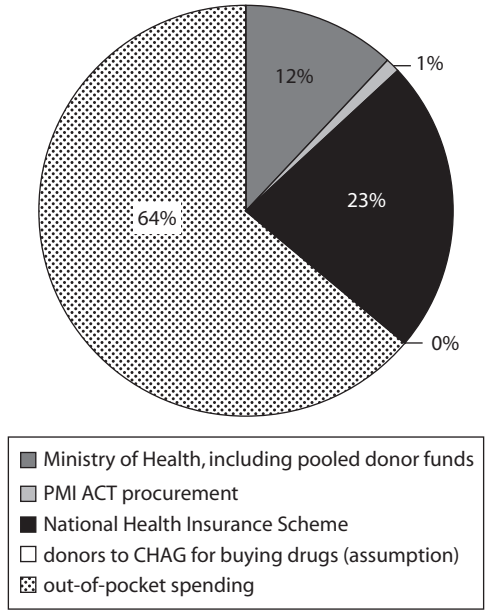
Drugs are a significant amount of recurrent spending. These expenses affect households disproportionately. On a per capita basis, Ghana's spending on drugs is not high based on international comparisons. However, recent trends, which show an increase in expenditures, suggest that attention must be paid to this situation. In 2005, Ghana spent about $13 per capita; total market share was estimated at $250 million (based on retail market prices).[7] This amounted to about 37 percent of the country's total health spending. More recent data are not available. However, some estimates suggest that the market has grown to about $300 million (Seiter and Gyansa-Lutterodt 2009). In 2008, MOH spent about $31 million (which includes global fund contributions),[8] and NHIS spent about $56 million. Household OOP spending is expected to be about 64 percent of total drug spending, a significant amount. Given that drugs and consumables are significant contributors of health spending, it is critical for Ghana to improve the efficiency, effectiveness, and sustainability of its medicine system. See figure 3.13.

Fiscal Space Analysis

For the fiscal space analysis,[9] this section assesses if additional financing may be expected because of (a) economic growth, (b) collection of additional revenue, (c) additional external borrowing, or (d) efficiency through reprioritization of health expenditures.

Economic growth. Ghana expects positive growth rates in future. Estimates suggest that on average Ghana will have a GDP growth rate of about 6 percent (2010–15). Oil revenue predictions suggest that GDP will grow beyond the expected rate to 12 percent per annum in the next two years, but after that the rate will drop to 6 percent by 2013. The fiscal deficit, which was about 8.5 percent of GDP in 2008, declined to

Figure 3.13 Ghana: Financing of Pharmaceuticals, Share (in Percent) of Different Funding Sources, 2008



Source: Seiter and Gyansa-Lutterodt 2009.
Note: The analysis does not include all stakeholders. ACT = artemisinin-based combination therapy (a drug for malaria); CHAG = Christian Health Association of Ghana; PMI = President's Malaria Initiative.

about 7.7 percent of GDP in 2010. Inflation rates have come down from 20.7 percent (June 2009) to 8.6 percent (December 2010).

Ghana is not expected to have additional fiscal space despite expectations about the country's oil production. Oil revenue is expected to be only 3 percent of GDP. The Single Spine Salary Reform[10] is expected to take up about 2.5 percent of GDP in 2011. It is anticipated that most oil revenue will pay for Single Spine Salary expenses and for arrears.

Ghana's health spending elasticity is estimated at 1.13 (1995–2009). Therefore, health spending is expected to grow a little higher than growth in income. Therefore, in nominal terms, health spending is expected to grow. However, in real terms, health spending is expected to decline by at least 7 percent to 13 percent (2010–15).

Additional revenue collection. Tax revenue represented about 15 percent of GDP in 2010. Oil tax revenue in 2011 was expected to be 4.3 percent of total tax revenues. The government wants to improve

its tax collections. Estimates suggest that the government hopes to meet its 20 percent target (average for an LMIC) by 2015. However, given the structural challenges in Ghana, achieving that goal is highly unlikely. If these new targets are not met, it is highly unlikely that additional fiscal space could be available through this avenue.

Additional external borrowing. Net public debt in Ghana has increased from 30 percent (2008) to 40 percent (2010). The government aims to reduce its debt to sustainable levels. Because Ghana has moved into LMIC status, additional grants and concessional loans may not be an option in the future. The same may be true for additional external borrowing.

The preceding scenarios suggest that real growth in health spending would be (a) a range of –13 percent to –18 percent (2010–15) due to economic growth and (b) a range between –1 percent and +27 percent (2010–15) due to revenue collection. Economic growth is not an option in creating fiscal space for health spending. Revenue collection could be an option, but that would depend on an increase in revenue collection, which is limited and, given Ghana's structural challenges, is unlikely to happen in the near term (World Bank 2011).

Potential gains in efficiency. Fiscal space can also be realized through gains in efficiency. If more output, coverage, or quality could be achieved by the same level of health expenditures, then lost fiscal space could be recovered by an increase in efficiency. In some cases high levels of inefficiency limit the absorbent capacity of additional resources; addressing inefficiency should be a precondition for bringing significant additional resources into the system. Interventions aimed at improving the technical[11] and allocative[12] efficiency of health spending include using cost-effectiveness criteria to inform resource allocations, reducing leakages in interfiscal transfers, and addressing absenteeism among health workers (Tandon and Cashin 2010).

The above analysis suggests that Ghana may not have sufficient fiscal space to increase its allocations for health. However, efforts could be made on that front and might help MOH benefit from the additional resources. Generally the recommendation would be for MOH to take steps to ensure areas that could benefit from efficiency gain.

Health Insurance Providers

Ghana is one of very few emerging market countries to take serious steps toward demand-side financing of health. These steps include the passage

of legislation for universal health insurance coverage, covering vulnerable groups, significantly expanding enrollment, and earmarking substantial resources to support the system.

As a product of the structural adjustment program the government was forced to introduce cost recovery into the health care system. The "cash and carry" (user fees) system was introduced (Osei 2008). The income levels of the people, however, were very low because of the crisis. The poor were simply priced out of hospital care, and a two-tier heath care system came into operation with better facilities for those who could afford to pay. The National Health Insurance Act (Act 650, 2003) was the government's attempt to address what had become a perennial problem—provision of safe and affordable health care to all residents of Ghana (Wahab 2008). National Health Insurance in Ghana has 10 stated objectives: equity, risk equalization, cross-subsidization, quality of care, solidarity, efficiency, community or subscriber ownership, partnership, reinsurance, and sustainability.

The National Health Insurance Act (Act 650, 2003) was a significant accomplishment for Ghana in 2003. The legislative instrument (LI 1809, 2004) is quite comprehensive. Through this, the government had found a solution to the fluctuating and declining public resources that supported the health sector by creating the National Health Insurance Fund (NHIF). The rationale for setting up NHIS was to remove financial barriers to utilization of health care. Despite these accomplishments, it is debatable whether NHIS has achieved its objective. The discussions below will explore to the extent possible those achievements and challenges. See box 3.1.

Institutional structure. Ghana's approach to transitioning toward a uniform national system was to build on the existing system of district mutual health insurance schemes (DMHISs). In 1995, the country started with a community-based health financing program. In 2003, under the National Health Insurance Act, the government expanded the community-based program to a national program; however, the DMHISs still worked with independent boards. NHIS is a public autonomous organization and includes national and local institutions: the National Health Insurance Authority (NHIA), NHIF, and DMHISs. NHIS has a governing body (called a council or board) that creates the policies of the scheme and appoints its employees. NHIA and NHIF are central bodies. NHIA purchases and pays for services; it also manages the fund and administers the scheme and provides accreditation and technical assistance. NHIF provides financing and reinsurance for

Box 3.1

The National Health Insurance Act

The National Health Insurance Act (Act 650, 2003)[13] was established to

- Secure the provision of basic health care services to persons resident in the country through mutual and private health insurance schemes.
- Put in place a body to register, license, and regulate health insurance schemes and to accredit and monitor health care providers operating under the health insurance schemes.
- Establish a national insurance fund that will subsidize licensed district mutual health insurance schemes.
- Impose a health insurance levy and provide for related matters.

Source: National Health Insurance Act (Act 650, 2003).

DMHISs. The latter is the local institution that collects premiums from workers in the informal sector and handles financing (district pool) and purchasing of services from public and private providers on behalf of NHIA. See table 3.3.

Ghana has about 145 DMHISs that are individually registered as a company limited by guarantee. These small risk-pooled groups cannot address the concerns that the poor raise about their coverage. Their financial stability is heavily dependent on NHIF for subsidies and reinsurance. Accountability exists on paper, but their efficiency is questionable, as is evident from the under-reporting of data from DMHIS.

When the National Health Insurance Bill (2011) was refined, the goal was to centralize NHIS. That meant dissolving the (independent) DMHISs and creating district offices of NHIS. However, it is not clear if the centralization will come about and to what extent. Several economies of scale can be gained from centralization. However, a risk also exists that the close ties that DMHISs have formed with beneficiaries and providers will suffer. Ghana is one country that started with a community-based program; it kept the decentralized and independent nature of DMHISs alive, while centralizing the program. However, regulatory enforcement under NHIA was weak; the same can be said of its information systems and reporting. Other shortcomings were limited information on beneficiary enrollment and insufficient payments to providers. Furthermore, the lack of information technology and inspection systems prevented a proper analysis and audit of claims. The latter

Table 3.3 Summary of NHIS's Functions

Functions	*DMHISs*	*NHIA*
Manage National Health Insurance Fund (NHIF)		×
Enroll and register the population in health insurance (cards are approved by NHIA)	×	×
Design mechanism for coverage of indigents		×
Set health insurance premium rates (not actuarially estimated, set differently by each DMHIS), parameters set by NHIA	×	
Collect premiums from paying members (informal sector workers)	×	
Collect subsidies from NHIF for those enrollees who are exempt under the NHIA	×	
Collect reinsurance from NHIF (against deficits in spending)	×	
Register, license, regulate, and supervise DMHISs		×
Provide subsidies (against exempt beneficiary enrollment) and reinsurance to DMHISs (against deficits), parameters set by NHIA		×
Accredit health providers and monitor their performance		×
Contract with service providers who are NHIA accredited to provide services, based on agreed-upon prices and those beneficiaries to be covered (prices have now been standardized by NHIA)	×	
Pay claims submitted (for services and for drugs) by health service providers (the central claims processing center now handles this function)	×	×
Resolve complaints		×
Provide public education, monitoring, and evaluation		×

Source: National Health Insurance Act (650, 2003).

were initially processed by DMHISs. This remains a problem. Until appropriate systems are developed, claims processing and payments will continue to be a problem.

Financing structure. Ghana's demand-side health financing model offers a mixed source of financing. However, a greater reliance on tax-based financing (general taxes, VAT, and payroll taxes) also exists. Discussions in the past few years about the one-time premium indicate the government may want to move to a tax-based system. Ghana has a hybrid model, as illustrated in table 3.4.

Sources of Revenue

In 2003, Ghana decided to earmark some of its revenue for health. This decision ran counter to the general advice of the International Monetary Fund (IMF), which generally does not support this practice. However, before that, the public sector contribution for health was dismal and irregular. The public sector contribution was less than 2 percent of GDP

Table 3.4 Ghana's "Hybrid" Health Insurance Model

Health insurance modality	*Financing*	*Management*
National health insurance	General taxes (VAT for exempt group) Payroll taxes (SSNIT for formal sector workers)	MOH develops policies. National Health Insurance Council (NHIC or the Board) regulates DMHISs (but not private schemes).
	Returns on reserve (for operating costs)	National Health Insurance Authority (NHIA) is the secretariat of the NHIC, manager of the National Health Insurance Fund (NHIF), with responsibilities for accreditation, actuarial analysis, purchasing, pricing, and paying for services. NHIF mobilizes and manages resources (VAT, SSNIT, and investments). National Health Insurance Scheme (NHIS), which encompasses the entire system, is responsible for benefits and obligations to beneficiaries.
Community-based health insurance (DMHISs)	Premium (for informal sector workers) Subsidies from NHIA (VAT for the exempt group and payroll taxes for SSNIT contributors) Any reinsurance from NHIA (for deficits against claims payment and for operating costs)	DMHISs: elected boards from membership and district representation Functioning office and staff (manager, M&E, claims processing, accountant) Part of the NHIS
Commercial voluntary insurance	Premium (for informal sector workers) Other sources of financing not known	Private mutuals Private commercials

Source: World Bank.
Note: M&E = monitoring and evaluation.

(2002).[14] Thirty-six percent of total health expenditures came from general taxes, and 51 percent from households' OOP spending. Furthermore, a significant proportion of the budget was for salaries and benefits; the nonsalary recurrent budget was very low. The government of Ghana wanted to improve the health of its people. Therefore, it earmarked funds for nonsalary recurrent spending by creating the NHIF.

Ghana has selected a hybrid model of health insurance. NHIF is financed through earmarked contributions: (a) sales taxes, VAT, and levies (2.5 percentage points), which fund most of those who are exempt; (b) payroll taxes, SSNIT, at 2.5 percentage points, which cover most of the SSNIT contributors and pensioners; and (c) voluntary premiums, which cover most of the informal sector workers. Most of NHIF's revenue comes from taxes, with about two-thirds of its income from VAT and levies and about one-third from SSNIT contributions and earnings from fund investments. A very small portion comes from voluntary premium collections. See table 3.5.

Equity implications of revenues. Some of these revenue sources are progressive and others regressive:

- The exemption of certain groups identified as underserved is progressive.
- VAT is considered progressive (World Bank 2012a), given that the economically better-off spend more than others.
- Payroll taxes are generally considered regressive if they require a flat payment for each income group, sometimes with income ceilings. Assets are not taxed. Income taxes are considered progressive because those earning higher incomes pay a higher percentage of taxes. However, in Ghana more than 70 percent of the workforce is in the informal sector. Therefore, this could be considered progressive.
- Voluntary flat premiums are generally considered regressive because all income groups pay the same amount. That means the poor pay a higher percentage of their income. Ghana's voluntary premiums could be considered geographically progressive because different geographical areas offer different rates, which range between 7.20 and 48 cedis per person per year. For now, no differentiation by income group is used.

Table 3.5 Ghana: Sources of Financing for NHIS, 2008–09

	2008		*2009*	
NHIS sources of financing	*Cedis (million)*	*Percent*	*Cedis (million)*	*Percent*
VAT and levies	218	62	263	61
SSNIT	60	17	67	15
Premiums from informal sector	18	5	17	4
Interest earned on NHIF reserves	36	10	76	17
Other income	0	0	1	0
Sector budget support	17	5	10	2
Total	349	100	433	100

Source: National Health Insurance Scheme financial reports, 2011.

Premium Rates

Formal and informal sector workers must pay an annual premium to enroll in NHIS. Most formal sector contributions are covered by employer/employee payroll tax contributions. Collection of premiums from informal sector workers (who represent about 70 percent of the workforce) has been a challenge. The premium is considered progressive based on geographical differentials (ranging between 7.20 and 48 cedis per person per year). However, an actuarial study showed that on average people paid 8.50 cedis, which is at the lower end of the premium range. Premium rates are not actuarially determined. They are considered reasonable but low relative to actuarial estimates. There is a large exempt group whose premiums are fully subsidized by the central government (that amount was 12 cedis per person per year in 2008, and it was increased to 18 cedis per person per year in 2010). During a recent review of NHIS enrollment figures, about 68 percent of NHIS registered beneficiaries were exempt from paying premiums. The rest of the population of Ghana is expected to pay registration fees and premiums. See box 3.2 for discussion on the one-time premium policy.

NHIS Benefits Package

Services offered to those enrolled in NHIS are comprehensive and curative in nature. Legislative instrument (LI) 1809 (2004) provides both a positive and a negative list of services to be covered. Ghana's NHIS is expected to cover at least 95 percent of all diseases. It also covers curative services and curative drugs for enrollees' outpatient and inpatient care. However, some services and drugs covered by MOH are excluded, including some chronic and long-term illnesses. HIV/AIDS treatment has been financed mainly by external partners (for example, the Global Fund). Family planning services are covered under NHIS, but family planning commodities and some other services and drugs must be financed OOP.[15] See box 3.3 for the exclusion list.

Choice of Providers and Accreditation

The NHIS has a wide network of providers, and it uses public monies to contract with private providers to serve NHIS beneficiaries. It covers the public sector, the missions, and the not-for-profit and for-profit health providers: it includes within this clinics (and CHPS), laboratories, pharmacies (and licensed chemical sellers), and hospitals.[16] Through the DHMISs, it is able to cover all 10 regions and has opened dialogue with various associations and negotiations with various provider networks. In this way, NHIS beneficiaries are able to benefit from a wide variety of

Box 3.2

What Is the "One-Time Premium" Policy to Be Introduced by Ghana?

The government's goal in introducing the "one-time premium" was to attain universal coverage under NHIS (increase coverage from 70 percent to 100 percent). This was one of the 2008–09 campaign/political commitments. NHIA wanted to move this agenda forward. However, the details associated with the one-time premium are still under discussion.

The government expects that the voluntary "one-time premium" (or rates) will increase enrollment among informal sector workers. These premiums (or rates) are not actuarially estimated. It is not easy to estimate a lifetime premium. The current discussion would establish this rate at 50 cedis per person. This rate, although higher than the current premium, is just once in a lifetime. If this rate had been calculated by a model, the total cost of the lifetime premium would be no less than 1,200 cedis per person (for example, an 18-year-old person would pay an annual premium of 50 cedis per person per year). However, the premium amount is not large enough to cover a lifetime of premiums (if that had been actuarially calculated).

Another consideration for the government is to treat this one-time premium, not as a premium, but as a one-time registration fee. The current system of collecting fees and premiums from informal sector workers is difficult, and the collection costs may be high (relative to the revenue earned). The additional revenue from this one-time premium (or rate) will not really generate an increase in revenue. It is not regarded as a solution to achieve financial sustainability. Currently people have to pay a very small amount once every five years, plus an annual renewal fee and an annual premium. Instead of charging a registration fee every five years, the population could benefit from registering only once in a lifetime, but they could continue to pay annual premiums. The current premiums are flat rates for all income groups, and these rates are regressive. Tiered pricing, on the other hand, would require those with higher incomes to pay more in premiums. NHIA should consider tiered pricing if it wants premiums to be progressive.

The "one-time premium" will affect only those among informal sector workers who can afford to pay, who are not risk averse, and who consider NHIS beneficial to them. It will not affect those who are exempt and those who cannot afford to pay. Essentially, the target group represents less than 30 percent of the population. The immediate impact of this one-time premium on NHIS is that medical expenditures will increase without a significant increase in revenue.

(continued next page)

Box 3.2 *(continued)*

The government needs to understand why enrollment in NHIS is low, especially because the current premium rates are fairly affordable for many. Voluntary enrollment should be determined by the beneficiaries' willingness and ability to pay these premiums. The "one-time premium" policy did not consider why the current enrollment is low: Does it reflect limited awareness and/or access to DMHISs, a lack of faith in NHIS's health care system/benefit package, and/or affordability issues? The "one-time premium" policy also did not take into account that informal sector workers have liquidity problems. In addition, NHIA does not define the poor (who are indigents). NHIA will eventually have to refine their definition of "indigents" who are exempt and will have to cover them under general taxes. Single-payer systems are generally progressive because of the exemptions they offer to underserved populations. Essentially, the one-time premium affects those in the informal sector who can afford to pay; they will certainly find this rate attractive.

Increasingly, NHIA is talking more and more about a tax-based revenue source. In tandem with that, NHIA is having discussions with parliament about increasing the health insurance levy by raising the VAT contribution for health insurance from 2.5 to 3.5 percentage points (or from 20 percent to 25 percent of VAT income). Essentially, the VAT and levies would pay for all those in the informal sector (exempt and nonexempt); the one-time premium would not help with revenue generation. There is no talk about increasing the overall collection of levy or SSNIT taxes. The proposed increase would only apply to VAT contributions and the NHIA levy. This is an opportunity for them to broadly assess the situation and dialogue with the Ministry of Finance and Economic Planning about what other sources of revenue could be tapped. Other oil and toll taxes are two examples of these potential sources of revenue.

NHIA seems to be moving most of its revenue base to a single source of income—with a greater emphasis on VAT and levies as well as some from SSNIT—but not premiums. It will be important to make sure that its revenue base is not too adversely affected by fluctuations in the economy. A single source of financing may pose some risks because of its reliance on a single government revenue base. Therefore, it will be important that the actuarial analysis has appropriate inflationary increases built into it and the revenue base reflects this as well. Inflation in medical costs is generally higher than general inflation.

Source: World Bank staff.

Box 3.3

Ghana NHIS: Benefit Package Exclusion

The following health procedures are excluded from the National Health Insurance Scheme Benefits List:

- Appliances and prostheses, including, for example, optical aids, heart aids, orthopedic aids, and dentures
- Cosmetic surgeries and aesthetic treatment
- HIV/AIDS retroviral drugs
- Assisted reproduction (such as artificial insemination) and gynecological hormone replacement therapy
- Echocardiography
- Photography
- Angiography
- Dialysis for chronic renal failure
- Organ transplants
- All drugs not on the NHIS list
- Heart and brain surgery other than those resulting from accidents
- Cancer treatment other than breast and cervical
- Mortuary services
- Diagnosis and treatment abroad
- Medical examinations for purposes other than treatment in accredited health facilities (for example, visa application, education, institutional, and driver's license)
- VIP ward (accommodation)

Source: LI 1809, 2004 Schedule II Part 2, regulation 20: Exclusion List.
Note: LI 1809, 2004 Schedule II Part 1, regulation 19 (1) provides the minimum health care benefits. See http://www.nhis.gov.gh/_Uploads/dbsAttachedFiles/LI18091.pdf

providers choices and avail themselves of services nationwide, although choices might be limited in rural and some underserved areas, given supply constraints.

NHIA is responsible for conducting accreditation and for conferring accreditation on providers. The accreditation standards are mature (cited in LI 1809, 2004) but rely primarily on input-based standards for infrastructure and personnel. Facility service performance indicators are not included. NHIS has contracted for services provided by both public and private sectors. These services cover outpatient care, diagnostics, and

inpatient care at hospitals, health centers, CHPS, and pharmacies. This is a great start; however, the accreditation process has been slow when it comes to covering the private sector. Many private sector facilities do not meet minimum standards. Of the 2,647 facilities accredited, 39 percent were private for-profit facilities (2010). Initially, NHIA decided to give blanket accreditation to all public sector facilities (2006–11), but many of them did not meet minimum standards. A recent study indicates that at least 45 percent of health facilities were unable to meet minimum standards (MOH 2011b). When NHIS accreditation renewals come up, NHIA should ensure that these public sector facilities have significant plans to meet at least the minimum accreditation standards.

The Provider Payment Mechanism

The provider payment mechanism is one way to control costs, but it could stand improvement. Ghana has a fee-for-service (FFS) system. NHIS-accredited providers are reimbursed for services rendered, such as inpatient and outpatient care and for drugs prescribed to NHIS beneficiaries. Ghana's diagnostic-related group (G-DRG) applies to all services: outpatient and inpatient care at clinics and hospitals. G-DRG uses 546 codes. Unlike the classic diagnosis-related group (DRG) used in many Organisation for Economic Co-operation and Development countries, Ghana's system does not include drugs; these claims are separate. The G-DRG also uses multiple rates, one for public providers and another for private providers. Because the former receive budget-based salaries, the G-DRG rates are lower (unlike the private sector, the salary portion is excluded). G-DRG rates for a particular service may differ by type of facility: tertiary versus secondary hospitals, hospitals versus clinics. The current system raises some concerns: (a) difficulty in administration, for example, all primary health care consultations have ex post G-DRG reimbursements, (b) the diagnosis may not correspond to the drugs prescribed, and (c) little control over fraud: anecdotal evidence suggests more expensive drugs are prescribed when a simple treatment is in order. NHIA is piloting a capitation model to cover primary health care services, which could result in gains in efficiency. Further, NHIA is considering an assessment of the G-DRG system to understand the bottlenecks. See box 3.4.

NHIA has an opportunity to indirectly bring about lower drug prices in the market. NHIA has its own list of medicines. This list includes drugs from the Essential Medicines List and others. Until recently, NHIA reimbursed providers for whatever drug charges they claimed; however, now

Box 3.4

Ghana NHIS: A Description of G-DRG Rates

The NHIS payment mechanism is complex. It has a grouping of 546 G-DRGs that are applied to all levels of care. The prices for outpatient care and inpatient care are different. For inpatient care a difference is found in price for public hospitals and private hospitals. Furthermore, the prices are different depending on the type of hospital (tertiary hospitals have a higher tariff than secondary hospitals).

The G-DRG system causes medical cost inflation because of tariff creep. Tariff creep means that providers have an incentive to shift to a G-DRG that offers a higher tariff. For example, more cases are reported as complicated malaria instead of normal malaria. If the gatekeeper system is not working well, NHIS has to pay for an outpatient G-DRG at a hospital rather than a clinic or for an inpatient G-DRG rather than an outpatient G-DRG. It is important to monitor the developments in health care and to estimate medical cost inflation. A good database that allows analysis by G-DRGs, by providers and G-DRGs, and by prices and providers and G-DRGs is crucial. This information is also necessary for calculating the overall consumption of health care. The current information is insufficient. These amounts should be in line with the amount paid and vice versa. This is also true for the membership database. Contributions collected for health care should be linked to the corresponding financial information. Health care should be in line with the number of registered members and the average contribution paid.

For health care providers supported by the government, the G-DRG tariff does not include the following (Government of Ghana 2009):

Health care providers	*Costs not included in tariff*
Ghana Health Service and teaching hospitals	All human resources (HR) on the government's payroll. HR on internally generated funds (IGFs) are included in the tariff. Capital and equipment costs
Christian Health Association Ghana health facilities	All HR on the government's payroll. HR on IGFs are included in tariff.
Quasi-government health facilities	All HR on government's payroll. HR on IGFs are included in tariff. Capital and equipment costs

Source: Hendriks 2010.

standardized prices are in place and are transparently reported on the NHIA website.[17] These prices are determined from market surveys. Median retail prices are selected for each drug, and that price becomes the reimbursement amount. These prices are reviewed approximately every two years. NHIA standards are expected to influence market prices. They could consider ensuring that MOH's more stringent markup policies are applied. As advised under LI 1809, 2004 regulation 41, "Based on the quarterly indices, the Council shall in consultation with pharmaceutical service providers regularly set allowable percentage mark-up in the prices of drugs and medicines charged by health care facilities and re-imbursement shall only be made for drugs and medicines within the allowable mark-up price."

Supply-induced demand. The provider payment mechanism introduced in Ghana in 2005 is ex post payment, after services are provided. Essentially it is a fee-for-service system. A DRG system was proposed, but it was only for services. Generally it offers the incentives of a FFS system. A FFS mechanism applies to drug cost reimbursements. NHIS beneficiaries receive free care at the point of service. Providers must claim fees from NHIS after the service is provided. The purpose of introducing this payment mechanism was to improve the use of services, which had been very low before the introduction of NHIS. However, ex post FFS-type payments create an incentive for providers to offer more services. This leads to supply-induced demand. Evidence suggests that the use of health services in Ghana has increased, but little in-depth analysis is available to understand how much inefficiency exists because some services are unnecessary. Prescription data suggest that more antibiotics were prescribed than were necessary. More patients were found to have a complicated form of malaria, requiring the use of more sophisticated drugs. An assessment of claims data would yield a better understanding of what types of services were provided, and whether they were necessary.

Moral hazard. The NHIS basic benefits package is comprehensive. It does not require copayments or deductibles, or have reimbursement ceilings by type of service. This means that NHIS beneficiaries have few restrictions on the types of services or the quantity of services they can demand. The limited data available prevent a clear understanding of consumer behavior. Most services provided by GHS were for outpatient care. It is possible that NHIS beneficiaries accessed primary care services more often than they would have otherwise. The gatekeeper system is not effective, and the referral system is inadequate.

Claims Payment

NHIS spending on claims is growing. Health spending has gone up, while revenue generation has remained stable. Revenues increased by 24 percent, and spending increased by 46 percent during this period (2008–09). Claims made up 81 percent of total spending in 2009; they increased from 73 percent a year earlier. Between 2008 and 2009, claims payments increased by 63 percent (in nominal terms). Most NHIS spending (73 percent) was allocated for claims payments to providers (2008). Out of 198 million cedis on claims, 69 percent was for outpatient services and drugs; the balance was for inpatient services and drugs. About 40 percent of overall claims expense applied to drug costs. Under the initial system and before the central claims processing center (CPC) was created, the funds were channeled to DMHISs as reinsurance. See table 3.6.

Claims processing leads to inefficiency, especially the large volume of manually processed claims generated for outpatient consultations. Currently Ghana processes 19 million claims per year; 60 percent are for outpatient and 40 percent are for inpatient care. According to NHIA, at least 45 percent of these claims are approved without the need for adjustments. About 65 percent of "clean" claims are expected to be paid within 60 days of receipt from providers (2010). LI 1809 (2004, regulation 38), states, "A claim for payment of health care service rendered which is submitted to a scheme shall, unless there is any legal impediment, be paid by the scheme within four weeks after the receipt of the claim from the health care facility." Outpatient claims are more or less standard, but the current system (G-DRG) requires ex post claims to be submitted and processed before reimbursements can be applied. This has created some inefficiency, especially for simple outpatient services at the clinic level;

Table 3.6 Ghana: NHIS Expenditures, 2008–09

	2008		*2009*	
NHIS expenditures	*Cedis (million)*	*Percent*	*Cedis (million)*	*Percent*
Claims payments	198	73	323	81
Administrative and logistical support (DMHIS)	12	4	8	2
Support to MOH	39	14	38	10
Operating expenses (NHIA)	5	2	8	2
ICT solutions (NHIS)	19	7	16	4
Construction/buildings		0	5	1
Total	273	100	398	100

Source: National Health Insurance Scheme financial reports 2011.
Note: ICT = information and communication technology.

these claims have to be prepared and processed and payments reimbursed. Delays in payment have resulted from liquidity constraints and from the timing of the processing cycle. Several providers have complained that the delay is affecting their performance; they are unable to purchase drugs and other products on a timely basis. NHIA had explored the option of upfront reimbursement of 40 percent for outpatient services at the time claims are submitted, with the balance paid after adjudication. NHIA is now exploring a capitation pilot for primary health care in the Ashanti region. This pilot is expected to improve the system's efficiency and reduce the ex post claims reimbursement load on primary care clinics. See box 3.5.

NHIS Administrative Costs

NHIS administrative costs seem reasonable. Administrative costs were about 8 percent of NHIS's total spending, which included costs incurred by NHIA and by DMHISs. Another portion of spending (10 percent) is allocated to partner institutions; this goes for capital investment and other public health programs. But the selection process and arrangements are not transparent; this needs further scrutiny as to its appropriateness. Should a national health insurance organization support a significant share of the MOH budget beyond reimbursement for services? Is this simply a matter of earmarking funds out of the general budget to give the Ministry of Finance and Economic Planning additional flexibility? If these are legitimate payments to NHIS beneficiaries for covered services, then it is unclear why all of the payments are not going directly to the facilities.

Box 3.5

Efficiency Measured for NHIS Claims Submission, Processing, and Reimbursements

The current NHIS claims tracking system is fairly reliable in capturing claims submission data and tracking reimbursement data as well. The sample included claims from tertiary, secondary, and primary providers. The robustness of the system is challenged, however, when it comes to capturing claims processing data. The study shows significant time lags at each stage of the claims cycle. Overall, on average, the cycle takes longer than the 90 days stipulated by law, especially for

(continued next page)

Box 3.5 *(continued)*

regional and teaching hospitals. In contrast, primary health care facilities captured in the sample are able to meet the mandated 90-day time line.

Clinics are more efficient in submitting claims than hospitals. Based on data reviewed from the claims processing center, less than 25 percent of claims from teaching and regional hospitals are submitted within the stipulated 60 days. The majority of claims captured in this sample for teaching hospitals were submitted 90 days after the patient visit (88 days on average, 2010). Regional hospitals submitted the majority of claims within 90 days of patients' visits (74 days on average, 2010).

Data from the Osu Klottey Mutual Health Scheme indicate that the majority (54.7 percent) of claims are submitted within 30 days of patients' visits. Primary care providers captured in the sample were the only group to meet the stipulated 60-day time frame for a significant percentage of claims. Nonetheless, about 10 percent of claims were submitted beyond the 60-day deadline; slightly less than 20 percent of claims were submitted more than 90 days after the patient's visit.

Clinics operated by DMHISs are relatively efficient in processing claims. DMHIS mostly processes clinic payments for services and drugs; CPC has started processing the heavier volume of outpatient and inpatient claims from regional and teaching hospitals. The sample data revealed that CPC approved the majority of claims submitted by the regional hospitals (100 percent) and teaching hospitals (65.2 percent) within 60 days. However, no claim was approved within 30 days of submission for teaching hospitals. The Osu Klottey DMHIS approved two-thirds of claims submitted within 30 days. About 13.3 percent of claims within the sample were still pending after 90 days (December 2010). DMHISs are near health providers; this proximity enables them to have close relationships with providers and to follow up on their claims.

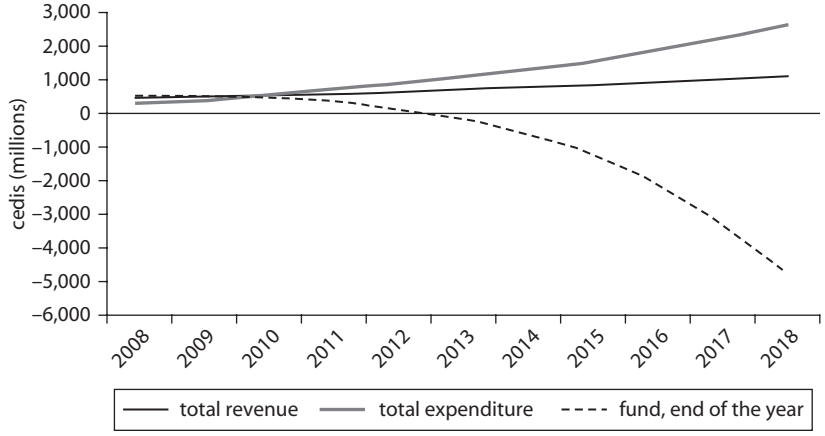
DMHISs reimburse claims submitted by clinics fairly efficiently. Most of the claims from teaching hospitals (69.4 percent) and regional hospitals (88.6 percent) are reimbursed within 60 days of submission by CPC. This is double the amount of time it should take. Within the Osu Klottey Scheme, at least two-thirds of submitted claims received reimbursement within 30 days.

Sources: Micah 2010; data from CPC and from Osu Klottey DMHIS.

NHIS Financial Sustainability

NHIS financial sustainability is threatened. An actuarial analysis using 2008 as the base year[18] showed that NHIS would become insolvent by 2013 based on the current income stream and expenditures (rising claims expenditures). See figure 3.14. When the fund was created, earlier

Figure 3.14 Ghana NHIS: Financial Sustainability Forecasts, 2008–18



Sources: Hendriks 2010. World Bank estimates. Initial data from NHIA in 2009–10 and reliability not confirmed.

estimates (World Bank 2007) had suggested NHIS would be financially sustainable for at least five years (2008–13). However, those assumptions were based on earlier estimates, indicating registration into NHIS would be much lower. Instead, registration has grown faster than expected. That may be attributed to two factors: the exemption policy, which captures the vulnerable population, and efforts made by DMHISs to provide subsidies for exempt groups at the district level. They had all the incentives to increase enrollment and increase them quickly. However, as registration grew, so did the use of health services and claims.

NHIA is considering options to increase its tax revenue base. NHIS is exploring a few options to improve its revenue base and its reserve fund, which is declining. One option is to increase the VAT and levy contributions for NHIS from 2.5 percent to 3.5 percent. This option could be a challenge because the government has earmarked a significant amount of revenue to health and the country's overall fiscal space situation.

NHIS is considering incentives to increase enrollment among workers in the informal sector. NHIA is also discussing the "one-time" premium option. It is unclear what exactly will be charged under the "one-time" payment, which is a new concept. If it is a premium, how it will be actuarially estimated over a lifetime is unclear. If this option goes through, it might increase enrollment, but not revenue, over time. Instead, it may lead to increased costs, given the inability of most individuals to pay an actuarially sound one-time premium.

One option is to provide incentives and increase enrollment among the informal sector. One way to increase enrollment and revenue is to make the program mandatory for informal sector workers. These workers pay premiums.

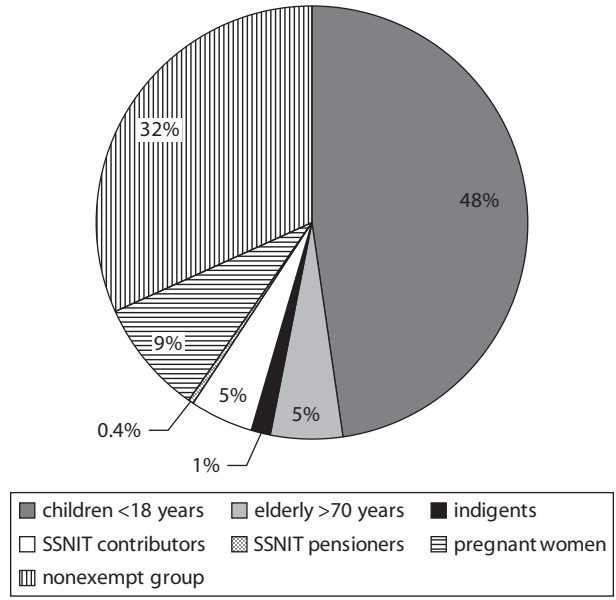
NHIS could explore ways to improve gains in efficiency. Revenue enhancements do nothing to improve spending efficiency. Refinements of the payment mechanism for primary health care could reduce costs and contribute to gains in administrative efficiency associated with claims processing.

Eligibility

Most of those who registered under NHIS are from the "exempt" group. All of the people of Ghana are eligible to enroll. However, some receive exemptions from paying premiums. Of the 8.2 million people enrolled in NHIS who had valid cards in 2010, nearly one-half were children under 18 years of age. All pregnant women are eligible for free maternity care; all elderly above 70 years of age are also eligible for free care. They were 9 percent and 5 percent of beneficiaries, respectively. Indigents made up the smallest proportion of NHIS beneficiaries (about 117,000 individuals). The exempt group had the greatest proportion of NHIS membership (68 percent); paying members (informal sector workers) represented 32 percent of the total 2010 membership. The poor were not necessarily covered because they are difficult to reach. According to Act 650, 2003, NHIA is responsible to design a mechanism to ensure health care coverage of indigents. Indigents could be better targeted if an income or consumption profile existed for them. See figure 3.15.

The NHIS exempt group is based on a demographic profile, not on income and consumption profiles. Twenty-nine percent of Ghana's population lives in poverty (2006) (World Bank 2011). And yet just about one-quarter of them are covered under NHIS. Their health risks and vulnerability are of great concern. Reaching out to households has not been easy; identifying the poor (or the indigent) has been a big challenge. The country does not yet have the means to do so. However, Ghana has come up with a community-based targeting methodology that was recently piloted and is in the process of being scaled up. It will take a few years before the population is mapped under "common targeting." Meanwhile, NHIS has encouraged the vulnerable population to register by offering them free or subsidized enrollment. The vulnerable population was identified using demographic groupings, such as children under 18 years, elderly over 70 years, and all pregnant women (generally women

Figure 3.15 Ghana: Composition of NHIS Membership, 2010



Sources: Data from the NHIA Actuarial Department, 2011.

15–49 years). NHIS uses a very stringent definition of "indigents"[19] but offers no proper operational guidelines, which makes it very difficult for DMHISs to identify this group of beneficiaries. Coverage of "the indigents" was among the worst in the exempt group. Although 400,000 persons were to be identified in any one year, only 117,000 (25 percent) persons could be registered. NHIS has tried to ensure that all Livelihood Empowerment Against Poverty (LEAP)[20] beneficiaries are registered with NHIS, but to date a very small proportion of LEAP beneficiaries are registered with the Ministry of Employment and Social Welfare (MESW), which is where the LEAP program belongs. A collaborative effort between the sector ministries and the MESW is under way to scale up identification of the poor.

DMHISs face many challenges to identify and verify exempt beneficiaries. Except for SSNIT beneficiaries, most other exempt beneficiaries are difficult to identify. DMHISs do not have information on the demographic groups in their districts that would aid in planning. National identity cards do not exist; therefore, DMHISs have trouble verifying beneficiaries who claim to be "exempt." Pregnant women are required to

bring a certificate of pregnancy from health specialists. However, birth certificates do not exist in most cases; therefore, children above the age of 18 can mistakenly be added as "exempt." The same is true of the elderly under age 70. Indigents are the most difficult to identify; many DMHISs tend to ignore this category. All exempt beneficiaries, except indigents and pregnant women, pay registration and reactivation fees. Most persons have to wait at least three to six months to get their registration cards; however, pregnant women and indigents are covered right away. It would greatly help DMHISs if NHIA would prepare guidelines on how beneficiaries should be identified. The system used by SSNIT is very helpful in identifying SSNIT contributors. Such a system could also be adopted by MESW. A national identity card would help in verifying beneficiaries.

Coverage under NHIS

Less than half of Ghana's population belongs to risk pooling programs. Since 2005 Ghana has enrolled a significant proportion of its population in the NHIS. Nevertheless, a discrepancy exists between household surveys and institutional data regarding registration figures and valid cardholders. NHIS institutional data indicate that at least 55 percent of the population is registered with NHIS and 43 percent of the population has NHIS valid cards (2008). However, a simulation using Ghana Demographic Health Survey (2008) data (Ghana Statistical Service 2009a) suggests that registration was lower (37 percent) and that the number of cardholders was much lower (32 percent). These figures represent at least a 10-point differential between institutional- and household-level data. A small proportion is enrolled in private commercial insurance, mostly under an employer's coverage (1–2 percent of the population). Although institutional registration systems are being strengthened, the government will need to rely on parallel data validated through household surveys. The Ghana Living Standards Survey (GLSS) and others such as the Ghana Demographic Health Survey (GDHS) and Multiple Indicator Cluster Survey are examples. See table 3.7 and figure 3.16.

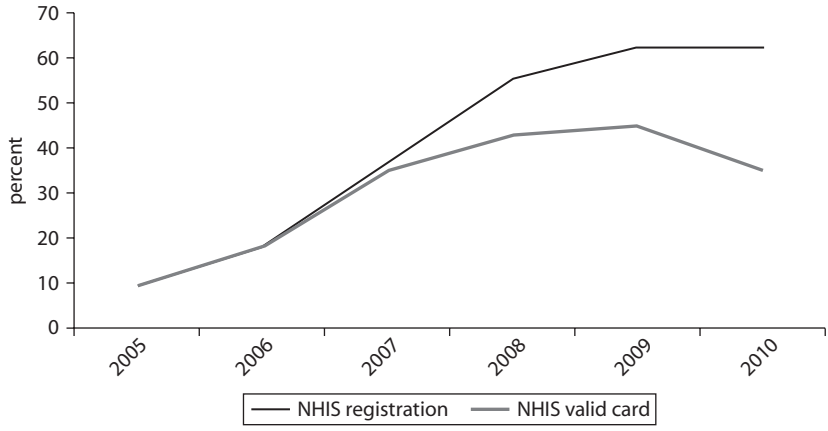
NHIS coverage shows widespread inequity. Although 65 percent of individuals from the top expenditure quintile are registered, about 30 percent (the range is between 24 percent and 29 percent) of individuals from the lower expenditure quintile are registered (Ghana Statistical Service 2009a and NDPC 2009, respectively). There is a disparity in NHIS coverage across regional, economic, and gender lines. See figures 3.17 to 3.19.

Table 3.7 Ghana: Coverage of the Population in NHIS, 2008

	GDHS, 2008 with simulation		
Age group (years)	*NHIS registered*	*NHIS cardholders*	*NHIS valid cards (seen)*
< 15	3,687,485 (43%)	3,241,299	2,282,553
15–49	3,632,321 (43%)	3,228,536	2,182,452
50–69	885,000 (10%)	796,500	538,311
70+	318,600 (4%)	286,740	187,265
Total	8,523,406	7,553,076	5,190,580
Percent	37%	32%	22%

Source: World Bank staff estimates.
Note: Simulation run using GDHS, 2008.

Figure 3.16 Ghana NHIS: Beneficiary Enrollment, 2005–10

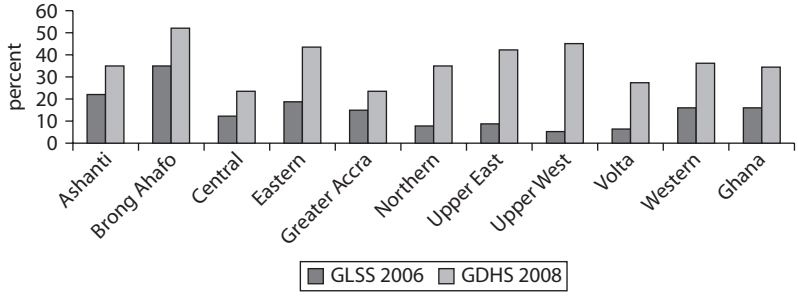


Source: National Health Insurance Authority 2011 data.

Risk Aversion

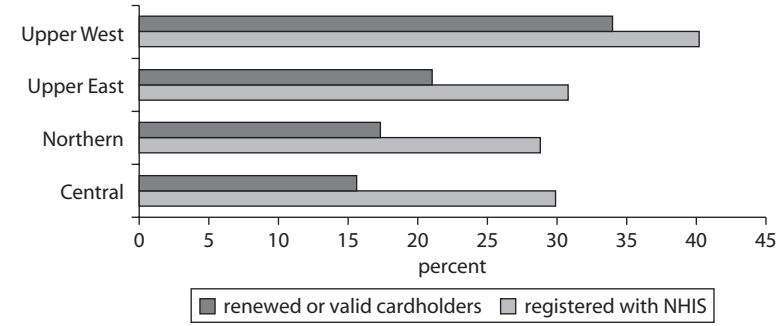
An adverse selection problem exists. NHIS is not mandatory for informal sector workers. Act 650 (2003) offers the people of Ghana the option of enrolling in public or private health insurance. Some persons are not enrolled in any program. Further, given limited monitoring, several NHIS registered persons renew their NHIS cards only if and when they fall sick. Therefore, survey results show that fewer persons hold valid cards. Some initial measures were imposed to reduce adverse

Figure 3.17 Ghana NHIS: Population Registered by Region and over Time, 2006 and 2008



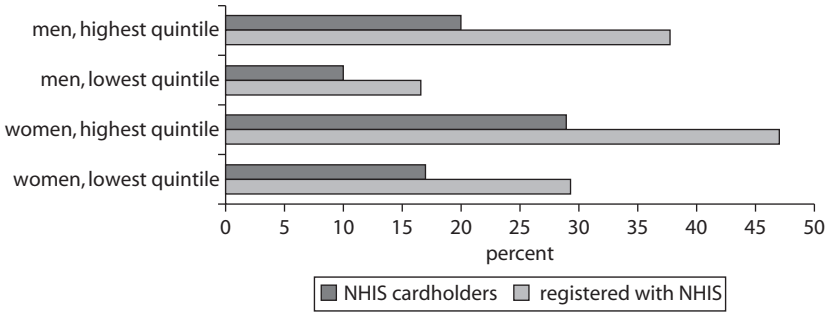
Sources: Makinen and others 2011; data are from GLSS 2006 and Ghana Statistical Service 2009a.

Figure 3.18 Ghana NHIS: Regional Inequity in Coverage among Adults (Ages 15–49), 2007–08



Source: Ghana Statistical Service 2009b.

Figure 3.19 Ghana NHIS: Income and Gender Inequity in Coverage among Adults (Ages 15–49), 2007–08



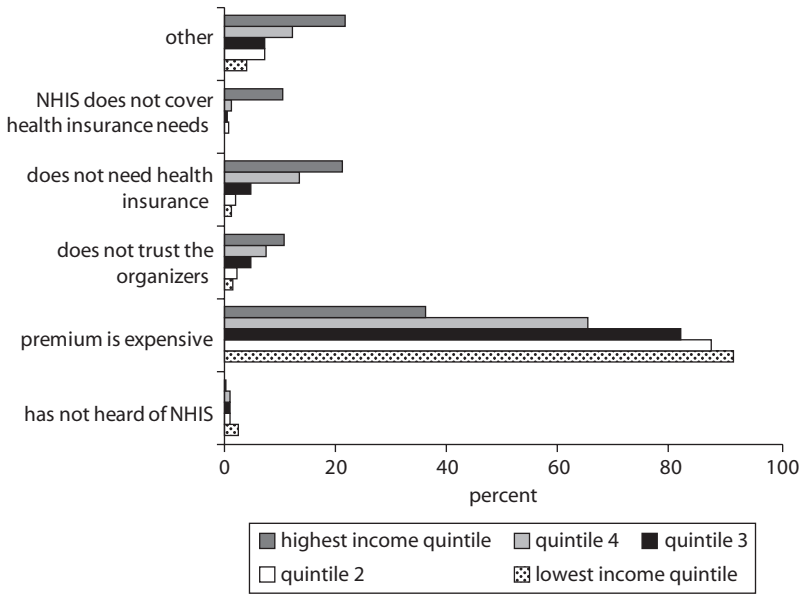
Sources: Ghana Statistical Service 2009a, 2009b.

selection. For example, children under 18 years of age were not registered if their parents were not registered. However, this strategy had to be discontinued because of administrative constraints. The waiting time for registration and the penalty for missed renewals are some other measures to reduce adverse selection.

Fewer people are holding NHIS valid cards. This stems from NHIS's administrative challenges in the early years of registration, when the waiting time for the processing of cards could be three to six months. This is not the case for renewals, but people may not be aware of that. The free program for pregnant women started in July 2008. Although these women were covered immediately, they did not have valid registration cards. This could be more efficient with a refined and computerized beneficiaries' registration system. Such a system has been developed, but it is not available on a national scale.

Renewals are low among those initially registered. Access and financial barriers explain this phenomenon in part. Additionally, there is an adverse selection problem. Registered members choose to renew their cards only when they fall sick—and without penalty. They simply pay a minimal reactivation fee. See figure 3.20 and tables 3.8 and 3.9.

Figure 3.20 Ghana NHIS: Reasons for People Not Enrolling, by Quintile, 2008



Source: NDPC 2009.

Table 3.8 Ghana NHIS: Reasons Registered Persons Did Not Hold a Valid NHIS Card in 2008

Top 3 reasons for not holding NHIS valid cards	*Urban (percent)*	*Rural (percent)*	*Total (percent)*
Not as yet renewed registration	36	36	36
Registered, but card not received	37	26	31
Registered, in waiting period	17	29	24
Total	100	100	100

Source: NDPC 2009.

Table 3.9 Ghana NHIS: Reasons for Low Renewals of NHIS Cards in 2008

Top 3 reasons for not renewing NHIS card	*Lowest quintile (percent)*	*Highest quintile (percent)*	*Total (percent)*	*Remarks*
Premium too high	65	35	50	Affordability. Concerns nonexempt group. Will they renew?
Has not been sick	19	10	18	Adverse selection. Feel need to go when sick. Will register, but later!
Waiting time for card too long	10	28	15	Administrative inefficiency. Perception from initial registration. Will they register?
Total	100	100	100	

Source: NDPC 2009.

Challenges Faced by NHIS

To achieve the basic objectives of creating health financing systems that improve health outcomes, offer financial protection, and respond to consumers in an equitable, efficient, and sustainable manner, the government of Ghana and NHIS need to better address several major strategic challenges:

- *Equity and targeting issues* (regressive socioeconomic profile of enrollees, coordination between NHIA and MOH). Given the stringent definition of "indigents," some poor and near poor are required to pay premiums. As a result, they fail to enroll, which means less equity.
- *Adverse selection*. Adverse selection and the lack of enrollment of informal sector workers result in a failure to enforce Section 31 (3) of the

Health Insurance Law. This law requires every resident in Ghana (except for the military and police) to belong to a licensed health insurance scheme.

- *Revenue generation*. Premiums, taxes, and reinsurance payments for NHIS and to DMHISs are not actuarially determined. The premiums for informal sector workers are low relative to the cost of care and the revenues they generate. Further, 65 percent of premium-exempt members are not all indigents. They could afford to contribute but instead are supported by the national health insurance levy contribution. Effective targeting by the government could improve this situation.
- *Benefits package*. The extensive basic benefits package covers 95 percent of the burden of disease with no cost sharing. This coverage may not be affordable or sustainable. Further, various cost-effective services are excluded; in general, the benefit package is biased in favor of curative rather than preventive care. For example, in principle, MOH provides for family planning, but this commodity is not part of the NHIS basic benefits package and it is underfunded. Increases in service utilization may not be sustainable under NHIS's current financing and provider payment arrangements: Outpatient visits increased from 0.4 per capita in 2005 to about 1 in 2009; inpatient utilization during the same period increased from 22 to 58 per thousand.
- C*ost containment*. Because of rapid expansion of enrollments (now about one-half of the population), *ceteris paribus*, the program will not be affordable or sustainable unless costs are brought under control. Furthermore, the NHIS HMISs are not capable of handling their current, much less increasing, operational requirements. Moreover, insufficient cost containment measures are exacerbated by an ineffective referral system and misaligned incentives across insurers and provider types. Ghana also faces a lack of an effective gatekeeper system; as an example of the latter, much of the increase in utilization is concentrated in tertiary hospitals. The provider payment systems used by NHIS are improving, but they have a ways to go before becoming truly effective strategic purchasing tools.
- *Inefficiencies in administration*. Administrative and managerial efficiency is problematic because of the lack of a modern HMIS. The result is poor claims management, limited quality assurance, high administrative cost inefficiencies for providers and NHIS, and incomplete information on enrollees. Two competing information technology systems are in use (one for beneficiary registration and one for claims processing). It is not clear if these two systems interface. NHIS reimbursement delays as

well as an inadequate service accounting system make it impossible to track patient use of services over time. Incomplete accreditation of nonpublic providers is a problem too.

- *Claims volumes are growing rapidly.* Those claims coming to NHIA's CPCs will continue to grow in number. NHIS's claims processing and management systems are not capable of handling current volumes, much less increasing operational requirements. NHIA's system has a challenge in reviewing every claim and processing is manual. Decentralized levels have an easier time of communicating with providers to investigate "rejected or disputed" claims. The CPC has a greater challenge because it is farther away from providers. NHIA lacks common standards for certain crucial coding systems, such as procedures and pharmaceuticals. The current NHIA system does not provide adequate analytics for management of the scheme or the insurance fund.
- *Sustainability.* NHIA is not financially viable under its current design and operational policies (for example, coverage rules, basic benefit package, provider payment and cost control, and revenue generation policies). Among the projections were a deficit in 2010 and depletion of the reserve fund by 2013. Further, the original health insurance law does not require reserves; in the medium to long term, reserves are necessary for all operational health insurance funds.

Specific problem areas common to many insurance entities have also emerged in Ghana:

- *Enrollment issues.* There is a difficulty in identifying indigents, there is weak portability, and there is unreliable eligibility authentication at provider sites.
- *Service utilization*. There is an inability to effectively monitor service utilization and cost; there is an inability to gather timely data on disease patterns, which hampers decision making; and there is weak enforcement of gatekeeper system (referral system) and misapplication of approved tariffs.
- *Matters related to medicines.* There is an inefficient Medical Supply Chain System, leading to a high cost of medicines on the NHIS medicines list, there are problems in prescribing and dispensing unapproved medicines, and there is misapplication of approved tariffs.
- *Claims processing.* CPC is fragmented, as some claims are electronically processed while some are manually processed; manual processing of

claims lead to delays in claims payment; and there are no fraud prevention initiatives by schemes and providers.
- *Sustainability.* There is a high cost of administrative inefficiencies, there are gaps in human capacity, and there are issues of artificial indebtedness.

Conclusion

This chapter provides an overview of the health financing situation in Ghana. Total per capita expenditures on health are not excessive. The public sector has increased its share in the past decade. The public sector has diversified its sources of financing, and some resources are now earmarked for health. However, more could be done to improve the efficient use of these funds. The health cost burden on households is declining, although it is still high by WHO standards.

The public sector has moved toward demand-side financing, but its sustainability is threatened. With the introduction of NHIS, the government instituted better accountability by guaranteeing significant public funding for needy groups and separation of providers from payers. To ensure the affordability of care, NHIS has heavily subsidized costs for the vulnerable populations. It also set up accreditation to ensure an improvement in quality standards and has used public monies to cover private providers to improve access to services for its beneficiaries. The benefits package is also quite comprehensive; as a result, claims have gone up substantially. The sustainability of the NHIS program is at risk and urgently requires attention.

Certain options can be considered to improve the sustainability of the NHIS. Some of these options are to improve the revenue base through either increased earmarking or improved coverage of informal sector workers, who are paying members and currently, given the voluntary nature of the scheme, are more likely to practice adverse selection. There is need to revisit the benefits package, which is comprehensive but is not bundled around cost-effective interventions or value for money. The other avenues for improving sustainability are to revisit the incentives behind the provider payment mechanisms, which at this time are more like fee for service and are unbundled between services and drugs, and between primary and referral networks, given poor quality of care and low gatekeeping enforcement. Furthermore, exploration is required regarding provider and consumer behavior resulting in supplier-induced demand and moral hazards; some ways to deter such effects are

through copayments for certain services or for certain subpopulation groups (such as the nonpoor) and through other standards on deductibles and reimbursement ceilings. The current system suffers from waste following unnecessary service use and prescription of the more expensive drugs. Streamlining and standardizing administrative processes, including drug pricing standards, procurement standards, claims processing, and such, could also lead to more efficient use of resources.

Overall, NHIS revenue incidence is mixed, although mostly progressive (that is, the nonpoor subsidize the poor). NHIS allows a more progressive way of financing health care, as it is mostly financed by progressive taxes, such as VAT, and by the formal sector payroll contributors. However, out-of-pocket spending and NHIS enrollee premiums tend to be regressive.

Nevertheless, the benefit incidence is mixed but mostly regressive. Most of the government subsidies are going toward inpatient and outpatient hospital care, which favor the nonpoor. Although subsidies for health centers and health posts are pro-poor, the government has not invested much in this area, and the use of these services is therefore low. NHIS is mostly accessed by the nonpoor, and therefore it is regressive in its use, because more of the nonpoor are enrolled in NHIS and more of the nonpoor use NHIS finances than the poor. However, when the poor are registered, they are more likely to use health services than when they are not registered. This result suggests that NHIS has the potential to be pro-poor or progressive. NHIS can quickly move toward this direction by defining indigents broadly, improving its targeting mechanisms, and adopting a common targeting approach for enrollment of the poor through a proxy means test.

Notes

1. The analysis refers to MOH, including NHIS and GHS, but not other parastatals, such as police and army.
2. Public sector spending captures government spending for MOH and NHIS. It excludes grants from development partners.
3. When the program was introduced in 1998, the ADHA budget was about 3.7 million cedis; however, this figured soared to over 825 million cedis in 2005. This amount includes MOH (headquarters, GHS, regulatory bodies), the three teaching hospitals, GHS (regional) and Christian Health Association of Ghana, psychiatry hospitals, and taxes.
4. DACF-earmarked funds include 1 percent for malaria prevention and allocations to capacity building (2 percent) and other items that may indirectly

impact health. They amount to 41 percent of total DACF transfers, leaving 59 percent to cover all responsibilities mandated for district governments.

5. Data are from MOH-audited financial statements for 2008. This is stated in Couttolenc (2012).
6. In these calculations, all decentralized MOH/GHS expenditures (to regional offices, facilities, and training institutions) have been allocated to the district where the unit is located. For instance, the cost of regional hospitals was allocated to the regions' capitals. Although this is not entirely correct, the distortion is unlikely to be important because the proportion of hospitals' users who come from the district where the hospital is located is usually quite high. Also, it is important to note that exact figures for individual districts may be distorted. Some newly established districts may not yet have separate budget allocations, population, or facilities. These values do not include public expenditures for mission hospitals. Only five of these hospitals reported expenditure data in the public expenditure review exercise. Including these five would distort the figures for a small number of districts relative to the others.
7. The Pharmaceutical Manufacturing Association of Ghana is currently surveying its members to get a better estimate of the size of the market. Manufacturers and distributors' sales dates are not published, but a market insider estimates that the largest players reach sales volumes in excess of $30 million.
8. This includes funds from the Global Fund and other donor agencies for priority disease programs (HIV/AIDS, tuberculosis, and malaria) but not malaria drugs provided through the President's Malaria Initiative (PMI). Ghana is one of 19 focus countries benefiting from the PMI, which is led by the U.S. Agency for International Development, which implements the PMI together with the U.S. Centers for Disease Control and Prevention. See http://www.pmi.gov/countries/profiles/ghana_profile.pdf for more information.
9. For Fiscal Space Analysis in Health, refer to Schieber and others (2012).
10. The Single Spine Pay Policy reform has been introduced by Ghana to streamline salaries in the public sector, to increase overall salaries, and to reduce the 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.
11. The term *technically efficient* describes a situation in which it is impossible for a firm to produce (a) a larger output from the same inputs or (b) the same output with less of one or more inputs without increasing the amount of other inputs. Compare also technical inefficiency.
12. *Allocatively efficient* refers to a situation in which it is impossible to generate a larger welfare total from available resources. In other words, some people

cannot be made better off by reallocating resources or goods without making others worse off. It indicates a balance exists between benefit and loss.

13. The text of the act is available at http://www.nhis.gov.gh/_Uploads/dbsAttachedFiles/Act650original2.pdf.
14. National Health Accounts estimates.
15. NHIS excludes the following services: cancer except cervical and breast cancer, dialysis for chronic renal failure, heart and brain surgeries, and so on; services covered under government vertical programs (such as immunization and family planning); and drugs not on the NHIS drugs list.
16. LI 1809, 2004, regulation 22 cites teaching hospitals; regional hospitals; district hospitals; quasi-public hospitals (such as the Military, Police, University, and Social Security and National Insurance Trust hospitals); health centers; dental clinics; private hospitals and health clinics; maternity homes; mission hospitals; pharmacies and licensed chemical sellers facilities; and private medical diagnostic facilities.
17. See the NHIS Medicines List, effective October 2009, at http://www.nhis.gov.gh/?CategoryID=158&ArticleID=1096
18. The 2008 data from NHIA were not the most reliable. However, given data constraints, this was the only option available to the World Bank team. Therefore, the simulation is not robust. Until better data become available, this simulation stands. NHIA is in the process of improving its data using 2009 as the base year. Further actuarial analysis will be conducted once more robust data are available.
19. Indigents are narrowly defined in a way that is out of step with the social welfare definition. By law, NHIS defines *indigents* as unemployed people who have no visible source of income, who have no fixed place of residence, who do not live with a person who is employed and who has a fixed place of residence, and who do not have any identifiable consistent support from another person.
20. LEAP was initiated in March 2008 to provide cash transfers to extremely vulnerable households, including those with orphans and vulnerable children.

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CHAPTER 4

Assessment of Health Financing and Delivery Performance

This chapter assesses performance relative to health outcomes. It also addresses where inefficiencies might still exist in the system, how the population is protected financially, and the degree of equity in access to quality and affordable health services.

Key Messages

Health Outcomes

- Of the four health-related Millennium Development Goals, two are likely to be achieved (child health and child nutrition) by 2015. Two are not likely to be achieved (maternal health and communicable disease control) by that date.
- Overall, Ghana has improved its health outcomes. But on average it has not achieved the health outcomes found in comparable income and health spending in lower-middle-income countries (LMICs).
- Effectiveness in the use of public funds needs further evaluation.

Efficiency

- Many direct sector investments do not provide good value for the money. The same is true of spending by the National Health Insurance Scheme (NHIS). Public resources could be more efficient.
- Release of budgets and claims reimbursements is slow.
- Financing of prevention and curative care is fragmented.
- Much of the population is unable to access health care near them. Patients are bypassing clinics in favor of hospitals because clinics may not have health workers and other amenities.
- More outpatient care consultations take place at hospitals than clinics.
- Some public programs directed at the poor are reaching this population; others are not.

Financial Protection

- Ghana is now a LMIC, but its out-of-pocket spending is still high for a LMIC.
- The population could be better protected against the cost of catastrophic illnesses through better risk pooling.
- Households do not seem to be heavily burdened with health spending, although the poor are disproportionately affected.
- Compared to the nonpoor, poorer households spend a much higher proportion of their household expenditures on health.

Equity in Delivery of Health Care

- Use of health care has improved, but inequity exists based on income and regional profiles. Regional differentials are evident: the Northern region stands out for its low use of services. The poor are disproportionately worse off.
- The private sector is an important contributor to health care. Generally the poor tend to use the services of public facilities. The rich go equally to public and to private facilities. Urban–rural and income differentials are evident.
- NHIS-registered beneficiaries tend to use both public and private facilities; however, a significant number of those who are not registered with NHIS tend to use private health facilities. A large proportion of them use private nonreligious/for-profit facilities.
- Evidence shows that those with insurance are better off: the poor who are insured are able to access more care in comparison to those in the same quintile who do not have insurance coverage.

Quality of Health Services

- Health service appropriateness and quality vary by region and income group, but they also show some signs of improvement.
- Income and regional disparities exist in access to quality care.
- The poor are not receiving as good a quality of care as the nonpoor.
- Households perceive that private providers render better quality care.
- According to a consumer satisfaction survey (NDPC 2009), NHIS beneficiaries are more satisfied with their quality of care than those who are not registered with NHIS.

Health Outcomes

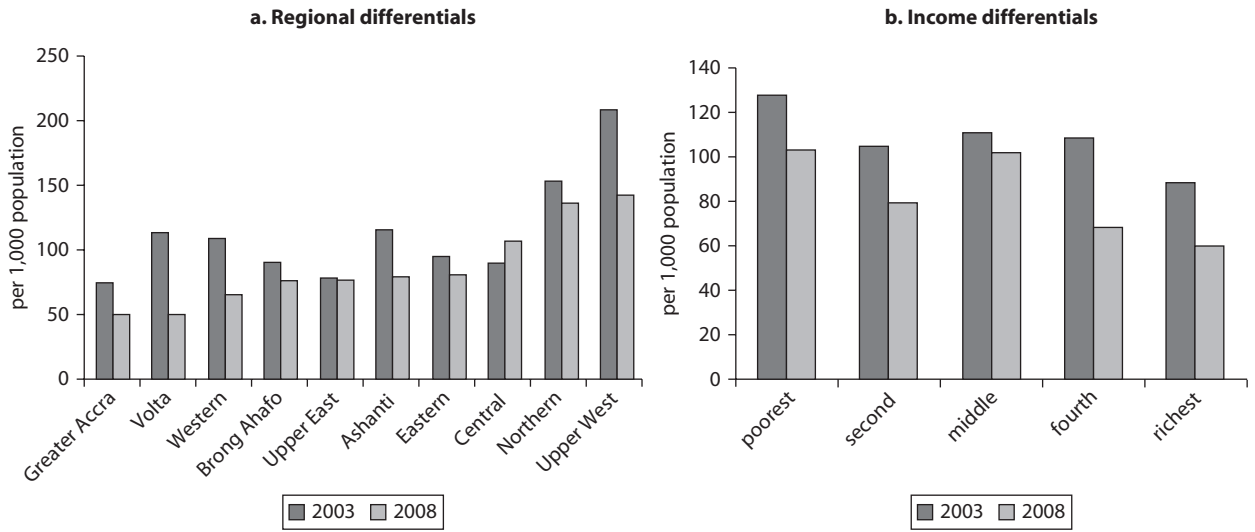
Status on Meeting the Millennium Development Goals for Health

Of the four health-related Millennium Development Goals (MDGs), most are unlikely to be met. Child nutrition is partly on track. Although child health has improved significantly, it is still not on track. In addition, two health-related MDGs are not likely to be achieved (maternal health and communicable disease control) by 2015. There is a particular need to address the latter. During the economic crises (1998–2003), Ghana was off track in meeting its MDG targets. However, from 2003 to 2008 it saw remarkable progress. If these efforts are accelerated and sustained, Ghana is likely to meet some of the MDG targets in health.

Ghana is less likely to meet its child mortality targets. The child mortality rate for those under age five is at 80 per 1,000 live births (2008); that declined from 111 (2003). Neonatal deaths are 60 percent of all infant deaths. To reach the child mortality MDG target (of 53, 2015), an accelerated effort is required to target cost-effective interventions and focus on neonatal age groups, the poor, and underserved regions, such as the north. The vulnerability of children goes beyond income profile, and living environment also influences their health outcomes (for example, access to sanitary conditions remains poor in the country). The recent momentum evident in under age five mortality, after 2003, suggests a greater likelihood for Ghana to meet MDG targets by 2015. See figure 4.1.

Ghana is highly likely to meet child nutrition targets (MDG target 1B). The proportion of children under age five reported to be underweight has declined from 23 percent (1988) to 14 percent (2008). The target for 2015 is 11 percent. Rural areas report a higher proportion of underweight children compared with urban areas (16 percent and

Figure 4.1 Ghana: Trends in under Age Five Mortality by Region and Income Profile, 2003–08



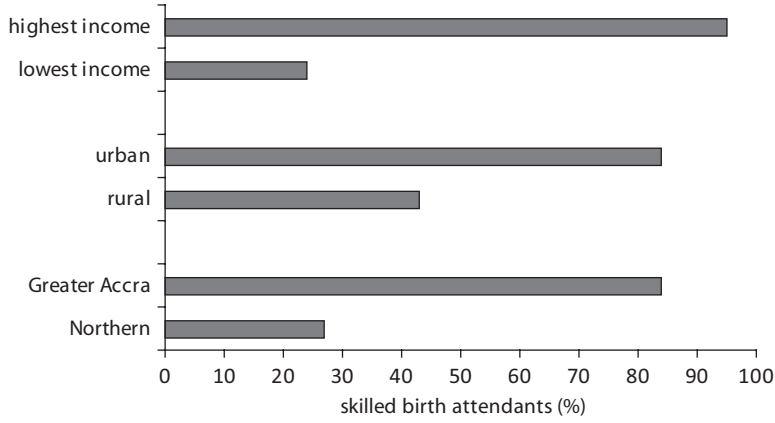
Source: Ghana Statistical Service 2009a.

11 percent, respectively, 2008). Breastfeeding is universal in Ghana, but the percentage of newborns given breast milk within the first hour of birth is low (52 percent, 2008). A special effort is required to reach those suffering from poor nutrition, including the poor, rural areas, and northern regions.

The situation is not the same for maternal mortality, which has been off track for some time. The maternal mortality ratio (MMR) was above 600 (ranging between 610 and 720 in 1990) per 100,000 live births, but it went down by 40 percent in the past two decades (ranging between 350 and 451 in 2008). However, this is too slow for Ghana to meet its MDG targets (160, 2015). Skilled delivery is 59 percent nationally; and yet wide disparities exist by region, rural–urban areas, and income profiles. The Northern region reported the lowest proportion of delivery by skilled attendants (27 percent): rural areas (43 percent) reported lower rates than urban areas (84 percent); and the lowest wealth quintile (24 percent) reported rates significantly lower than the highest wealth quintile (95 percent) (2008). See figures 4.2 and 4.3.

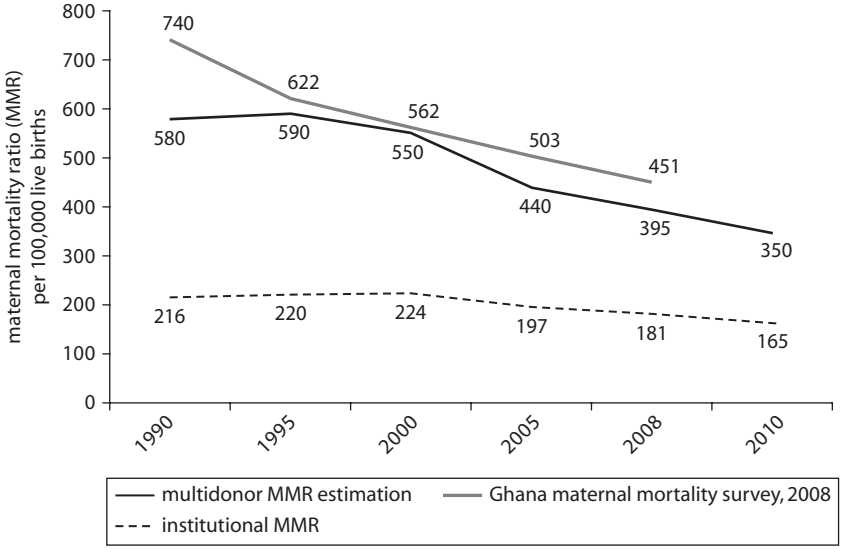
The reduction in prevalence of communicable diseases is inconsistent; MDG targets for communicable diseases, such as tuberculosis (TB), malaria, and HIV/AIDS, have mixed results. HIV/AIDS prevalence has declined and is among the lowest in Sub-Saharan Africa. The incidence of malaria remains high. The prevalence of TB has not shown significant progress to meet MDG targets.

Figure 4.2 Ghana: Skilled Birth Attendants by Region and Income Profile, 2008



Source: Ghana Statistical Service 2009a.

Figure 4.3 Ghana: Trends in Maternal Mortality and Achieving MDG, 1990–2010



Sources: WHO 2012b; MOH 2011c; *Ghana's Health Sector Review Report* (2009) and *Centre for Health Information Management* (MOH 2008), cited in NDPC/UNDP 2010.

Health Status in Comparison to Other Countries

Ghana has come a long way in improving health outcomes. It performs reasonably well when compared with other Sub-Saharan African countries. In 1990, Ghana started with better health outcomes than its neighbors. It still does. However, proportionately, over the past 20 years, the decline in mortality has not been as positive as that of some of its neighbors. See table 4.1 and figure 4.4.

However, on a global level, when its health outcomes are compared with other countries with similar incomes[1] and health spending levels, its performance is more mixed. For example, Ghana's health outcomes for child health and maternal health are worse than those of other countries with comparable incomes and health care spending, but life expectancy is better in Ghana. See figure 4.5.

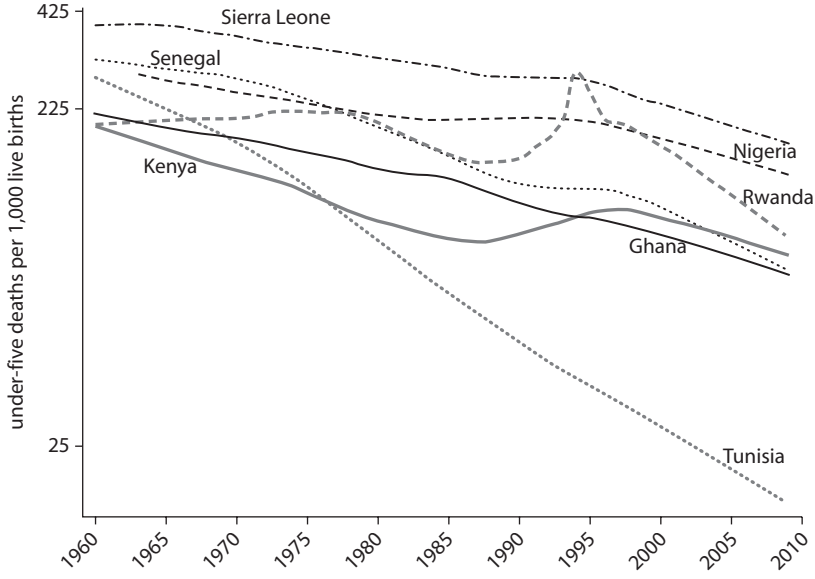
Ghana's life expectancy at birth is 62 years (2005–10), which on average is better than countries with similar incomes. The life expectancy is also an indication of the high risk that children face of not surviving beyond their fifth year. Ghana's life expectancy at birth is better than that of other countries with comparable income and health spending. See figure 4.6.

Table 4.1 Health, Nutrition, and Population Outcomes for Comparable Countries, 2008

Country	*Life expectancy at birth*	*Under age 5 mortality (per 1,000 live births)*	*Maternal mortality (per 100,000 live births)*	*Total fertility rate*	*Malnutrition prevalence, weight for age (% of children under age 5)*	*Total HIV prevalence (% of population ages 15–49)*
Ghana	57	80	451	4.0	14 (2008)	1.8
Neighboring countries in West Africa						
Burkina Faso	53	169	560	5.9	26 (2009)	1.2
Côte d'Ivoire	57	121	470	4.6	17 (2006)	3.7
Togo	63	100	350	4.3	22 (2006)	3.2
Senegal	56	95	410	4.8	15 (2005)	0.8
Countries with comparable historical background						
Kenya	54	86	530	4.9	16 (2009)	6.3
Tanzania	56	111	790	5.6	17 (2005)	5.8
Uganda	53	130	430	6.3	16 (2006)	6.4
Nigeria	48	143	840	5.7	27 (2008)	3.6
Sierra Leone	48	198	970	5.2	21 (2008)	1.6
Rwanda	50	117	540	5.4	18 (2005)	2.9
Countries with comparable Human Development Index						
Bangladesh	66	55	340	2.3	41 (2007)	0.1
Haiti	61	89	300	3.5	19 (2006)	2.0
Nepal	67	51	380	2.9	39 (2006)	0.4
Tunisia	74	21	60	2.0	3.3 (2006)	0.1

Sources: Data from Ghana Statistical Service 2009a; World Bank's World Development Indicators; Ghana Health Service 2010; UNDP 2010.

Figure 4.4 Under Age Five Mortality Rate, Ghana and Select Neighbors, 1960–2009



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators and WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.
Note: y-axis log scale.

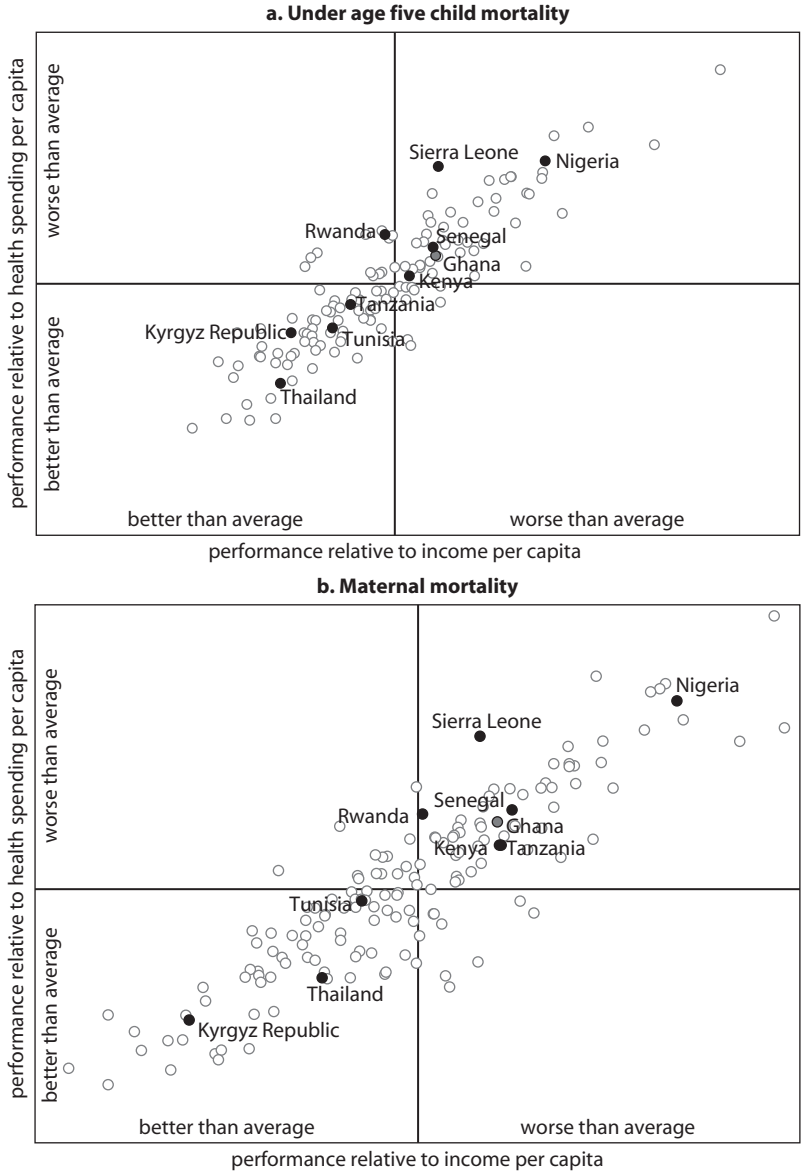
Health Outputs

Child Health

Ghana has invested in several cost-effective interventions to improve health for children under age five and to reduce child mortality. Interventions include the Expanded Program of Immunization, promotion of breastfeeding and appropriate weaning, malaria prevention and control, and acute respiratory infection control, among others. Although child health outcomes improved overall, they remain below average (relative to other LMICs); the results of many of these interventions were mixed.

Coverage of some services is quite high, whereas that of others is low. Among children aged 12–23 months, full immunization coverage has increased and was at 79 percent in 2008. However, only 70 percent of infants under one year of age received their vaccinations in the first 12 months of life. Neonatal mortality is a high 60 percent of the total infant mortality rate (50 per 1,000 live births in 2008). Of primary

Figure 4.5 Global Comparisons of Health Outcomes Relative to Incomes and Health Spending, 2009



Sources: Schieber and others 2012; data from the World Bank's World Development Indicators and WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.

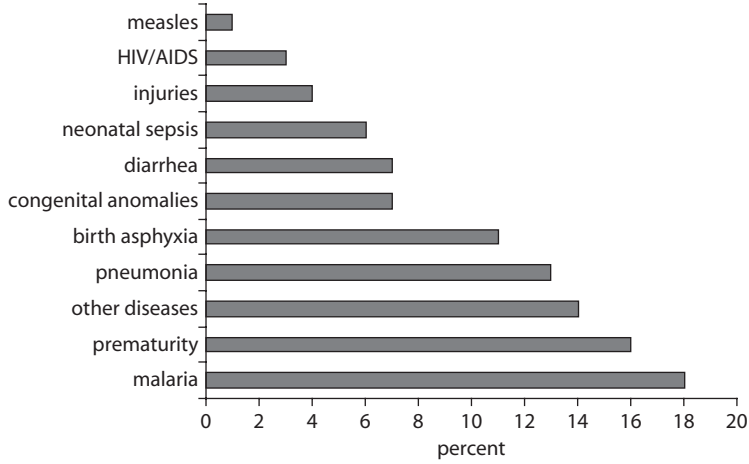
Figure 4.6 Life Expectancy at Birth, International Comparison, 2009

Sources: Schieber and others 2012; data from the World Bank's World Development Indicators and WHO National Health Accounts database, http://apps.who.int/nha/database/StandardReport.aspx?ID=REP_WEB_MINI_TEMPLATE_WEB_VERSION&COUNTRYKEY=84639.
Note: Both axes are log scale.

concern is that many births do not take place at institutions. Therefore, many infants do not get appropriate care in the early years of their lives. Although 82 percent of infants below two months of age are breastfed exclusively, only 63 percent are exclusively breastfed until six months of age. Only 86 percent of infants have been weaned by 9–11 months of age. In contrast, the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend weaning by six months of age. Knowledge and experience with what constitutes a weaning diet need to be scaled up to improve child nutrition.

Child health interventions have accelerated in recent times. Ghana adopted the integrated management of childhood illnesses strategy in 1998 and expanded it to include the Roll Back Malaria (RBM) program in 2001. This was a critical step to address malaria, which ranks as the number one cause of death among children under five years of age. See figure 4.7. The new child health policy and strategy was launched in 2010. It emphasizes community-based interventions and facility-level care to scale up integrated management of childhood and newborn illnesses. Given that at least 60 percent of infant mortality is among neonates (first

Figure 4.7 Ghana: Causes of Death among Children under the Age of Five, 2010



Source: WHO 2012a.

month of life), this engagement is critical. Further, the programs are building community-health interventions by advancing the agenda for strengthening Community-based Health Planning and Services (CHPS); the goal is to scale up home-based detection, management, and care (including prevention and first-aid management of diarrheal disease and malaria). However, the shortage of community health nurses needs to be addressed before this program can be scaled up. Some of the CHPS curative care interventions for NHIS beneficiaries are reimbursed; however, prevention and promotion care programs will need more sustainable financing.

Ghana faces a dual burden regarding the nutrition status of children under five years of age. On one hand, 28 percent of children under age five are stunted, 9 percent are wasted, and 5 percent are obese (Ghana Statistical Service 2009a). Stunting has been observed among children above 18 months old; wasting is more common among children under the age of one. Obesity is higher among children from wealthier families and those living in urban areas.

Childhood anemia continues to be a problem. Seventy-eight percent of children (age 6 to 59 months) had some level of anemia (Ghana Statistical Service 2009a); however, 56 percent of these children received vitamin A supplements, and 28 percent received iron supplements.

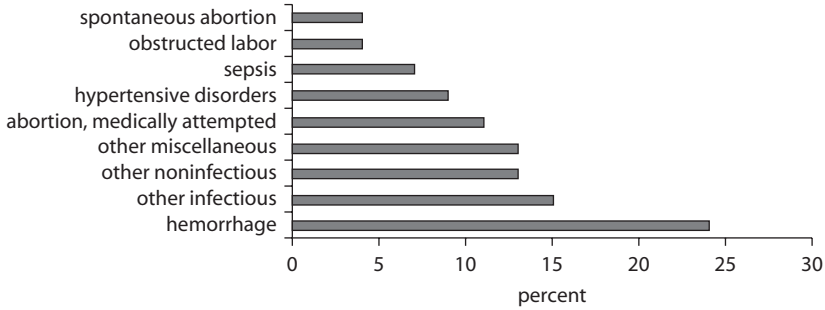
Several interventions have addressed malnutrition among children with lackluster results. The health sector supported several programs, including child welfare clinics that targeted high-risk children. They included a safe

motherhood program that promoted breastfeeding, deworming, and addressing micronutrient deficiencies; infant and young child feeding programs; and school feeding programs supported by the Ministry of Education. A multisectoral strategy under the Ghana Growth and Poverty Reduction Strategy (GPRS) II (2006–09) was developed to address malnutrition (NDPC 2005). Despite these efforts, the results are not that promising. Malnutrition and anemia are still highly prevalent among children. Greater effort is required to address this lack of progress and to explore programmatic challenges, including cross-sectoral collaboration and coordination, the promotion of long-term sustainable interventions, such as behavioral change communication, and scaling up community-based interventions. The problem of obesity will need to be addressed in the early stages with activities to create awareness and prevention.

Maternal Health

The focus on maternal health has been delayed—with dire consequences. Ghana's MMR is high, a consequence of low institutional delivery (57 percent, 2008), low medically assisted delivery (59 percent, 2008), infrequent postnatal care (67 percent within 48 hours of delivery, 2008), and poor quality care. Among the primary causes of maternal death are hemorrhage (17 percent, 2010) and severe pre-eclampsia or eclampsia (16 percent, 2010). Twenty-nine percent (2010) of the MMR is estimated to be the result of indirect causes, such as malaria and severe anemia (MOH 2011b). Eleven percent of the MMR is expected to be the result of unsafe induced abortion (2007) (Guttmacher Institute 2010). See figure 4.8.

Figure 4.8 Ghana: Causes of Maternal Deaths, 2007



Source: Ghana Statistical Service 2009b.

Anemia continues to be a problem among women. Fifty-nine percent of women (15–49 years) have had some level of anemia. Anemia correlates with premature delivery and low birth weight, and it continues to be a problem among women. Sixty percent of postpartum women with children under age five had received vitamin A supplements, 87 percent of women took iron supplements during pregnancy, and 35 percent took deworming medications (Ghana Statistical Service 2009a).

Women in Ghana are not at high risk for malnutrition. This indicates they generally have a balanced diet, although 30 percent of them are classified as overweight (Ghana Statistical Service 2009a). This is a growing concern, given the other health problems associated with obesity, such as diabetes and hypertension. These too can lead to pregnancy-related complications. Obesity can be easily controlled with diet and physical activity, both cost-effective interventions. In developed countries, obesity-related illnesses can consume up to 5–10 percent of total health spending.

At least 7 percent of pregnancies in Ghana result in abortions (2007). A higher incidence of abortion exists among urban women (21 per 1,000 women) and women between 20 and 24 years (34 per 1,000 women). Although abortion is more likely among urban and educated women instead of rural and poor women, it can have dire consequences for the underserved. The latter do not have access to appropriate care or they have limited information. NHIS does not cover abortions, which can be expensive (3–30 cedis or $9–90 in 2000 for a hospital or private clinic abortion; Guttmacher Institute 2010), but it does cover post-abortion services. This imbalance puts women from poorer households at higher risk; they must resort to traditional or nonmodern methods. The proportion of physician-attended abortions has increased over time (57 percent in Ghana in 2007 versus 19 percent in southern Ghana in 1997–98);[2] nevertheless, among those who had difficulties after abortion, at least 41 percent did not seek treatment.

The incidence of caesarean section is considered low. WHO recommends that countries offering appropriate care would have a rate of caesarean section of about 5–15 percent of deliveries. However, on average Ghana reports a rate of 4 percent. Wide disparity is found by region; the northern regions report the lowest rate, less than 2 percent (MOH 2011b).

Reproductive health interventions are inching forward. In 1985, abortions became legal; they are permissible under specific circumstances, such as rape or health risk to the mother or child. In 1995, the safe motherhood initiative was launched. In 2003, a comprehensive reproductive health policy was developed that includes screening for reproductive-related

cancers and prevention and management of safe abortions. However, little effort has been made to include the prevention of chronic illnesses under the primary health care program. To date, the focus has remained on MDG-related issues. In 2007, a consortium of international and domestic organizations launched a program to reduce maternal morbidity and mortality, particularly those caused by unsafe abortion. In 2008, a strategy to improve skilled delivery led to free maternal health care under NHIS. These free services include treatment of cervical and breast cancer. However, the program was unable to address a critical need for family planning commodities. This remains a problem today, a problem that cries out for a solution. Ghana has recently developed a maternal MDG acceleration strategy and is seeking financing to accelerate these efforts. The strategy focuses on institutional delivery, reducing unmet needs, and improving access to emergency obstetric and neonatal care facilities by improving access to skilled health workers (HWs) and medical equipment.

The prevalence rate for contraception (24 percent, 2008) is stagnant. The need is high and remains unmet, especially the spacing of births (unmet overall, 35 percent; for birth spacing, 23 percent, 2008). This situation has not changed much since 2003 and is higher than Sub-Saharan African averages (22 percent, 2008) (Singh and others 2009). Seventeen percent of currently married women use contraception. Injectables (6 percent) are the most popular; the birth control pill (5 percent) is next. Just 2 percent of men use condoms. Knowledge of "at least one contraceptive" is universal in Ghana; however, a disparity exists when it comes to using them: few poor (12 percent) and few married women from the Northern region (6 percent) used contraceptives. There is a need to get a better grasp of the reasons for this low usage. Not many HWs (23 percent, 2008) discussed family planning options with their clients. Fieldworkers in the northern regions were more likely to discuss family planning with their clients than elsewhere. The poor were also more likely to hear about family planning options from field workers than the nonpoor (the latter subgroup mostly reside in urban areas; they do not benefit from field workers because they primarily use health facilities). Past strategies enhanced information education communication campaigns and resulted in universal knowledge on issues of breastfeeding, family planning, and others. However, practice of that knowledge is low. Recent strategies are advocating for behavioral change communication strategies.

The family planning program in Ghana is part of the reproductive health program. HWs are trained to counsel women on family planning.

Public facilities are expected to keep stocks of family planning commodities. The public sector does not provide free family planning commodities, although public facilities may subsidize them. Family planning services (but not commodities) are provided at no additional cost to NHIS beneficiaries. The public sector does not allocate sufficient resources to purchase family planning commodities. Contraceptives are mostly procured through external financing or by the private sector. The marketplace is short on supplies, and the private sector has responded to these unmet needs by covering about 51 percent of market share (2008). However, private sector prices are not regulated, and the public sector has not addressed price issues. Households pay out of pocket (OOP), while several have financial constraints in accessing or purchasing family planning commodities. NHIS and the Ministry of Health (MOH) are looking at the feasibility of including family planning commodities within their benefit package in addition to services. The NHIS benefit package needs further review and a push to include more cost-effective interventions such as this. Policies have not addressed demand or the lack of awareness. Fewer couples were exposed to contraceptive messages in 2008 than in 2003 (Ghana Statistical Service 2009a). Given an increase in high-risk behaviors among youth, a need is seen to offer a more comprehensive program that addresses these behaviors, offers choices, and promotes the use of condoms.

Communicable Diseases

A high proportion of morbidity and mortality may be attributed to communicable diseases, which are preventable in a very cost-effective manner. Cost-effective interventions exist to control some key communicable diseases: malaria, TB, and HIV/AIDS. However, these efforts have to expand.

Malaria is among the leading causes of morbidity in Ghana; the incidence is 47 per 100,000 population (2008). About 38 percent of Ghana's population lives in malaria-endemic areas. Pregnant women and children are highly susceptible. A high incidence of malaria is reported among children under age five; as many as 58 percent of hospital admissions and 44 percent of outpatient visits are for malaria treatment. Malaria continues to be one of the leading causes of morbidity and mortality in Ghana.

Activities to prevent malaria have resulted in increased ownership of long-life insecticide-treated nets (ITNs; that is, bed nets; use was 4 percent in 2003 versus 43 percent in 2008). Malaria preventive programs are considered pro-poor: more rural (38 percent) and more lower-income (36 percent) groups have at least one ITN. However, compliance is low.

Just 28 percent of children under the age of five and 20 percent of pregnant women slept under ITN mosquito nets (2008). Overall, ITN compliance has been a specific challenge. Various strategies to change behavior are undergoing experimentation; one of them has introduced vouchers to four regions. The effectiveness of this intervention has yet to be determined.

Malaria intervention programs have expanded since mid-2000, but they have faced significant challenges. In 1999, the RBM initiative was adopted, and the National Malaria Control Program developed. Nationwide implementation began in 2005. As part of the Abuja Accord (2000), Ghana committed to promote multiple preventive activities, including ITNs, prevention of malaria in pregnancy, improved diagnostics and case management, and environmental management. In 2004, Ghana adopted an intermittent preventive treatment policy for pregnant women (IPTp), which uses three doses of sulfadoxine-pyrimethamine. In 2006, ITNs were scaled up with the assistance of the U.K. Department for International Development and UNICEF. Three years later, artemisinin-based combination therapies (ACTs) were added to the Essential Medicines List as a first-line treatment for uncomplicated malaria. NHIS covers the cost of complicated malaria treatment drugs. However, the sustainability of many of these preventive activities, such as the ITNs, is a cause for concern. All of the funding for ITNs comes from external partners (Global Fund, UNICEF, U.S. Agency for International Development, and the government of Japan); little or no domestic financing supports this effort.

To supply ITNs to women and children, the public sector uses community distribution networks and health facilities, such as antenatal clinics and immunization campaigns. Indoor residual spraying is conducted by the public sector and through partnerships with the private sector. Both public and private providers offer intermittent preventive treatment IPTp to pregnant women at antenatal clinics and ACT to children under the age of five when they are diagnosed with fever. Access to malaria treatment drugs is widespread; these drugs are available from the public sector as well as from licensed private drug sellers. HWs are trained in home-based malaria case management and clinic-based malaria diagnosis. However, the quality of malaria diagnosis needs to be improved at both the health facility and community levels.

The prevalence of TB has changed little over time; scaling up of interventions is direly needed. TB prevalence is reported at 329 per 100,000 population (2008), which is little significant change in more than a decade (1996). TB cure rates have increased from 61 percent (2003) to 79 percent

(2008), but regional variations exist. TB detection rates, reported at 31 percent (2009), have been more difficult to achieve (WHO 2009). Awareness of TB among adults is high; stigmas associated with it are low. Many adults (72–78 percent) knew that TB is spread through the air; fewer adults (about 30 percent) reported they would keep a family member's TB status a secret (Ghana Statistical Service 2009a).

In 1994, the National Tuberculosis Control Program went into effect, based on WHO's Directly Observed Treatment Short course (DOTS) strategy. The DOTS strategy depends on political commitment with increased and sustainable financing, early diagnosis, standardized supervised treatment, an uninterrupted drug supply, plus monitoring and evaluation. Emphasis has been on strengthening the capacity of health personnel to improve the management and treatment of TB. In addition, the government collaborated with WHO in adopting the Stop TB Strategy. The goal is to reduce the burden of TB and cut in half the number of deaths from TB by 2015. To achieve that objective, more strategic and community-based interventions may be needed to scale up household use of TB services.

The prevalence of HIV/AIDS in Ghana is among the lowest in the Sub-Saharan African region, so targeted interventions of high-risk and vulnerable populations are now required. HIV/AIDS prevalence is at 18 per 1,000 population and has shown a steady decline in the past five years. The global prevalence rate is 8 per 1,000 population, and the Sub-Saharan African regional average is 47 per 1,000 population (2008). Despite national trends, death caused by HIV/AIDS-related conditions is among the top five causes nationwide among adults aged 15–49 years. In 2007, it is estimated that 21,000 deaths among adults and children resulted from AIDS (WHO 2008).

The need for geographic targeting is critical. Although national HIV prevalence shows an overall decline from 2.2 percent (2003) to 1.71 percent (2008), geographical differentials exist. Prevalence in urban areas (2.1 percent) is estimated to be higher than in rural areas (1.5 percent). Regional variations also exist: the Eastern region (4.2 percent) reports rates that are four times higher than the Northern region (1.1 percent). District variations are worse: Agormanya (8 percent) and Fanteakwa (4.6 percent) in the Eastern region are among the worst, followed by Korle Bu (3.8 percent) in Greater Accra, Sefwi Asafo (3.8 percent) in the Western region, and Amansie West (3.7 percent) and Kumasi (3.6 percent) in the Ashanti region.

There is a critical need to target vulnerable groups. Overall, approximately 236,151 adults (58 percent female) and children are living with

HIV. Experts believe that the rate is much higher among female sex workers (30–50 percent), men having sex with men (25 percent), and their clients and partners. The prevalence of HIV among antenatal care clinic attendees (15–24 years), which is a marker for new cases, has remained stable at 1.9 percent (2005, 2008), but this rate remains above the national average.

Programmatic targeting is critically needed. Awareness of where to go for an HIV test was generally modest (70–75 percent, 2008). People in the Northern region had the least information; the same was true of those among the lowest wealth quintile. Only 50 percent of women received counseling during antenatal clinics. Women in the lowest wealth quintile (30 percent) and the Northern region (38 percent) received the least counseling. Only 8 percent of sexually active youth (15–24 years) were tested for HIV. HIV/AIDS general interventions have been effective, but now they need to target the vulnerable.

Although the prevalence is declining, many are still engaging in high-risk behaviors without taking preventive action. Although awareness of HIV/AIDS is good, comprehensive knowledge is low, and risky practices are evident (Ghana Statistical Service 2009a). Support of behavioral change initiatives is an urgent need. Evidence suggests that youth in particular need to be targeted. Their use of contraceptives during intercourse is low, and high-risk intercourse is on the increase. Activities to prevent mother-to-child transmission are low and require special attention. A stigma exists for those living with HIV/AIDS, which raises concern for their care.

Ghana Health Services, together with the National AIDS Control Program, has taken the lead on dealing with the health-related effects of AIDS. Ghana's AIDS Commission, established in 2000, coordinates all public and private sector stakeholders in combating this epidemic.[3] Among the top priorities are the prevention of new infections by promoting safe sex (behavior change communication), condom use, sexually transmitted disease care and prevention, blood safety, and infection control. Another subset of activities focuses on HIV/AIDS management (care for people living with AIDS) and integration of voluntary counseling and testing (VCT) and pregnant mother-to-child transmission (PMTCT).[4]

The following interventions grew out of two rollouts of the HIV/AIDS Strategic Framework (2001–05, 2006–09): (a) intensify behavior change strategies, especially for high-risk groups, (b) prevent mother-to-child transmission, (c) promote safe sex practices, (d) improve access to VCT and integrated youth services, and (e) promote strategies to reduce the stigma and discrimination against people living with HIV/AIDS.

Substantial service and funding gaps exist to provide treatment of PMTCT. New guidelines on PMTCT introduced by WHO recommend lifelong antiretroviral treatment for all pregnant women with a serious or advanced disease or with a CD4 count at or below 350.[5] The revision of national treatment targets will create significant service and funding gaps over the next two years. In 2003, a Support Treatment and Antiretroviral Therapy program began in three regions; the goal was to provide antiretroviral drugs complemented by VCT and community sensitization.[6] It is critical to scale up comprehensive care for people living with HIV/AIDS, including antiretroviral therapy for all who need it. Statistics indicate that almost 90 percent of the cumulative AIDS cases occur between the ages of 15–49 years despite the high rate of HIV/AIDS awareness among the populace (about 98 percent of women and 99 percent of men are aware of the disease) because of the intensification of prevention programs.

The need for antiretrovirals (ARVs) among adults will continue to rise. By 2012 forecasts indicate that the number of HIV-positive pregnant women receiving ARV therapy will increase 10 times and result in a $10 million funding gap. Although new infections among the 15–49 age groups are expected to remain relatively stable over the next six years, the need for ARVs among adults will continue to rise due to incremental increases in the number of adults receiving ARVs during the same period. New HIV infections among children aged 0–14 years are also expected to decline; however over this same period, the demand for ARVs by this age group will increase by 12 percent (from 15,159 cases to 17,271 cases).

Health Promotion and Prevention

To improve the effectiveness of the various interventions and to scale up its coverage, several supply-side and demand-side options could be considered. One is to consider scaling up the prevention and health promotion programs. Some of these are already covered by MOH and could be scaled up in their coverage, while others more in the nature of personal prevention, promotion, and screening programs could be integrated into the NHIS programs, and appropriate incentives adopted to scale up these interventions. Some preventive programs could be included within the primary health care program under a per capitation provider payment mechanism, while other preventive programs with lower demands, such as cancer screening, could be promoted through a reimbursement payment mechanism. Thailand has a mixed financing of health promotion and preventive programs, which helped scale up the programs in the country (Srithamrongsawat and others 2010). See table 4.2.

Table 4.2 Options to Improve Health Promotion and Prevention Programs for Communicable and Noncommunicable Diseases

Diseases	*Supply-side intervention options*	*Demand-side intervention options*
Communicable disease (CD) control	MOH retains financing and scales up delivery of public promotion and prevention programs for CD control	NHIS offers performance-based provider payment mechanisms that include personal promotion and preventive and cost-effective interventions for CD control.
	Improve diagnostic skills	MOH retains financing for public promotion and prevention programs for CD control, but NHIS offers incentives to providers to deliver services horizontally; that is, more of an emphasis on personal promotion and preventive services instead of curative care.
	Include the need for basic diagnostics, laboratories, drugs	MOH pools its financing with NHIS and covers some CD control interventions under the NHIS benefits package, such as family planning contraceptives added within the EML and the NHIS benefits package, and other personal promotion and preventive goods and services that benefit the society at large.
	Improve surveillance system and monitoring and evaluation	Consumers (especially the poor) are eligible for conditional cash transfers that offer them an incentive to avail themselves of certain services (such as maternal and child care) early in life.
Noncommunicable disease (NCD) control	Offer within the PHC package of services the personal promotion, prevention, and screening of NCDs; appropriate staff skills, equipment, laboratories, drugs	Add "sin tax" for tobacco, alcohol, road, and the like
	Coordinate on multisectoral programs, such as food fortification	NHIS offers within its benefits package personal promotion, prevention, and screening of NCDs, plus maintenance drugs for specific chronic and nonchronic diseases that have been identified in that country's disease profile.
		NHIS offers performance-based provider payment mechanisms that include personal promotion and preventive and cost-effective interventions for NCDs.
		Offer programs to bring about a change in behaviors to reduce smoking, improve nutrition, and other lifestyle changes.

Source: World Bank staff.
Note: EML = Essential Medicines List; PHC = primary health care.

Noncommunicable Disease

A National Health Policy (2007) exists to prevent and control communicable diseases (CDs) and noncommunicable diseases (NCDs). The Regenerative Health and Nutrition Program developed under the 2007–11 Program of Work (MOH 2007) addresses some of the lifestyle and nutritional issues causing NCDs. It emphasizes healthy lifestyles through diet, exercise, rest, and environmental cleanliness. Preventing NCDs requires individual behavior changes to improve diet and physical activity; it also requires government investment in education, food policy, and living environments. Unfortunately, a comprehensive strategy to control NCDs is lacking along with sustainable financing. Treatment of NCDs is expensive. Now is the time to introduce NCD prevention and control programs. Otherwise, the country will face high expenditures to treat NCDs. Ghana's NHIS benefits package includes treatment of several (but not all) NCDs. See box 4.1.

Box 4.1

Country's Capacity to Address and Respond to Noncommunicable Diseases

Is there a unit, branch, or department in MOH with responsibility for NCDs?	Yes
Is there funding available for	
Cardiovascular diseases?	No
NCD treatment and control?	Yes
Cancer (with some exceptions)?	No
NCD prevention and health promotion?	Yes
Chronic respiratory diseases?	No
NCD surveillance, monitoring, and evaluation?	Yes
Diabetes?	No
Alcohol?	No
Does the national health reporting system include	
Unhealthy diet, overweight, and obesity?	Yes
NCD cause-specific mortality?	Yes
Physical inactivity?	Yes

(continued next page)

Box 4.1 *(continued)*

NCD morbidity?	Yes
Tobacco?	No
NCD risk factors?	Yes
A national, population-based cancer registry?	No

Source: WHO 2011.

The prevention of NCDs is inadequate. Access to services to control CDs has been a challenge. Similarly, access to services for NCD control has been sparse. Access to NCD treatment is difficult because it is offered at few urban tertiary hospitals. The population affected by NCDs tends to live in urban areas. The quality of services for CDs varies, as will be illustrated later in the book. The quality of services for NCDs has yet to be assessed. It will be important for Ghana to understand the quality of services offered at clinics and particularly hospitals, as well as at district levels. Districts are responsible for providing and monitoring public health activities. Furthermore, the use of CD health services based on income and region is well documented; however, the use of NCD (chronic and nonchronic) health services is not well documented. A need is also seen to have a better understanding of the patterns and use of services for catastrophic illness. Ghana does not have a comprehensive surveillance system for NCDs or their risk. The country could benefit from a nationwide STEPS survey[7] to establish a baseline and an improved health information system to monitor the situation.

The NCD implementation strategy is weak, and no clear implementation strategy is in place. Furthermore, districts have expended little effort to extend the program to the prevention and control of NCDs. Guidelines to establish screening and proper management of NCDs have not been decentralized at the district and subdistrict levels. All adults 18 years of age and older who visit a health facility are required to have their blood pressure taken. Ad hoc screening for blood pressure, body mass index screening, and breast examinations are conducted by nongovernment organizations and churches during important festivals or public holidays. Health education about NCDs is generally weak and mostly tied to other programs such as malaria, TB, HIV/AIDS, and polio. Further, systematic screenings for cancer have yet to be established. Breast cancer screenings are limited to

two teaching hospitals. Cervical cancer screenings are available from some private health institutions; however, they are expensive. Accessibility is only for those who can afford it. All cancer treatments are not covered under the NHIS benefits package; cervical and breast cancers are the exceptions.

Efficiency

Ghana's health system has several well-known structural inefficiencies that likely consume a large share of its resources. Addressing these inefficiencies will free up additional fiscal space in the system and increase the absorptive capacity for future resources. Here are just a few of the most serious inefficiencies that offer the greatest potential for freeing up additional fiscal space for health.

Some mechanisms used by the Ghana health system could be reviewed to see if further allocative efficiency could be gained. For example, health service financing is fragmented between MOH and NHIS: MOH finances preventive services, NHIS curative services. NHIS's benefits package offers an incentive for providers to increase the number of curative services, so a tendency is seen among providers to focus on the NHIS package of services. Budgeting of preventive services, on the other hand, requires few expectations about results. The need for services is great. Fertility rates are also high. Both affect the lower-income groups disproportionately. If the financing of preventive and curative care were pooled (or at least better coordinated) or preventive services promoted with appropriate incentives, the population would benefit.

The NHIS benefits package covers more than 90 percent of Ghana's burden of disease. However, the coverage is mainly for expensive curative services. The system offers few incentives for providers or patients to use preventive care. Paying for preventive services (such as screening for chronic diseases), family planning,[8] and possibly even nonmedical prevention such as ITN bed nets for malaria could generate future savings by reducing the need for more expensive services and medications (Smith and Fairbank 2008).

Few public facilities have initiated programs to prevent and control NCDs. NCD treatment is expensive; a need is seen to introduce NCD prevention and control programs now so that later the country does not face high expenditures for these treatments. Ghana has included treatment of several (but not all) NCDs within the NHIS benefits package. Financing a comprehensive NCD control and prevention program has not been addressed.

NHIS provider payment systems could also enhance efficiency. NHIS pays hospitals a flat rate for outpatient services, depending on the diagnosis (Ghana diagnostic-related group [G-DRG]). Although the G-DRG payment system represents an improvement over the previous traditional fee-for-service (FFS) payment system, there is no cap on claims. Payment to providers is open-ended. Moreover, diagnostic related groups (DRGs) are still an FFS system. Fortunately, the bundling of services reduces providers' ability to game the system. Nevertheless, utilization and total claims have continued to increase at unsustainable rates. No mechanism is in place to ensure that the funding is allocated in the most cost-effective way. The G-DRG payment system also contributes to inefficiency and overuse of services, some of which are easily corrected. For example, the "maximum" payment of three visits for complicated malaria has become a minimum.

Furthermore, payment systems such as capitation that encourage and reward prevention may generate immediate savings by limiting total expenditures. Capitation might also bring about a structural shift in expenditure patterns over the long term. A pilot is being planned for the Ashanti region to test capitated payments for primary care.

Discussions about better enforcement of a gate-keeping system are also under way. It is critical, however, for NHIS to have a comprehensive purchasing and provider payment strategy that creates incentives to improve quality and use services in a cost-effective way.

Medicine use patterns and price reductions could also lead to gains in efficiency. Pharmaceuticals account for some 40 percent of NHIS spending, and NHIS accounts for about 44 percent of total pharmaceutical spending (Seiter 2011). Prices and spending are a major concern; so too are quality, prescribing patterns, fraud and abuse, and most critically patient health outcomes. Furthermore, bundling of services and drugs under G-DRG could result in cost efficiencies.

Delays in NHIS claims processing could be reduced. Delays in claims processing have become a major source of inefficiency within NHIS. NHIS can have a backlog of several months of unprocessed claims. Payment delays create enormous inefficiencies for providers who do not have a reliable flow of funds to operate their facilities. Providers who run short of essential supplies and medicines are forced to buy them on credit or charge patients directly. Payment delays also dilute incentives associated with provider payment systems. Claims processing bottlenecks also create inefficiencies for NHIS; monitoring expenditure flows is difficult and makes it hard to get an accurate picture of the cost of operating the system.

Health facility use has grown over time, especially after the introduction of NHIS (2005). Overall, hospitals are running more efficiently, but improvements at lower-level facilities could increase efficiency. Hospital bed occupancy rates (BORs) in Ghana grew from 44 percent in 2005 to 60 percent in 2009. The use of hospitals in the districts and regions has varied by region, given the limited capacity of skilled HWs and recurrent budget constraints. District and regional hospitals, however, had lower BORs; they averaged about 60 percent (ranging between 48 percent and 94 percent); teaching hospitals had a higher BOR, approximately 81 percent. Overall, the average length of stay (ALOS) at hospitals has declined from 4.5 days in 2005 to 3.8 days in 2009. This decline may be attributed to the introduction of the NHIS, which stipulated certain standards for ALOS based on various types of treatment. Teaching hospitals reported the highest ALOS (6.7 days), which is expected to reflect patients with tertiary level health conditions. Although efficiency indicators have improved, especially after 2006, significant opportunities still exist for further gains in the utilization of hospital beds. However, improving efficiency requires that current imbalances in service delivery are addressed. Greater gains in efficiency could come from increasing investment in lower-level facilities. See box 4.2.

Allocative and technical inefficiency is also seen in hospital spending. There are sizable differences, based on the types of facilities: teaching

Box 4.2

Efficiency in Health Service Utilization

Outpatient utilization of health services has increased, from 0.4 (1997) to 0.8 (2008) patients per year. Greater jumps in utilization were noted in 2007 and 2008.

Hospital admission rates have also increased from 30 (1997) to 40 (2007) per 1,000 population. Regions with admissions above the national average are: Central, Eastern, Upper East, and Upper West.

Statistics from government hospitals (Ghana Health Services) suggest that the hospital bed occupancy rate (BOR) has increased although not significantly. This was true of most regions, except for Upper East, which reported a decline in utilization. However, the actions of Accra-based hospitals are significant. Since 2007, Accra-based hospitals have seen a significant increase in BOR; by 2008 it was more than 80 percent. This increase represents an improvement in efficiency. But the

(continued next page)

Box 4.2 *(continued)*

sudden increase suggests a need for investigating the profile of hospital admissions because it occurred after the introduction of the FFS system.

Average length of hospital stay (ALOS), another efficiency measure, has declined from 5.0 days (2003) to 4.5 days (2008). This was the case in all government-owned regional hospitals, except in Accra, where ALOS increased from 7.5 days (2003) to 9.1 days (2008). Further investigation is necessary. What are the possible reasons for longer stays at hospitals? Is it a phenomenon of the payment mechanisms?

Source: Health Research for Action 2011.

hospitals received the largest mean budget allocation by far, district hospitals the smallest. It was found that district hospitals receive a proportionately larger resource allocation relative to their production. As a result, they have a substantially higher cost per bed or per patient day. A more detailed analysis of hospital costs and a revised criterion for budget allocations and other resources would clarify the causes behind this apparent distortion. See table 4.3.

Overall, public resources could be spent more efficiently. Many direct sector investments do not provide good value for the money; the same is true of NHIS's spending. The population is unable to access convenient health care. Patients are bypassing clinics in favor of hospitals because clinics may lack HWs and other amenities. More outpatient care consultations occur at hospitals than at clinics. This too is costly to the system; per capita costs at hospitals are higher. Inappropriate use congests the system and diverts resources from patients needing hospital care. Patients are bypassing district hospitals in favor of regional hospitals; districts may not have specialized HWs or services. Per capita spending at district hospitals is higher than at regional hospitals; district hospitals are underutilized. It also means fewer patients are able to access health care timely; travel time and costs can be considerable.

Efficiency gains could be achieved through "systemic" measures, such as (a) establishing efficient public–private partnerships with Christian Health Association of Ghana (CHAG) and the for-profit sector to ensure that available resources are used to their utmost, (b) shifting human resources to primary care at health centers and at the community level (expansion of CHPS),[9] (c) strengthening the "gatekeeper"[10] function to

Table 4.3 Ghana: Mean Features of Hospitals by Category

Type of hospital	*Number*	*Mean number of beds*	*Mean number of admissions*	*Mean patient-days*	*Mean recurrent expenditures*	*Mean expenditure per bed*	*Mean expenditure per day*
Teaching	3	935	41.700	250.723	26,432,260	28,270	105.42
Psychiatric	3	395	2.209	146.060	4,008,386	10,139	27.44
Regional	8	218	12.640	55.886	1,558,141	7,143	27.88
District	99	73	4.578	15.081	969,755	13,270	64.30
CHAG	59	102	5.474	23.113	687,790	6,720	29.76
Quasi-public	24	70	2.078	7.448	—	—	—
Muslim	4	66	3.920	32.479	—	—	—

Sources: Couttolenc 2012; data from Ghana Health Service, Bed State Report 2008, Budget 2009 (for teaching and psychiatric hospitals), and Lake and Ly 2009.
Note: CHAG = Christian Health Association of Ghana.

reduce moral hazard and the bypassing of primary health clinics,[11] and (d) identifying and securing new sources of funding for infrastructure investments in primary care. See table 4.4.

Financial Protection and Equity in Financing

Financial Protection

Ghana's population is not financially protected against illness (box 4.3). WHO has recommended a benchmark for a country that offers financial protection against the cost of illness. According to this benchmark, a country should not exceed an OOP expenditure of 15–20 percent of total health expenditures. Based on recent data, Ghana falls short of this benchmark; OOP expenditures remain at 40 percent of total health expenditures. Although not unusual for a country that has just transitioned from low-income country to LMIC status, Ghana's share is double this percentage.

On a positive note, the burden of household spending for health appears to be relatively low in Ghana, ranging between 1 and 5 percent; however, households in the poorest quintile allocate a higher share of expenditures to health care compared to the rich. See figure 4.9.

OOP expenditures on drugs can be significant for households. Many Ghanaians do not have an NHIS insurance card; therefore they still have to pay cash for all of their medicines.[12] Some wealthier individuals have private or employer-based insurance that includes a drug benefit, but a significant population of those outside NHIS is poor. It is not easy to estimate the aggregate spending for drugs for this population. Also it is

Table 4.4 Inefficiencies and Options for Improving Efficiency in the Health Delivery System in Ghana

Items	*Inefficiencies*		*Recommendation*
	Allocative	*Technical*	
Capital investment			
1 Limited cost effective interventions, such as family planning commodities relative to treatments	X		Adopt family planning commodities within the NHIS benefits package.
2 Limited investments in primary health care relative to hospitals	X		Prioritize capital investment for primary level health facilities, including CHPS.
3 Limited investments in medical equipment for primary and secondary care relative to tertiary hospitals	X		Prioritize investment in medical equipment for obstetric and neonatal care.
4 Limited coordination in planning of capital investment between public and private sectors		X	Improve coordination and public–private partnership for service delivery.
5 Limited recurrent budgets for maintenance and replacement of capital investments	X		Prepare formula for budget allocation toward maintenance and vehicle depreciation.
Health workers			
1 Inadequate skills mix of staffing		X	Set up schools and provide meritocratic scholarships.
2 Inequity in distribution of staffing across regions		X	Incentivize redistribution.
3 Low productivity, unmotivated staffing		X	Incentivize performance.
4 Concentration of staffing in urban rather than rural areas and in hospitals rather than clinics	X		Incentivize redistribution.
5 Patients bypassing clinics in favor of hospitals for PHC, thereby crowding hospitals		X	Strengthen quality of care in clinics, and revive gatekeeping process.

Medicines				
1	High prices of drugs		X	Encourage pooled procurement to benefit from economies of scale.
2	Decentralized and limited pooled procurement process		X	Set standards on pooled procurement at decentralized levels.
3	Poor quality of drugs		X	Improve regulatory capacity.
4	Poor monitoring of drug use and its effects		X	Improve regulatory capacity.
5	Improper prescribing behavior		X	Improve training and supervision.
Financing				
1	Inequity in per capita budgeting for regions or districts	X		Prepare allocation formula based on equity principles.
2	NHIS offering fee for service for drug reimbursements that results in fraud (more expensive drugs prescribed)		X	Review PPM and test some changes. Capitation pilot is under way.
3	Fragmented financing and NHIS payment mechanism that creates incentives for curative over preventive care		X	Bundle preventive and curative service, and create incentives to promote preventive care.
4	Unbundled services and drugs within G-DRG		X	Bundle services and drugs under G-DRG.
5	Delayed NHIS claims processing		X	Reduce timing at which claims are processed, or provide some prepayment or other incentive.

Source: World Bank staff.
Note: PHC = primary health care.

Box 4.3

The Three Dimensions of Universal Coverage

The three dimensions (policy choices) of universal coverage are (a) population covered, (b) services covered, and (c) financial protection.

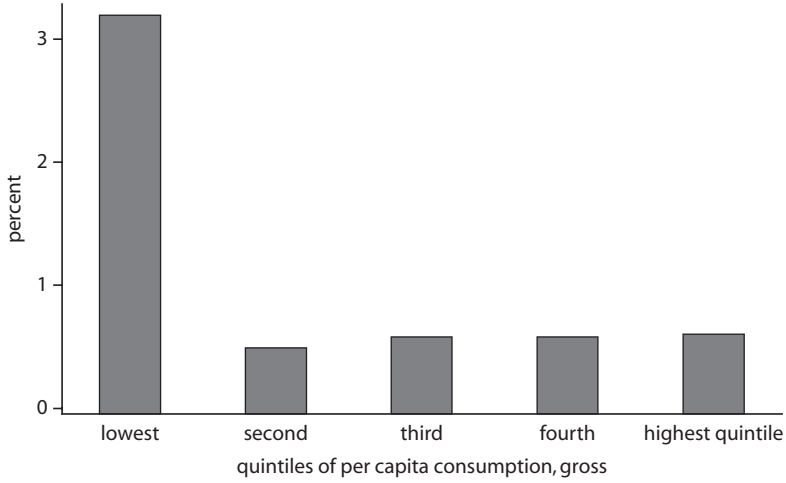
Does Ghana have universal health coverage: Is most of the population assured of effective access to a basic benefits package? The National Health Insurance Scheme (NHIS) covers about 37 percent of the population (2008).

Does Ghana offer protection/coverage against most illnesses? Which services are covered under universal coverage, and how much does it cost (scope)? Ghana is expected to cover at least 95 percent of all curative care and treatment drugs for those who are covered under NHIS. This package costs Ghana 20 percent of total health expenditures.

What financial protection is assured and what do people have to pay OOP? Approximately 40 percent of total health expenditures are paid OOP.

Sources: World Bank staff. Framework from WHO 2010.

Figure 4.9 Ghana: Health Payment Shares by Quintile Analysis

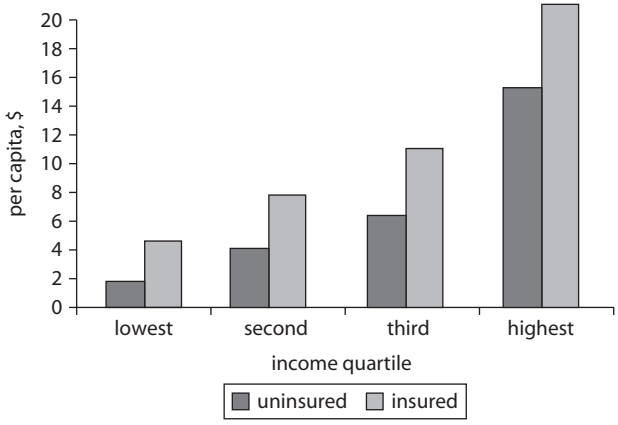


Source: Schieber and others 2012; estimated using data from the Ghana Living Standards Survey (GLSS) 2005–06.
Note: The year of the GLSS study was a year before National Health Insurance Authority was established and therefore does not capture the impact of NHIS on household spending.

not clear how much NHIS beneficiaries pay OOP for medicines. Reports from studies suggest that many patients have tried some form of self-medication before they go to a clinic or hospital and seek professional treatment. Ghanaian traditional medicine consists of herbs and spiritual healing methods practiced by relatives, local healers, and village herbalists often as a first step to cure symptoms of a disease. There is no regulatory enforcement that would prevent nonauthorized personnel (that is, chemical sellers) from prescribing and advising patients about their prescription drugs. Pharmacists too might exceed their authority in prescribing drugs. Patients may rely on advice from these professionals and family members, or they might buy the same drug they had used during an earlier episode (MOH 2007). See figure 4.10.

Households facing catastrophic spending have little financial protection. Catastrophic spending occurs when OOP spending—expressed as a percentage of total household spending—exceeds a threshold, such as 25 percent. A relatively higher percentage is found of lower-income quintiles reporting a threshold of 25 percent or more. A higher proportion of households facing catastrophic spending are less likely to smooth consumption (nonmedical spending has to decline to cover an increase in medical spending); they belong to lower-income households. They do not have sufficient and equitable financial protection. Incurring

Figure 4.10 Ghana: Modeling Per Capita Spending on Medicines



Source: Seiter 2011.
Note: Simulated using GLSS 2005–06 data.

catastrophic spending has a higher likelihood of pushing the near poor into poverty.

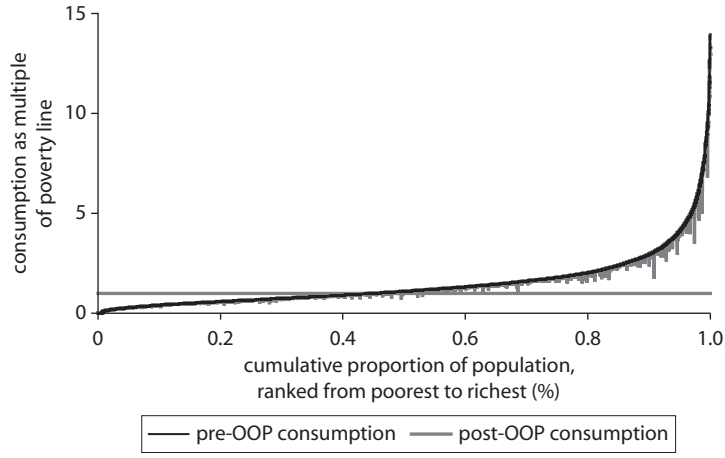
The poor are not financially protected against catastrophic illness. According to the 2005–06 Ghana Living Standards Survey (GLSS5), the poor were more likely to underutilize health services and more likely to have poorer health outcomes relative to the nonpoor. They were also more likely to spend more per household on health and less likely to smooth consumption when they incurred catastrophic spending relative to the nonpoor. In short, the poor were worse off than the nonpoor. See table 4.5 and figure 4.11.

Table 4.5 Ghana: Catastrophic Expenditure Headcounts, by Various Thresholds

	Household health spending (OOP) as a percentage of total household spending				
	5%	*10%*	*15%*	*25%*	*40%*
Lowest	4.3	3.3	2.9	2.9	2.9
Second	1.8	0.6	0.3	0.0	0.0
Middle	2.5	1.1	0.4	0.0	0.0
Fourth	2.3	1.0	0.4	0.1	0.0
Highest	2.3	1.1	0.6	0.2	0.1
Total	2.7	1.4	0.9	0.6	0.6

Source: Schieber and others 2012; estimated using data from GLSS, 2005–06.

Figure 4.11 Ghana: Per Capita Expenditures, Gross and Net of Health Spending



Source: Schieber and others 2012; estimated using data from the GLSS, 2005–06.

Overall, benefit incidence is mixed but mostly regressive. Hospitals and clinics tend to benefit households that are better off more than they benefit the poor. This is especially true for hospital care. In addition, public spending for faith-based providers does not necessarily reach the poor any more significantly than public spending for public providers. However, data show that the poor are more likely to use public facilities if they are insured. This suggests a more progressive use of public funds for insurance. Enrollment of indigents has improved under NHIS but could do better. See box 4.4.

Box 4.4

Benefit Incidence of Public Health Facilities and Mission-Based Facilities

Household surveys and administrative data can be used to conduct a benefit incidence analysis of public spending for health. Differences in unit costs between districts derive from the budgets allocated to each district based on administrative budget data from 2007 and the number of visits to the districts in the 2003 Core Welfare Indicators Questionnaire (CWIQ) and 2005–06 GLSS5 surveys. With both surveys, unit costs vary widely by district and regions; higher unit costs were observed in the wealthiest (Greater Accra) and the poorest regions (Upper West). In Accra and other comparatively better-off regions, it could be that higher unit costs reflect the fact that health personnel tend to be more qualified (most of the doctors tend to concentrate in the wealthier parts of the country). In contrast, in poorer areas, the demand for care is less. Occupation rates for hospitals are also lower in these areas, and unit costs may be higher as a result. By implication, the unit costs for districts and regions tend to be in the middle of the welfare distribution. This "U"-shape relationship between poverty and average unit costs for visits to health facilities across districts or regions is apparent in the following figure. The size of the dots in the scatter plots are proportional to the size of the population in the various districts or regions in each figure, but they are not comparable for districts as opposed to regional scatter plots; both linear and quadratic best fit lines are provided by using regressions weighted by population.

Relationship between Unit Costs and Poverty Levels at the Regional Level

When combining data on unit costs with usage of facilities from household surveys, overall public health funding is found to be regressive, mainly because

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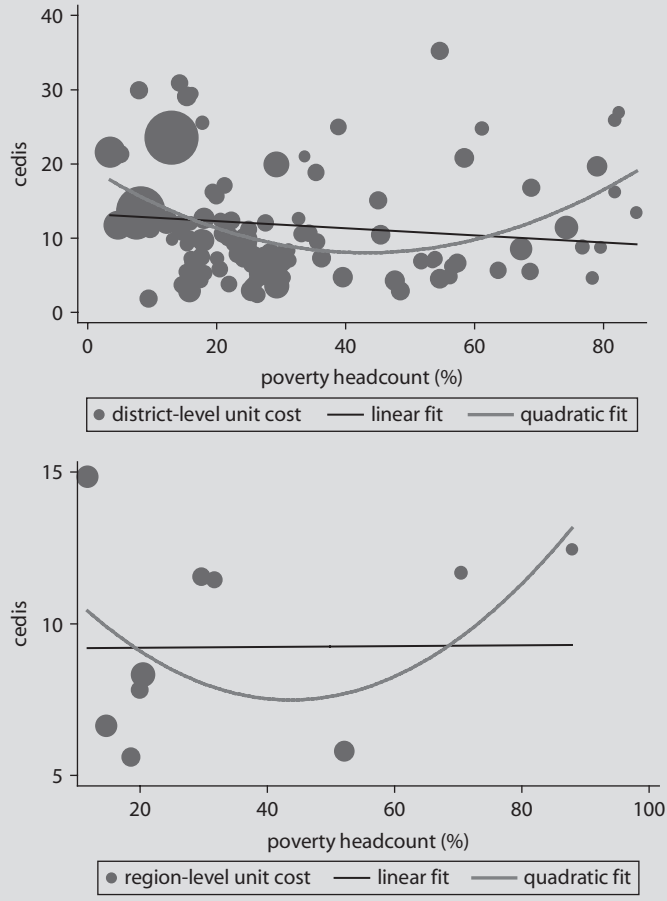
Box 4.4 *(continued)*



hospitals and clinics tend to benefit more households that are better off than the poor; this is especially true of hospital care. Overall the results suggest that public spending for faith-based providers does not reach the poor any more significantly than public spending for public providers.

Source: Coulombe and Wodon 2011.
Note: Estimated using data from CWIQ 2003, GLSS5 2005–06, and administrative data.

Equity in Delivery of Health Care

Who is using health services? Access to health care has improved, but regional differentials are evident. Overall, health service utilization has gone up. Outpatient care has increased, and the hospital BOR has gone up. In 1999, 43 percent of the ill sought medical care; 60 percent of them sought medical care in 2005–06 (GLSS4 and GLSS5). Annual contacts per capita increased from 3.19 to 3.33 during this period. Overall outpatient contacts at public facilities have grown at the national level from 0.49 (1995) to 0.81 (2009). Regional differentials are evident: the Upper East (1.37) and Brong Ahafo (1.15) reported the highest outpatient rates compared with Greater Accra (0.51), and the Northern region (0.53) reported the lowest outpatient rates (2009) (Ghana Health Service 2010; numbers do not include the private sector).

Based on public hospital usage data, inpatient admissions grew by almost 40 percent between 2005 and 2009. About one million admissions to public hospitals were reported in 2009, an increase from about 700,000 (admissions remained stagnant between 2002 and 2005). The largest proportion of admissions occurred among hospitals in the Ashanti region. This growth spurt occurred after 2006. Overall, about 19 million outpatient visits were reported in 2009, an increase of almost 60 percent from 2005.

Where are they going for health services? The population uses both public and private facilities. The use of private health facilities for outpatient services has gone up. However, regional and income differentials are evident in the type of services used.

The private sector is an important contributor to health care: at least 50 percent of the ill sought care from the private sector, more from for-profit facilities. Urban–rural and income differentials are evident: generally the poor availed themselves of services at public facilities; the rich went equally to public and private facilities. NHIS-registered beneficiaries tend to use both public and private facilities. However, a significant proportion (57 percent) of those who are not registered under NHIS tend to use private health facilities; a large proportion of them use private nonreligious/for-profit facilities. See table 4.6.

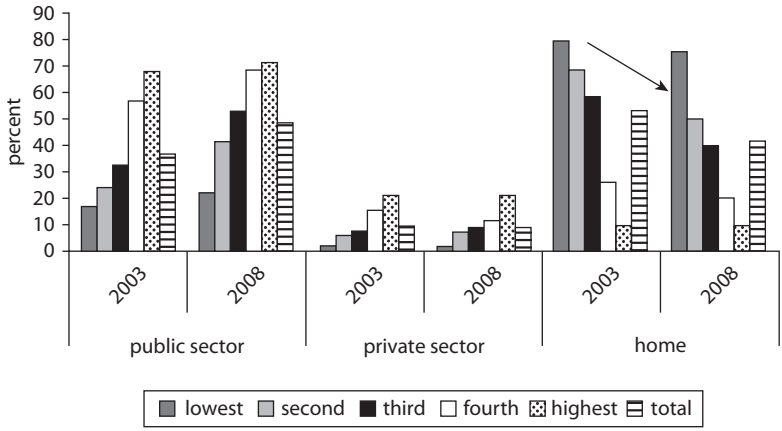
The poor and the nonpoor tend to use public facilities: 71 percent of women in the highest wealth quintile gave birth at public facilities; 22 percent of those in the lowest wealth quintile gave birth at public facilities. Most institutional deliveries took place at district hospitals (55 percent) or at health centers (23 percent) (MOH 2011b). Among

Table 4.6 Ghana: Outpatient Use of Health Facilities by Type (Public, Private For-Profit, and Private Not-for-Profit), 1999 to 2005–06

	Sought care from		
	Public (%)	*Private for-profit (%)*	*Private not-for-profit (%)*
GLSS4 (1999)	48	47	5
GLSS5 (2005–06)	45	49	6

Source: Makinen and others 2011.
Note: Data from a year before the National Health Insurance Authority was established.

Figure 4.12 Ghana: Place of Delivery by Type of Facility and over Time as a Percent, 2003–08



Source: Ghana Statistical Service 2004, 2009a.

children with acute respiratory infection (ARI), 48 percent did not go to a health facility, 38 percent went to a public facility, and 14 percent went to a private facility. More women in the lowest wealth quintile went to providers in 2008 compared with 2003. However, income differentials are evident: 77 percent of pregnant women in the lowest wealth quintile saw a skilled health worker (9 percent by a doctor), whereas 98 percent of those in the highest wealth quintile saw a skilled health worker (50 percent by a doctor) (Ghana Statistical Service 2009a). The poor registered with NHIS are more likely to go to public instead of private facilities. See figure 4.12.

Regional differences are evident. Most regions reported at least 50 percent of women had an institutional delivery. The Northern region was an exception; it reported only 26 percent (2008). Nationally, 58 percent of

women visited a doctor, nurse, or midwife for postnatal care; in the Northern region 32 percent sought postnatal care (Ghana Statistical Service 2009a). See figure 4.13.

There is a high reliance on public facilities for institutional delivery. Most institutional delivery takes place at public facilities (69 percent in 2010), and public facilities also cater to the largest proportion of maternity beds and tables (63 percent). The largest maternity bed capacity is in hospitals (54 percent), and the largest share of institutional delivery also takes place at hospitals (65 percent), a significant proportion of which happens at district public hospitals (32 percent). Although the public sector caters to a higher proportion of institutional delivery relative to its capacity of maternity beds and tables in the country, for-profit private facilities cater to a lower proportion of institutional delivery relative to their maternity bed and table capacity. Public health centers are also important facilities catering to institutional delivery (20 percent in 2010). Interestingly, public sector maternity homes have a low capacity of maternal bed and tables. Rural areas, on the other hand, have maternity beds and tables while institutional delivery remains low. See figure 4.14 and table 4.7.

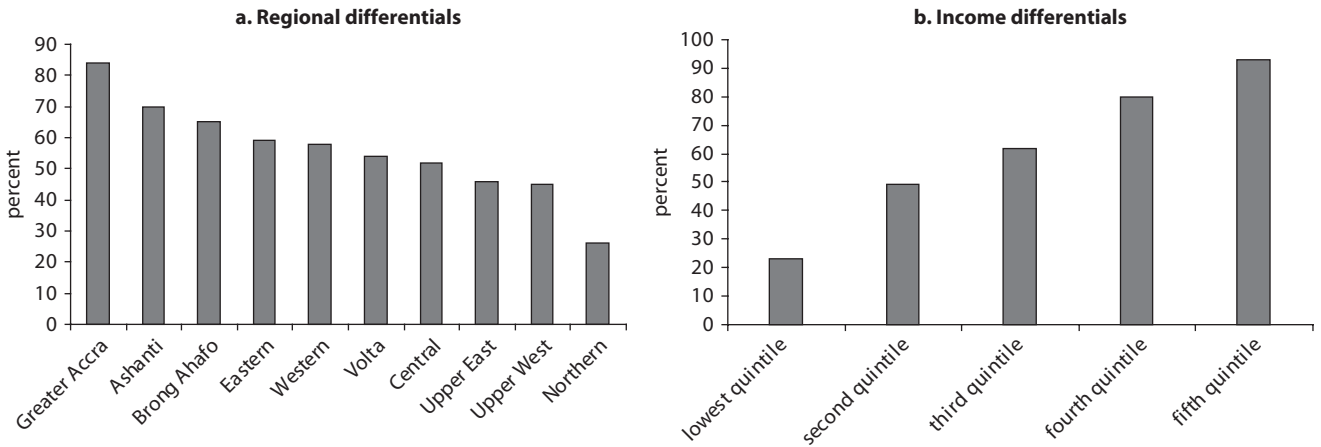
A significant proportion of the population bypasses primary health care clinics; instead, they use hospitals for primary health care. Nationally, hospitals account for 32 percent of all consultations; clinics were next at 28 percent (GLSS5; Olivier and Wodon 2012). Many patients went to district hospitals instead of subdistrict clinics for primary health care services. Patients are bypassing primary health care facilities. Clinics might be referring patients to hospitals when they have more complex cases. Although the gatekeeper concept has been introduced, it is not fully operational. Patients might also be self-referring; this suggests that patients prefer district hospitals because their perception of the quality of care at clinics is that it is not on a par with hospitals. Many patients bypass clinics in favor of hospitals because of a given shortage of physicians and other skilled HWs and a frequent shortage of drugs.

Quality of Health Services

Status of Quality of Health Services

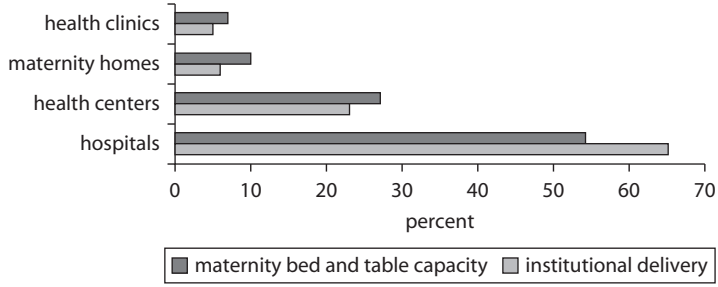
Quality of care varies by service. About 6 percent of children under age five were reported to have ARI symptoms, but only 24 percent of them sought care using antibiotics (Ghana Statistical Service 2009a). Among children under the age of five with diarrhea, 40 percent sought care at a

Figure 4.13 Ghana: Regional and Income Differences in Institutional Delivery, 2008



Source: Ghana Statistical Service 2009a.

Figure 4.14 Ghana: Institutional Delivery by Facility Type, 2010



Source: MOH 2011b.

Table 4.7 Ghana: Maternity Bed Capacity and Use by Type and Ownership of Health Facility, 2010

Facility ownership	*Maternity beds and tables to institutional delivery per 1,000 deliveries*	*Use above capacity*	*Use below capacity*
Total	26		
Government	24	1.1	
Private for-profit	46		0.6
Religious/mission	23	1.1	
All hospitals	22		
Teaching	22	1.0	
Regional	20	1.1	
District	22	1.0	
Health centers	30		
Government	48	1.0	
Private for-profit	30		0.6
Religious or mission	30	1.0	
Health clinics	42		
Government	38	1.1	
Private for-profit	42	1.0	
Religious or mission	47		0.9
Maternity homes	42		
Government	14	2.9	
Private for-profit	44		0.9
Religious or mission	75		0.9
Urban	24	1.1	
Rural	39		0.7

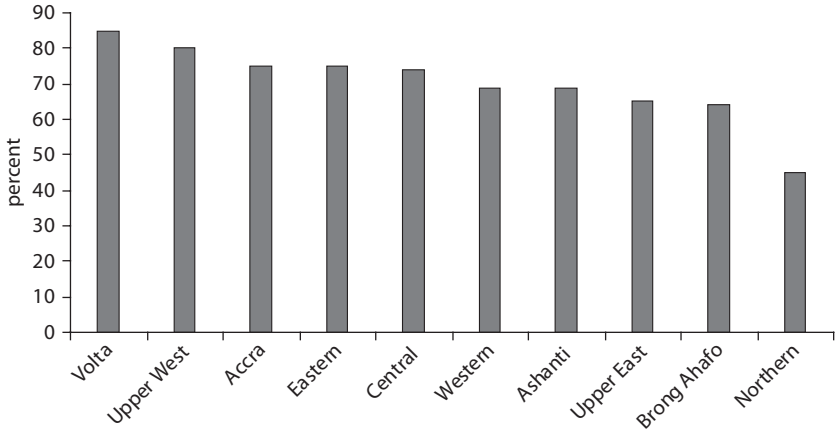
Source: World Bank; data from MOH 2011b.
Note: A figure above 1 indicates institutional delivery is higher than the maternity bed and table capacity, whereas a figure below 1 indicates institutional delivery is below the bed capacity.

health facility; 35 percent of them were prescribed antibiotics to treat diarrhea, which is not a recommended treatment. About 44 percent of eligible women received the recommended dosage for medicine to prevent malaria; 24 percent of children under age five received antimalaria drugs on the same or next day that they were running a fever. The situation was worse among the lowest wealth quintile and in the Northern region.

Income and regional disparities exist in access to quality care. Although the use of antenatal care (ANC) is high, it is not clear from the data whether the quality of care pregnant women received during ANC was comprehensive. ANC assists mostly those in high-risk status: 60 percent of pregnant women received all basic prenatal care services. Although many pregnant women had their weight and blood pressure measured and their urine and blood samples tested, only 68 percent of pregnant women were advised about pregnancy complications and their symptoms during their ANC. Only 56 percent of them had two doses of tetanus toxoid (Ghana Statistical Service 2009a). Although the poor are receiving better care, they do not receive the same quality of care as the nonpoor. Facilities in the Northern region seemed to offer the worst care. See figure 4.15.

Of the facilities providing deliveries, most offered parenteral oxytocics, but not assisted vaginal delivery. The Upper East region had the worst quality for emergency obstetric and neonatal care. Several hospitals with designated services for emergency obstetric and neonatal care reported

Figure 4.15 Ghana: Percentage of Pregnant Women Informed of Signs of Complications during Antenatal Care, 2008



Source: Ghana Statistical Service 2009a.

that they were unable to provide caesarian sections (38 percent), assisted vaginal deliveries (32 percent), or blood transfusions (41 percent) because they lacked the appropriate equipment, supplies, or drugs (2010) (MOH 2011b). See figure 4.16.

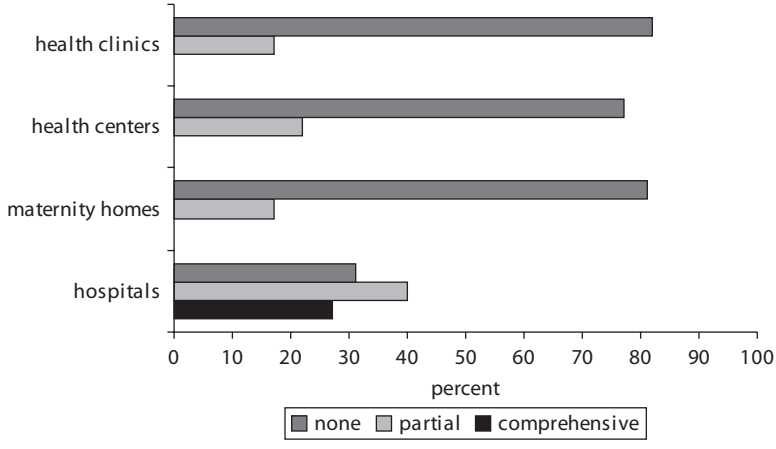
The poor are not receiving the same quality of care as the nonpoor. About 20 percent of children under age five were reported to have had a fever. Of those, 51 percent sought care, 43 percent received antimalaria tablets, and 25 percent received antibiotics (2008). Of those who sought care, fewer children from the lowest wealth quintile (30 percent) received antimalarial medicine compared with the highest wealth quintile (42 percent) (Ghana Statistical Service 2009a). See figure 4.17.

Access to services for CDs and particularly NCDs is not easy. Services for NCDs are mostly offered at a few tertiary hospitals, located in a few urban cities. The quality of services for CDs is variable; the quality for NCDs needs to be assessed in a future study. It will be important for Ghana to understand the need for quality of services offered at clinics and particularly hospitals to build a better NCD delivery system from the outset.

Reasons Not to Use Health Services

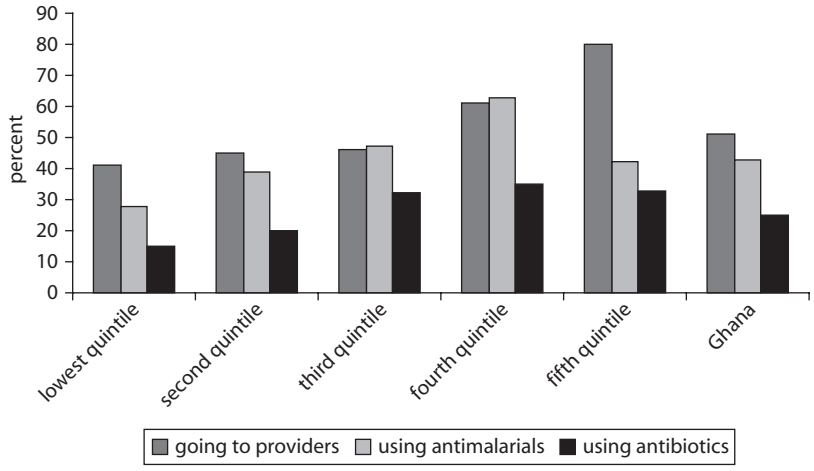
Use of services is determined by culture, knowledge, geographic and financial access, and perception of the quality of care. Cultural barriers

Figure 4.16 Ghana: Availability of Emergency Obstetric and Neonatal Care at Health Facilities, 2010



Sources: World Bank staff; data from MOH 2011b.

Figure 4.17 Ghana: Income Differences in Households with Children under Age Five Who Had a Fever and Sought Care, 2008



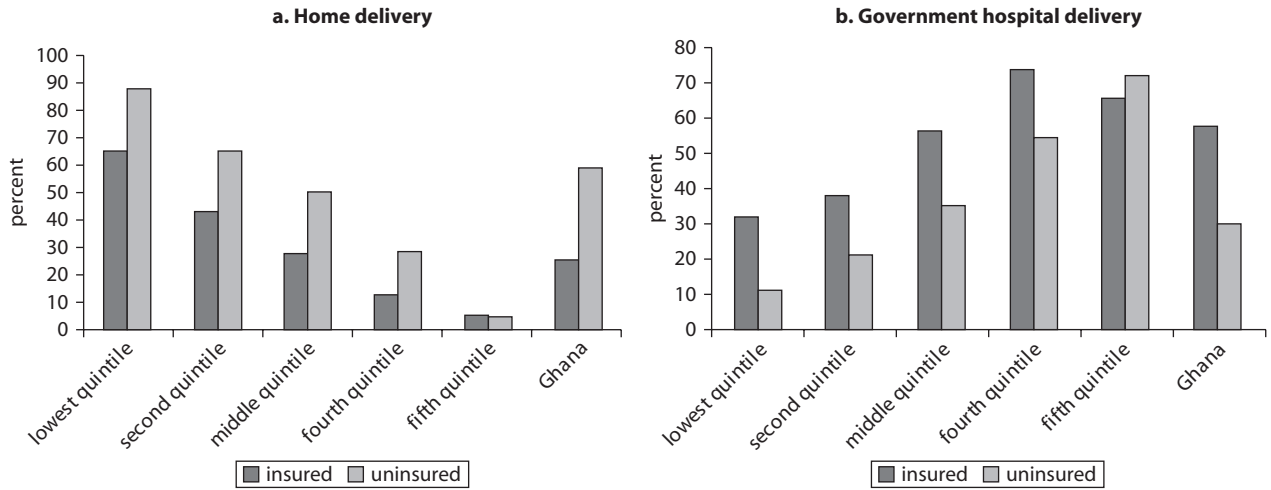
Source: Ghana Statistical Service 2009a.

are deterrents, and household knowledge about the appropriate use of care is limited.

Among children under the age of five with diarrhea, only 67 percent received treatment (oral rehydration solutions or increased fluids). Most mothers decreased food intake among children during their diarrhea episode. Among pregnant women, ANC use is high (95 percent, 2008), but ANC attendance is not as frequent as WHO recommends: 78 percent of pregnant women had four or more ANC visits during their pregnancy, but only 55 percent of them had an ANC visit during their first trimester (Ghana Statistical Service 2009a). Home deliveries are still common among the poor, possibly because of cultural, geographical, and financial barriers.

A substantial proportion (74 percent) of women faced obstacles in accessing health care. Financial constraints were a significant barrier, followed by long distances of travel and lack of transport. Over time, the situation for the poor has improved, but it has not improved as much as for higher-income groups. Evidence shows that those with insurance are better off: the poor who are insured (or have financial protection) were able to access more care compared to those in the same quintile who lacked insurance coverage. See figure 4.18.

Figure 4.18 Ghana: Pregnant Women Deliveries by Quintile Analysis and by Insured or Uninsured Status



Source: Ghana Statistical Service 2009a.

NHIS coverage and the region of residence have a positive impact on use of public facilities. Among those who choose to deliver outside the home, a regression analysis of the factors that influence a woman's choice of provider for a delivery reveals two significant factors that affect the decision to use a public provider: having NHIS coverage and the region of residence. NHIS coverage increases by almost six percentage points the probability that a woman who delivers outside the home will select a public provider compared to a private provider. Among women who chose to deliver outside the home, their selection of a public provider varies by region.

Perception of the Quality of Health Services

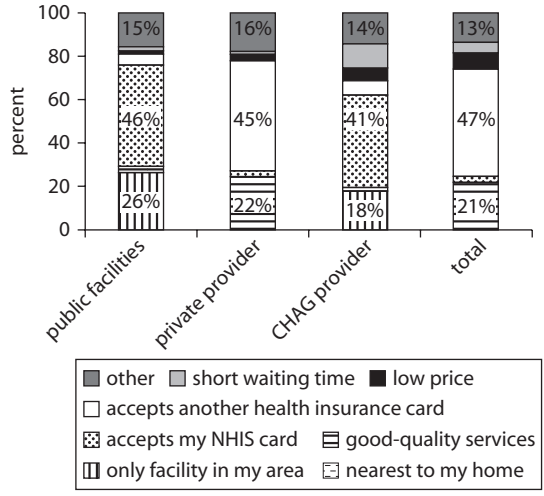
Quality of care is determined by access to skilled workers, a positive attitude among HWs, the availability of drugs and other services, and price. The primary reason for not using health services was the patient's perception of a low quality of care: lack of drugs and absence of HWs, followed by absence of female HWs (Ghana Statistical Service 2009a).

HWs access is an important reason to go to a facility. Among those who went to public facilities, most went because of easy access to personnel. Among those who went to missions, personnel, followed by short waiting time, were key determinants. For those who went to private for-profit facilities, access to drugs was the greatest attraction, possibly because many private providers are chemical sellers. Patients use private providers because of the good quality of service (availability of medicines and laboratories) and convenient access. In addition, they go if private providers are NHIS accredited and drugs and services are available to them at no additional cost.

Better quality service is the prime reason for selecting any kind of provider. Low price is perceived as a distinguishing feature of public providers, although actual spending does not seem to be relatively lower among users of public providers. Shorter waits are a distinguishing feature of private providers. Courteous service is a distinguishing feature of CHAG providers. See figures 4.19 and 4.20.

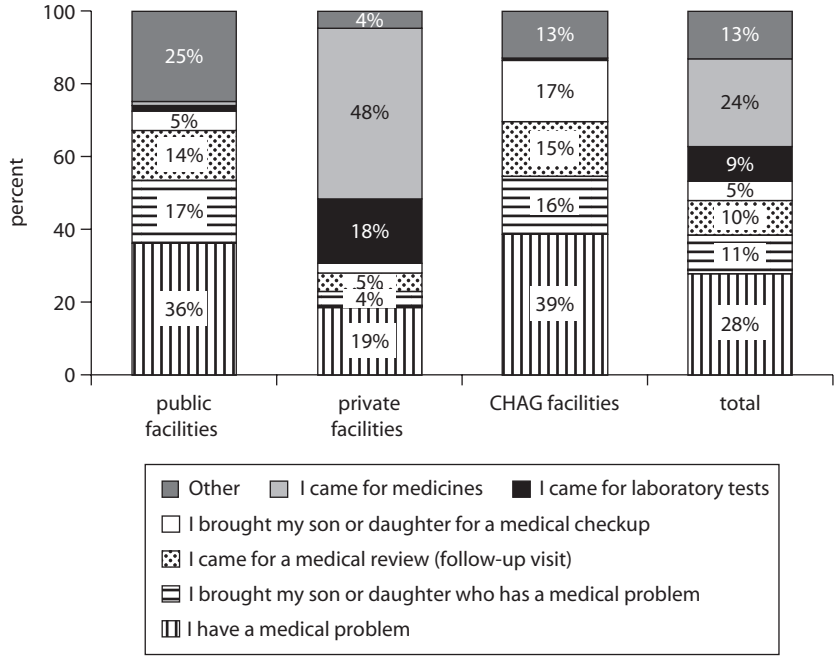
The NHIS-registered population is generally satisfied with this program. Once registered under NHIS, enrollees receive free care and drugs from any NHIS-accredited health facility. No additional medically related costs are incurred, as well as no deductibles, no copayments, and no limits. However, access to services is still a constraint. Nevertheless, those NHIS beneficiaries who access services are satisfied with what they receive

Figure 4.19 Ghana: Main Reason for Provider Choice



Source: Makinen and others 2011.

Figure 4.20 Ghana: Medicines and Laboratory Tests Draw Consumers to Private Providers



Sources: Makinen and others 2011. Data from an exit poll survey, 2008.

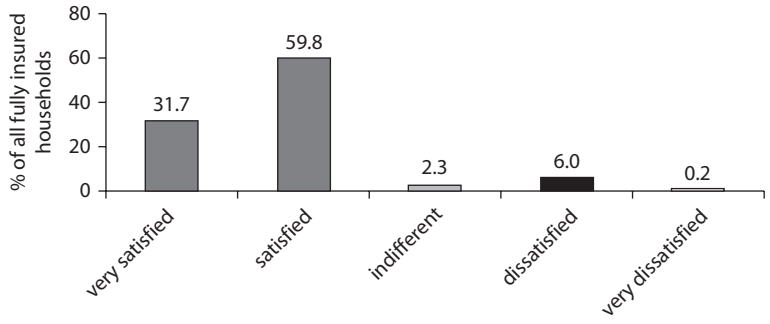
(relative to what they had probably received in the past). See figure 4.21 and box 4.5.

Conclusion

This chapter has provided an assessment of Ghana's health financing and delivery performance. It has illustrated that Ghana, as an LMIC, fares worse in several health outcomes relative to countries with comparable income and health spending levels, although it does well in its performance in life expectancy at birth. Performance in the health sector is low on many fronts, and although Ghana had performed well in the past, the economic crisis years, in particular, derailed health outcomes. Now Ghana struggles to get back on track to meet MDG targets in health.

The health sector suffers from allocative and technical inefficiencies. The challenges are many, as illustrated in previous chapters; for example, the primary health care delivery system has been underfinanced and is underperforming, and financing and incentives are fragmented with respect to preventive versus curative care. Patients bypass clinics in favor of hospitals, resulting in crowding of hospitals for primary care services. The gatekeeper system is nonfunctional. Drug prices are several folds higher than international reference pricing, and the fee-for-service payment mechanism has incentivized overprescription of drugs and prescription of more expensive drugs, thereby resulting in wastage of resources. Drug costs take up at least 50 percent of NHIS reimbursements. A cost-containment strategy to reduce these inefficiencies would save resources, which could be directed to the more cost-effective interventions.

Figure 4.21 Ghana: Household Perception of the Quality of Health Services after the Introduction of NHIS, 2008



Source: NDPC 2009.

Box 4.5

Satisfaction with Health Care Providers

How satisfied are patients with the services rendered by various types of providers? Qualitative data from 2010 fieldwork carried out among staff and patients with six mission-based providers (MBPs) suggests relatively high satisfaction with the services received, albeit with some caveats. Patients using MBPs were satisfied with the quality of the staff, hygiene at the facilities, and cost, but less so with the availability of proper accommodations, technical equipment, and medicines. The situation was more difficult for clinics and hospitals not accredited by NHIS.

Quality of care was the main reason for choosing facilities. Among patients in Christian clinics/hospitals, two-thirds said that quality was the main reason for choosing the clinic/hospital. Close to 60 percent mentioned that workers were skilled, knowledgeable, competent, dedicated, and patient; in short, they appreciated the quality of the staff. For patients in Islamic clinics/hospitals, the most common answer was the quality of workers; the quality of service was second and location third. Respect for patients came in strongly as a key reason for choosing MBPs.

"Here we are treated with respect. They listen to us well and understand all of our problems. They take their time to talk to us in a polite way. You don't regret spending your money at this hospital. Even if they don't have all the equipment, the way they handle makes me feel comfortable" (female Muslim patient, Islamic clinic). *"I have heard that they are a top quality hospital and they are very serious with their work and they treat patients with care and respect"* (male Christian patient, Christian hospital).

To understand the different reasons for choosing providers, patients were asked to share the advantages that they see in using MBPs. In Christian facilities a third of patients cited "quality of workers" as the main advantage of the facilities, followed by "assistance for the poor" (25 percent of respondents) and "quality of service" (19 percent). Among patients in Islamic facilities, the most common answer was "workers' skills and quality" (44 percent) followed by "location" (31 percent). Two other reasons were mentioned: "assistance for the poor/orphans" and "quality of service" by 12.5 percent of respondents. The availability of assistance for the poor, although not a leading criterion for the choice of provider, was also mentioned by facility staff.

"What is the target population of this clinic? Elders come, youth come, children come, and pregnant women come . . . any kind of category. The majority of people who come to this clinic are Moslem, but we have non-Moslem too. They are Christian or believe traditional religion. Also we have both poor and middle income group. Majority of the patients are actually poor. That is one of the main reasons for the establishment of this clinic. People are facing financial problems, unemployment and deprivation. Their monthly income is low. We try as much as possible to subsidize our services."

Source: Shojo, Tsimpo, and Wodon 2012.

Overall, benefit incidence is mixed but mostly regressive. Hospitals and clinics tend to benefit households that are better off more than they benefit the poor. This is especially true for hospital care. In addition, public spending for faith-based providers does not necessarily reach the poor any more significantly than public spending for public providers. With the introduction of NHIS, population is expected to have better financial protection. However, NHIS disproportionately favors the nonpoor. Moreover, data show that the poor are more likely to use public facilities if they are insured. This finding suggests that a more progressive use of public funds can be achieved under NHIS.

Health service use has gone up in the past decade among all economic groups; however, the sector suffers from inequity in access and quality. Regional and intraregional differentials in investment and access have also made it difficult for the population—especially the poor and underserved—to obtain services. Although the introduction of NHIS has made it easier for many people to afford health services, access to quality care remains a concern. Many people still do not access services, because they consider the quality of clinics to be low, and many bypass clinics in favor of hospitals although the latter are farther away and have nonmedical cost implications.

The public sector delivery system is considered to be of better quality in many ways, and the population (both the poor and the nonpoor) prefers to choose the public sector system over private sector options. The population prefers public sector hospitals, which tend to have skilled HWs, drugs, and medical equipment. The population, however, prefers private sector clinics, given their accessibility and their access to drugs and laboratories. Mission clinics are preferred because of their courteous staff, their welfare orientation, and the free services offer, especially to poor people without access to NHIS. A more strategic partnership between the public and private sectors can ensure quality and affordable access to services for both the rural and the urban populations. After the introduction of NHIS, the beneficiaries feel that health services have improved: they now receive services and drugs that are both free and more frequently available than before.

Notes

1. Until now Ghana has been compared to other low-income countries, but after rebasing its gross domestic product, the situation has changed, as Ghana is being compared to other LMICs.

2. Data between 1997–98 and 2007 are not comparable. The survey questionnaire methodology for obtaining and verifying data might be different between the 2007 Ghana survey and the 1997–98 study in southern Ghana.
3. See the United Nations Economic Social Council website at http://webapps01.un.org/nvp/indpolicy.action?id=161.
4. See the United Nations Economic Social Council website at http://webapps01.un.org/nvp/indpolicy.action?id=161.
5. See the WHO HIV/AIDS information at http://www.aidsmap.com/New-WHO-guidelines-on-PMTCT-and-infant-feeding/page/1436978/.
6. See the United Nations Economic Social Council website at http://webapps01.un.org/nvp/indpolicy.action?id=161.
7. The WHO STEPwise approach to surveillance (STEPS) of risk factors is a simple, standardized method for collecting, analyzing, and disseminating data for chronic disease risk factors in WHO member countries.
8. An "essential public good" depriving NHIS of potential savings of $11 million in 2011 and $17 million by 2017 (Planned Parenthood of Ghana 2009).
9. The CHPS initiative has employed strategies tested in the successful *Navrongo* experiment to guide national health reforms that mobilize volunteerism, resources, and cultural institutions for supporting community-based primary health care. See http://pdf.usaid.gov/pdf_docs/PNACT263.pdf.
10. Gatekeeper: a health care professional, usually a primary care physician or a physician extender, who is the patient's first contact with the health care system. The gatekeeper triages the patient's further access to the system. See http://medical-dictionary (thefreedictionary.com/Gatekeeper).
11. Moral hazard arises because an individual or institution does not take into account the consequences and responsibilities of its actions. There is a tendency to act less carefully and shift some responsibility for the consequences of those actions to another party (http://en.wikipedia.org/wiki/Moral_hazard).
12. Those who are not registered under a financial protection scheme must pay OOP for curative care services and drugs from both the public and the private sectors.

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CHAPTER 5

Key Reform Issues and Options

Reform Issues

Ghana has made considerable progress in health systems reform. At this stage of its development, the government of Ghana could embark on additional optional reforms by building on its strengths while addressing its weaknesses in the areas of (a) decentralization, (b) governance, (c) health service delivery, (d) public health, and (e) health financing. These reforms will need to be embodied in a comprehensive and accountable health reform process to facilitate Ghana's transition to universal health coverage. These additional reforms would also advance its overall reform agenda.

Health Systems Supported Policy Development

The health sector has undertaken some important policy decisions. Some of these policy changes have been critical and have helped create a positive environment in the health sector. A summary of key past reforms is presented below.

In recent years, Ghana has experienced relatively stable macroeconomic growth. This situation created the opportunity for more resources to be invested in social sectors. Between 2004 and 2008, the government used the opportunity of strong economic growth to undertake rapid fiscal

expansion. During that period public expenditures grew from 20 to 24 percent of gross domestic product (World Bank 2011). As part of that expansion, the government of Ghana increased expenditures for the health sector, particularly by dedicating new resources to the National Health Insurance Scheme (NHIS).

Ghana has earmarked public finances for health. In 2003, Ghana decided to tackle the problem of limited and fluctuating resources for nonsalary recurrent budgets. This problem led to low-performing health services. NHIS, introduced in 2005, offers a program with demand-side financing; certain resources under value added tax (VAT) and levies, earmarked for the National Health Insurance Fund (NHIF), were to be used for health service operations. At the same time, the government permitted use of public monies for financing the private sector. Both public and private health facilities were accredited under the NHIS program. Further, the program also enhanced accountability by separating payer and provider functions.

Ghana has made significant progress in decentralization; several building blocks for a devolved health system are in place. These include a comprehensive legal framework for government decentralization, establishment of district-level political and administrative structures, including the district assemblies (DAs) and the deconcentrated Ghana Health Service (GHS) offices, numerous useful information systems and management tools (including planning and budgeting systems, reporting and information systems, performance measurement, and financial transfer mechanisms to local governments), and implementation of participation mechanisms including facility boards. However, policies could be realigned to complete implementation, which has been hampered by issues related to regulatory inconsistencies, resistance to change, weak managerial capacity, centralized authority over key resources, weak capacity at the central and regional levels to monitor and support implementation, and a weak economic base in many districts.

Ghana has made an effort to make drugs more affordable and available. The Ministry of Health (MOH) five-year program (2007–11) emphasized the need to improve access to medicines, improve supply management systems, increase quality assurance, and promote rational use of drugs. MOH has an Essential Medicines List (EML), and NHIS offers a medicine list that includes those from MOH and others. The Central Medical Stores (CMS) procure drugs and vaccines, which are financed by external funding and include vaccines, family planning commodities, HIV/AIDS treatment drugs, insecticide-treated nets, and other essential

drugs. Given the challenges faced in the efficient running of the CMS and because supply chains were not effective, the government allowed health facilities to procure their own drugs, including those from the non-public sector. The results led to improved access, but because of weak regulations, prices went up. NHIS has established drug pricing that uses a median market rate approach. NHIS could help regulate market pricing. Also, the quality of drugs procured varies. The private sector procures its own drugs, and the Food and Drugs Board is unable to ensure quality at decentralized levels. Additional effort is required to regulate the quality of drugs in the market.

Ghana has given autonomy to health facilities for their retention and use of internally generated funds (IGFs). Ghana agreed to give public health facilities autonomy in the use of IGFs, based on certain parameters. This autonomy has provided public health facilities with easy access to procure drugs, to conduct minor repairs of health facilities, but not to use these moneys for large capital investments, personnel remuneration, and travel. However, a more comprehensive understanding of IGF retention and use is needed along with regular reporting and monitoring. At this stage the latter is not consistent.

Ghana has formed public–private partnerships (PPPs) to scale up health care services. Given the skewed distribution of GHS facilities, which favor urban and periurban areas, MOH signed an agreement with the Christian Health Association of Ghana (CHAG), a mission, to form a PPP. CHAG was charged with providing services in rural and remote areas where GHS was not operating. CHAG financed capital investment for their hospitals and clinics and provided administrative staff and standards; MOH provided clinical staff. Out-of-pocket health expenditures (OOP) and NHIS reimbursed CHAG's operating costs for the NHIS benefit package offered to its beneficiaries. Concern has been expressed that faith-based providers (such as CHAG) could be better targeted; they do not reach the poor significantly better than public providers.

To reduce unnecessary use of health services, Ghana has introduced gatekeeping for primary health care. Ghana introduced gatekeeping at the clinic level; however, no comprehensive policy or guidelines create appropriate standards and incentives. Little assessment has been done of achievements and challenges of the gatekeeping program; in fact, anecdotal evidence shows that patients continue to bypass clinics in favor of hospitals. The gatekeeper system is not enforced, given the variability of the quality of health services. Several clinics do not have physicians or other appropriately skilled health workers (HWs). Others may not have

appropriate equipment. Recently Ghana planned to experiment in building primary health care networks (under a capitation pilot), to ensure basic primary health care services at the clinic level. Also, pricing standards are being considered to incentivize providers to provide primary services. The pilot should be closely monitored for lessons learned and scaling up.

Ghana has made strategic efforts to improve the acute problems faced in human resources for health (HRH). To overcome physician shortages, Ghana initially formed a pact with Cuba to bring in 200 Cuban doctors to work in remote and rural areas and to help train Ghana's doctors. Ghana produces one of the highest numbers of physicians in the region. But when it started losing its trained HRH personnel to foreign markets, Ghana took steps in 2004 to improve the country's salary scale. Although health sector salaries in the public sector are much better than those offered by other public sector agencies, disparities exist. Physician salaries are close to or above regional averages. Nurses and midwives' salaries are one-third of physician salaries or below regional averages. Despite salary increases and available positions, the public sector is unable to fill its vacant physician posts. Large rural–urban differentials exist; few physicians serve rural areas. Most physicians are concentrated in urban areas and in the Greater Accra and the Ashanti regions. Recent challenges faced by Ghana include limited production of physicians and other cadres (for example, community health nurses and health assistants) and a need to improve the quality and production of HWs and to retrain those currently employed. To attract more regional and rural students, Ghana is responding by preparing a new updated strategy to consider a more egalitarian distribution of medical and paramedical schools across the country. Ghana is also looking at forming partnerships with the private sector to offer medical and paramedical training. This may help alleviate the problem of high enrollment in certain schools and may lead to better quality of certain cadres of HWs. Given the great disparity in distribution, rural incentive schemes and performance management contracts are also under consideration.

Current Health Policy Reform: Strengths and Weaknesses

The various reform efforts in Ghana led to some positive results and, in some cases, led to unforeseen results. Some of the strengths and challenges are highlighted under the following sections: (a) governance, management, and organization; (b) delivery system; and (c) financing.

Governance, management, and organization
Strengths

- The government has in place the administrative and legal requirements for its decentralized governance structure.
- The Public Financial Management system is adequate and clear; it meets most international requirements.
- The government is committed to health and has developed an integrated three-level health system (national, regional, and district, incorporating a community-level health delivery system).
- Successive Common Management Arrangements provide an effective framework for relating to partners.
- The NHIS legislation and implementation strategically set out an elaborate governance and administrative framework for health insurance.
- Relatively high levels of consumer satisfaction exist, especially among NHIS beneficiaries.

Weaknesses

- The decentralized health sector faces a number of serious challenges, including potential inconsistencies between the government's overall decentralization model of devolution and GHS's model of deconcentration.
- Local authorities have little control over budget or expenditures because most of their resources are executed centrally or earmarked from the center to specific programs or initiatives.
- Other issues include HW ratios, health infrastructure deficits, equipment and transport deficits, health management information system (HMIS) deficiencies, procurement of drugs, and the poor performance of the CMS contrasted with financing, quality assurance, and logistics management.
- Poor coordination among the various regulatory agencies results in inefficiencies, such as high drug prices and quality issues.

Delivery system
Strengths

- Large increases have taken place in HRH numbers; the production of nurses and the production of doctors are higher than in many countries in the region.

- Exits from the labor market are largely due to retirement, not outmigration, since the 2006 salary increase.
- Informal payments are *reportedly* uncommon.
- MOH/GHS has developed a comprehensive approach to set priorities for investments; this approach considers, for example, recurrent costs, human resource constraints, and maintenance implications.
- Outpatient care utilization has increased significantly.
- Overall, hospital use trends (for most categories) are positive, with bed occupancy rates increasing from 45 percent to 60 percent at local levels.
- A vibrant private sector is a major care supplier of all forms of nonhospital care and a significant supplier of hospital care.
- Ghana has a reasonable EML and good availability of drugs.

Weaknesses

- Current health care provider densities are far below the World Health Organization's recommended levels.
- There is an unequal urban–rural distribution of staff (especially high level cadres), inadequate total numbers, and a weak distribution of HWs in regions with high poverty levels.
- Few incentives ensure the performance of HWs.
- Hospital bed occupancy rates are at 60 percent; considerable interregional variation is seen in occupancy, beds, average length of hospital stay, and turnover.
- Health infrastructure expansion is limited by inadequate financial resources and delays in the release of budgetary allocations. The latter results in cost overruns, unplanned initiation of projects outside the capital investment plan, inadequate planning for preventive maintenance, and issues in the acquisition, distribution, installation, and use of equipment.
- A need exists to strengthen district health and subdistrict health systems with a focus on primary care.

Financing

Strengths

- Ghana is one of a very few emerging market countries to take serious steps toward demand-side financing for health. It has passed legislation

for universal health insurance coverage, begun implementation by covering vulnerable groups while significantly expanding enrollment, and earmarked substantial resources to support the system.
- Ghana's NHIS relies on a diversified set of funding sources that has resulted in stable and sustainable health financing.
- Ghana's approach pragmatically builds on the existing system of district mutual health insurance schemes (DMHISs) in terms of transitioning toward a uniform national system.
- According to NHIS, membership has steadily increased between 2005 and 2011. Outpatient visits have increased 23-fold, inpatient service use 29-fold, and expenditures 40-fold.

Weaknesses

- With current expenditure patterns, NHIS is not financially viable. It is projected to be insolvent by 2013.
- Revenues for NHIS do not match the actuarially based cost of providing services.
- The basic benefits package is heavily biased toward curative care. Coordination with MOH's vertical programs is poor. It may not be affordable to cover 95 percent of the disease burden with no cost sharing.
- Lack of an effective gatekeeper system, an ineffective referral system, and misaligned provider payment incentives preclude NHIS from being an effective "active" purchaser.
- Large numbers of premium-exempt members could afford to contribute.
- The stringent definition of "indigent" excludes some poor and near poor.
- Lack of a modern HMIS in the health sector results in inadequate data for decision making, inefficient claims management, incomplete information about enrollees and providers, limited quality assurance, and inefficient overall health systems management.

Reform Options

This section presents reform options to sustain and strengthen the health system. Many of these issues and reform options have already been the focus of government policy planning and implementation efforts. Some are new; others have not been effectively implemented.

Decentralization and Governance

Based on performance, potential options to reform Ghana's health system are suggested. These reform options suggest that health policy in Ghana could focus on the following issues.

Decentralization. *Coordination mechanism*. The discussion and definition of a decentralization policy framework for the health sector would have to mobilize all stakeholders. The goal would be to strengthen the final proposal that will emerge by building consensus and support around it. Such an endeavor will require strong and committed leadership by MOH. A Coordinating Committee jointly led by MOH and the Ministry of Local Government and Rural Development (MLGRD) could be established to coordinate the formulation and implementation of decentralization of the health sector.

Policy framework. A health system decentralization framework is greatly needed. It would further clarify and detail the responsibilities and functions of each government level and agency. The definition of particular functions to be decentralized could take into account factors such as economies of scale (especially in the procurement of drugs and other strategic supplies and services) and the highly technical nature of some functions and services. The design of a strong policy framework could thus encompass a detailed technical discussion of functions and responsibilities that would be decentralized at the local (or regional) level and those that would remain centralized.

Human resources management. Revising and defining regulations and policies regarding human resource management in a decentralized system would help reduce duplication and fragmentation as well as help formulate a clearer regulatory framework. This framework would homogenize processes and provide minimal standards, without limiting local governments' autonomy to manage staff. It should necessarily include provisions for transferring staff from the central to the local level, and a structure of incentives to encourage staff to transfer. The conflict between devolution and a central Local Government Service should also be resolved as soon as possible in favor of staff devolution if sufficient capacity can be built at the district level.

Capacity strengthening at the district level. As part of the discussion of capacity and autonomy of local governmental health authorities, a need exists to discuss and define what degree and form of managerial autonomy will go to what types of health facilities. Over the years GHS has devolved some responsibilities to facilities, but not in a homogeneous

way. Activities performed at the facility level vary significantly based on those facilities of similar type and size. The role and capacity as well as the structure of subdistrict entities and communities need clarification too. Finally, increasing autonomy at the facility level requires that bottlenecks to genuine autonomy are addressed appropriately.

The planning and implementation of decentralization would greatly benefit from a systematic assessment and mapping of the district health administration's (DHA's) and DA's capacity and conditions for taking responsibility for specific functions to be devolved. Several aspects are to be considered in strengthening local government capacity. Once effectively devolved, the different responsibilities will be carried out in different places by different groups of staff. Thus, it is necessary to break down the general capacity assessment at the local level and clearly identify the different types of capacity that will be needed within the local government and define where exactly they could be invested. Some responsibilities will be carried out at the facility level, others (yet to be transferred) by local health offices, and the remainder by the DA and its management committee and staff.

Financing framework for decentralization. A clearer health financing framework for local government would help implement decentralization. This framework could streamline the multiple existing flows and funds and take advantage of the District Assembly Common Fund (DACF) to consolidate these flows. As a first step, it would be important to estimate financial needs (expenditures) to upgrade local governments' capacity and to meet the devolution of responsibilities. Second, the framework would define financing sources and flows for decentralized levels, including a structure of incentives needed to promote effective implementation and attract staff to remote areas. As part of this framework, the current policy and formula for budget allocation across regions and districts could be revised to emphasize equitable redistribution of funding that is intrinsic to decentralization. Opportunities for testing and implementing performance-based financing schemes could be considered; international experience has shown that such schemes can provide a proper incentive structure for improving performance.

Integrated planning and budgeting. As most assessments and policy documents have pointed out, the current "composite budget" initiative has not yet taken hold. A critical step in moving toward full devolution, this initiative needs to be strengthened in the short term. This could be done by developing practical guidelines for joint planning and budgeting in health at the district levels. This means revising existing guidelines for the "composite budget" and practices to promote effective participation

by the DA in the discussion and preparation of the district health plans and budget.

Monitoring and evaluation (M&E). To better promote and support decentralization and later monitor and evaluate the process and its impact, the capacity of central and regional levels for M&E has to be strengthened. This applies to human resources, systems, and instruments. This activity could build on several important initiatives, such as M&E and performance assessment, adopted in recent years and adapt them to a decentralized system. The key objective is to enable these systems to produce reliable information at the district level.

Legal framework. The financing and functions of decentralization policy frameworks would be consolidated into one legal framework for health system decentralization; to avoid contradictions and regulatory revisions, this legal framework could be prepared once policy documents have defined all the main dimensions and aspects of decentralization.

Private sector. *The private health sector policy.* MOH developed a private sector policy in 2003. In 2011–12, it reviewed and revised the 2003 Private Sector Policy based on input from key stakeholders to establish an implementation framework, to identify and establish specific roles and responsibilities for the public and private sectors, and to set priorities and a realistic timetable to accomplish them. However, the MOH Private Sector Unit is new. It will need strengthening to serve the ministry's and other stakeholders' needs. MOH could also recruit the necessary technical support and other relevant resources from the Ministry of Finance and learn how to create and implement PPP. Finally, MOH should establish a public–private engagement committee with equal representation from the public and private sectors to facilitate dialogue among stakeholders. This engagement committee should have oversight over the review, revision, and implementation of the Private Sector Policy. Collaboration is essential among public and private stakeholders in overseeing the private sector's role in health.

Regulatory capacities, licensing, and accreditation processes. The country offers a system of licensing health providers. With the introduction of NHIS, it accredits health facilities. To improve coordination and collaboration between the regulatory bodies and NHIS accreditation, the role of licensing and accreditation boards should be reviewed. The goal should be to strengthen and identify ways to monitor and enhance quality. The licensing and accreditation processes could focus on rural facilities and staffing norms. In addition, the legal framework for laboratory services

could be finalized. Pharmacy and chemical sellers' accreditation and standards need to be revisited. Finally, it is necessary to review and harmonize the legal framework for regulatory bodies and review the mandate to level the playing field between public and private actors and eliminate nonprofessional providers.

Joint collaborative arrangements between various stakeholders. NHIS affects private sector development by putting the power to buy privately delivered services directly in the hands of health insurance enrollees. However, NHIS faces some immediate challenges. The National Health Insurance Authority (NHIA), private providers, GHS, and health sector regulatory bodies will always have to collaborate to solve these common problems. The collaboration should include the establishment of a joint task force (NHIS, GHS, professional associations, private for-profit, and private not-for-profit/mission-based providers) to address immediate and acute issues of NHIS, including fraud, delays in reimbursement, and slow accreditation. NHIA should move as quickly as possible to implement a centralized claims management system to speed up and help reduce fraud in reimbursements. There is a need to carry out periodic (annual or every two years) peer reviews of NHIS tariffs and instruments to promote quality of care, such as accreditation. A joint committee of health sector regulatory bodies and NHIA should be established to oversee and analyze the systematic collection of reliable monitoring and evaluation information to identify, understand, and resolve challenges to provider performance and quality of service.

Access to financing. Private providers rely heavily on OOP payments for operating costs. They depend on their savings and credit for investment purposes. Larger private ventures, such as private hospitals, have easier access to credit than smaller health providers. Lack of access to credit and financing (48 percent) has been a significant constraint in the expansion of the private sector. Further, several private providers are unable to upgrade their facilities to meet NHIS accreditation standards. Those that are NHIS accredited are challenged by delays in claims reimbursements. As a result, some are reluctant to register with NHIS.

Access to credit and lack of business skills. Access to credit might be improved by setting up specific lending funds through banks that target health sector borrowers and train bank loan officers in specifics of the health industry. Partial guarantees of bank health lending portfolios could also give banks incentives to reduce collateral requirements on these health loans. In addition, a need exists to create incentives for private investment in rural (and underserved urban) areas and to identify

innovative ways to provide government support to private actors. The advisory services of some national business consultants could help these efforts. To encourage the start of such relationships, a competitive small grants program could be set up to provide matching funds for contracts between health businesses and consultants.

Health Service Delivery

Options to reform Ghana's health service delivery system address (a) infrastructure, (b) human resources, and (c) pharmaceuticals. They could focus on the following.

Health infrastructure and other physical capital. *Preparation of capital investment plans.* Ghana has a process in place for the preparation of capital investment plans every five years. Much of the capital investment is financed externally. Because the process lacks routine monitoring, several hospitals are incomplete, and vehicles are not repaired or replaced; the same is true of medical and information technology equipment. Primary health care has received little attention; investment targets are unmet. Further, despite all the capital investment, the government of Ghana does not support recurrent budgets. This results in inefficient expenditures and ineffective outcomes. A dire need exists to improve planning, coordination, and transparency and to put a stringent process in place for monitoring and accountability. Further, a regular maintenance budget (costed out on depreciation) would be very beneficial.

Development of current infrastructure standards. Ghana needs to review its current infrastructure standards and develop some feasible ones, especially for hospitals and hospital beds. Planning is hampered by limited standards that guide capital investment plans. Plans based on standards, especially if they are comprehensive in addressing both the public and non-public sectors, could improve the use of limited resources. The plans could be linked to the objectives and goals of the Health Sector Medium Term Development Plan (HSMTDP) and based on principles of equity and efficiency. They could also be supported with procurement processes and budgetary and financing commitments. HWs' needs could be addressed in parallel.

Project management for capital investment. The previous Capital Investment Plan discussions identified priorities for development: (a) to improve project management and monitoring, (b) to enhance capital investment planning and budgeting, based on the country's needs, (c) to improve skills development in negotiating procurement of capital investment projects, and (d) to address the critical backlog in capital investment.

Given the huge backlog of new infrastructure and rehabilitation of current infrastructure, MOH could focus on the immediate way forward. Options for expediting rehabilitation are to contract with turnkey project promoters to take on "backlog" property maintenance (and remedial renovation), to work with local internal contractors, to continue to rely on external financing (which may not be sustainable), or to start planning budgetary allocations, especially for the primary care program. Another alternative would be to ring fence the recurrent maintenance budget, instead of committing to counterpart funding for "earmarked" capital projects.

Regulatory framework and management of equipment. Regulating the medical equipment subsector could be initiated and strengthened. The regulation process could include a technical evaluation of the medical devices in all health institutions. NHIS could benefit from using the results of regulation for its accreditation activities. Measures to standardize equipment and reduce the number of brands could be intensified. Using distributors and subsidiaries of (certified) original equipment manufacturers for technical support could be encouraged instead of the current practice of relying on agents and integrators.

Redefining of the role of the MOH Biomedical Engineering Unit (BEU). MOH and its agencies could benefit from BEU's assumption of an oversight role for the sector. This would also give BEU a mandate to link up with the technical departments of GHS and teaching hospitals. For even better performance, BEU could organize joint reviews of the country's equipment needs with GHS and teaching hospital agencies. BEU could also collaborate with the technical departments at these agencies to manage capital equipment programs (including planning, acquisition, and handing over). Before making new acquisitions, in-house capacity to use and maintain equipment could be assessed as well as recurrent cost implications. International standards and practices could be established and implemented in all teaching hospitals. The equipment management system will need to be reviewed; this review should include a nationwide stocktaking of equipment based on level of care. The Emergency Obstetric and Neonatal Care Study (2010–11) assessed equipment for maternal and child health care services; however, little was done to address equipment needs at the hospital level. Equipment maintenance is lacking. BEU could train regional staff to carry out this role or consider the feasibility of contracting maintenance to the private sector.

Transport management system. MOH has one of the most advanced transport management systems (TMSs) in the region. Many other Sub-Saharan African countries have learned from their experience. However,

transport policy and guidelines are overdue for review; the country could benefit from a single TMS policy document for MOH and its agencies. This review could define the role of MOH and the agency transport managers in vehicle procurement; the goal would be to ensure that procured vehicles are in line with Ghana's future needs. The current gaps in ambulances are somewhat being addressed through the private sector. This avenue should be explored further. There is a need to ensure continuing, regular, and thorough review of the National Ambulance Service business plans to avoid undesirable consequences of expanding its fleet. Finally, a need also exists to align capital investment in vehicles with adequate investments in their maintenance. Staff training should also be expanded to include nontransport managers. In brief, MOH could ensure that transport management is always within the focus of its reviews, assessments, and targets. To better coordinate all relevant units and agencies within MOH at the national level, TMS needs to be included in the MOH national report and annual national transport management conferences.

Information and communication technology. MOH is leading the development of the HMIS and information and communication technology needs assessment. The review would help reform policies and strategies in HMIS, electronic health, mobile health, information, communication, technology hardware, software, and standards and skills development. Further work on this is necessary.

Human resources for health. *Policy refinement*. MOH is refocusing its policy and developing a five-year HRH plan. The emphasis is on a more egalitarian distribution of HWs and a better performing health workforce. To achieve these goals, MOH is looking at the following strategies: (a) recruiting students from and training students in other than large cities and (b) incentivizing HWs to work in locations other than large cities. There is, however, no clear preservice or in-service policy. To be sustainable, a refined HRH education policy would be very beneficial. Low production capacity for the most needed categories of HWs (including profiles for specialized doctors and nurses) will need to be addressed. PPPs can also relax fiscal constraints in the HRH education system. Some private sector initiatives are already in place; more could be encouraged. Further, MOH is considering contributing to a better geographical distribution of HWs by strengthening (or creating) schools in deprived and rural areas (preferably as a training ground for regional and district-level hospitals). A need is also seen to strengthen the existing regulatory system, especially the accreditation process, to rule out poor-quality teaching centers.

Accreditation standards must be enforced with an emphasis on quality over quantity. Also, sustainable resources will be required to train new teachers, replace ineffective equipment, and rehabilitate school buildings.

Incentives. Given the rural–urban (and regional) differences in the distribution of HWs and mixed reviews for past incentives, incentive schemes will have to be scaled up but not before they have been tried, tested, and evaluated. MOH will pilot a results-based financing modality. This could be an opportunity to test monetary and nonmonetary incentives for working in deprived and rural areas. Career-based incentives could be considered for rural areas. A possibility may exist to reduce absenteeism and improve performance issues by offering performance-based incentives.

District Health Management Team. Because of the movement toward devolution, building capacity in district health management is critical. This team is key to improving public health programs, epidemiological analysis, and surveillance and helping build evidence-based planning and needs-based assessments. The district team will also need to have a better grasp of its management and technical support teams at the regional and central levels to help them improve performance at the district and regional levels. Regions that currently lack skills and have poor health outcomes should be a priority when it comes to capacity building.

Health Service Delivery Team. The health service delivery staff needs experience in team building. Prior studies have indicated that competencies are low. This suggests a need for improved and supportive supervision and for hands-on practical periodic training to ensure the staff is using those skills. Clinical practice guidelines are in place, but staff members have not viewed them as tools to help them improve their job performance. Gatekeeping has been introduced, but it is not fully operational. Many primary health clinics do not have the appropriate number of HWs; their laboratories and equipment may also be limited.

Skills enhancement for nonclinical staff. The health team requires clinical and nonclinical staff to run health facilities. However, those in management positions are not trained in management or finance. Most financial officers at health facilities and in district management are not trained accountants. It will be necessary to revisit this area of specialization. Although information technology (IT) is being introduced throughout the health delivery system, few personnel have been trained in this field. GHS is developing an IT training strategy that should help create a cadre of HWs on HMIS.

HWs database to improve monitoring. A database is needed to track staff movements, offer supportive supervision, and identify those who upgrade

their skills. A database could also be developed to track HWs working in the public and non-public sectors.

Pharmaceuticals. *Regulation and enforcement.* Ghana has made progress in setting up a modern regulatory system for the food and drug sector. However, efforts are needed to strengthen the current system and address key challenges. The main obstacles to overcome are limited resources and a lack of communication and coordination among Ghana's various players. Some options for regulatory reform are the following: (a) enforcing good standards of manufacturing and distribution, (b) increasing the monitoring of substandard/counterfeit drugs, and (c) improving the physical condition of the national drug quality control laboratory.

Industrial policy. Although domestic drug production is growing, it is fragmented and not quite ready to compete in international markets. For additional growth to occur, it will require improved quality assurance standards, improved access to credit, and a more favorable tax environment. Ghana's current prices for drugs manufactured in the country are significantly higher than average international reference pricing. This situation requires regulatory standards and enforcement. Some options for reform are drug manufacturing and wholesale and distribution.

Creation of a Group Purchasing Organization. Ghana could reinvent MOH's central procurement unit for drugs, commodities, and medical equipment into a Group Purchasing Organization (GPO) and technical services department. A review and refinement of the central unit's organization structure could be very beneficial. The goal would be to identify its comparative advantage and the most effective role it could play in a decentralized system. The central unit's procurement of public health and specialized medical products and equipment and management of donor commodities is critical. This role needs to continue in the foreseeable future. In addition, the central unit needs to reinvent itself to offer a GPO type of service, negotiating and developing contracts on behalf of Ghana's health facilities. Second, facilities could tap centrally negotiated contracts. The GPO could provide quality oversight across the supply chain. Third, it could provide technical support in helping MOH monitor what medicines are available and affordable; the goal would be to improve pricing efficiency.

Procurement management. Pharmaceutical procurement happens at multiple levels in Ghana. The central level plays an essential role in several vertical treatment programs that are intrinsic to public health, including vaccines, family planning commodities, and bed nets. Otherwise,

Ghana's pharmaceutical procurement and supply is fairly decentralized and largely privatized. Although the central level can benefit from economies of scale, localities face a challenge on this score. Decentralized levels could benefit from a centrally negotiated contract pooling arrangement that procures supplies for all facilities. Unfortunately this arrangement is uncommon in Ghana's health sector. In its new reimagined role, the central level could serve as a GPO, helping establish a framework for contracts and tapping the department's strong procurement abilities. The implementation of a GPO model could also reduce the possibility of petty collusion and corruption at the local purchasing level.

Supply chain management. The central level has a limited role in the delivery of commodities downstream. The supply chain is managed at the regional level; each region is responsible for accessing centrally procured medicines and commodities. The regions spend much time coordinating their efforts to bring back centrally procured drugs and to distribute these drugs to health facilities. Often the regions do not have the capacity to negotiate an outsourced transport model. Or they cannot easily access efficient transport services. The central level could help the regions by certifying and negotiating rates with transport companies similar to the policy in India.

Financing and payment. NHIS payment mechanisms for drugs have triggered positive and negative results. More drugs are available at health facilities—with fewer shortages, but drug prices have accelerated. Based on a recent assessment, medicine reimbursement costs represented nearly one-half of total claims reimbursed. Some practices are in place, but other options could be considered: (a) to control fraud and abuse by providers, (b) to control overprescribing and nonfraudulent irrational use of medicines, (c) to educate patients so that they do not encourage providers to overprescribe, (d) to reduce inefficient procurement practices that cause NHIA to pay more for drugs than is necessary, (e) to rationalize drugs on the EML and NHIA medicine lists, and (f) to maximize the savings potential of Affordable Medicines Facility–malaria (AMFm).[1]

The price of medicine. Around the country prices vary for the same drug. The private sector tends to charge higher prices, but even within the public sector price differentials exist. If NHIA's list of medicines had defined prices, that would reduce price variability. The government may want to consider appropriate policies that would make medicines more affordable and reduce the high prices that prevail in the marketplace. Options may include (a) indirect price regulation through framework agreements and (b) increasing the transparency of prices to empower buyers and consumers.

Rational use of medicines. Ghana faces "polypharmacy," which means the use of too many drugs, overuse of injections, overuse of antibiotics in the absence of an adequate diagnosis, and an increased tendency to prescribe drugs outside the EML and branded generics. This situation has brought about unnecessary spending on drugs, which affects the public health system and individual households. It may also lead to noncompliance because of the lack of affordability and result in complications or resistance to antibiotics or other adverse effects. The government may consider the following options to curb the overuse and inadequate use of drugs: (a) policy, (b) education and training, (c) patient copayments, and (d) provider accountability and incentives for rational prescribing.

Health Financing

Based on the performance and fiscal space analyses, health financing policy in Ghana could focus on the following.

Increasing the revenues of the NHIS. The current scenario suggests that NHIS can become insolvent by 2013, because its expenditures are increasing faster than its revenue, and its reserve fund will likely be depleted. The reserve fund needs to be protected to ensure the financial sustainability of the NHIS. At the minimum, it is necessary to maintain the share allocated to the health sector when there is economic growth or an uptake in revenue. Further, the government must ensure that NHIF receives its commitments from all sources and transfers are timely.

The NHIA is keen to increase its revenue base and has considered options to increase the allocated earmarking through VAT and levies or Social Security and National Insurance Trust contributions or through other sources such as oil revenue. The "sin tax" option has also been considered; however, simulations have suggested that the amount earned through a sin tax would be small, as the population has low use of tobacco and alcohol, and little political commitment is seen for taxing some of these substances. Further, the fiscal space analysis has also suggested that the macroeconomic situation is fragile, and expecting additional fiscal space for health, through budgets or through earmarked funds, may be a challenge.

However, additional revenues will be required to sustain NHIS, and these could be sourced in some of the following ways:

- First, other sources of revenue, such as premiums paid by the informal sector. The informal sector includes persons who can afford to pay these premiums, and this could improve the diversification of the risk

pool (include more healthy with the sick in the risk pool). This would also bring about a more diversified source of financing and would provide protection in the revenue base against macroeconomic shocks.
- Charging means-tested (differential) premiums by income profiles. A simulation has not been run to consider how much of a revenue gain this could accumulate, but certain populations could afford to pay at least the actuarially estimated premium.
- Through copayments on some (or all) NHIS beneficiaries for use of (certain) services and for purchase of prescribed drugs.
- Through steps taken to contain costs, which would likely lead to efficiency gains, including timely flow of finances through the treasury.

Reducing NHIS expenditures. The current scenario suggests several areas within the NHIS that could benefit from structural and operational reforms. To pour additional funds into NHIS without addressing these inefficiencies would lead to further wastage of resources.

NHIS is not mandatory for the informal sector workers. Although exemption is offered to a significant population, many poor persons are left out of the system, and this can be very costly to the health care system. Health outcomes are much affected because of this inequity. Improving the risk pool would be very beneficial because that would add within the beneficiaries those who are sick and those who are healthy, as well as those who are poor and those who are rich. The current scenario suggests that the population is risk averse and follows adverse selection. The healthy choose to enroll only when they fall sick. The NHIS does not benefit from a more diverse risk pool.

The number of outpatients has increased significantly, especially since the introduction of the NHIS. There is insufficient evidence to suggest where this spending is going. The provider payment mechanism could benefit from refinement. For example, the current Ghana diagnostic-related group (G-DRG) system works as fee for service and generates moral hazards and supplier-induced demands. Copayments could help reduce unnecessary use of services; gatekeeping (when possible, because currently the primary health care level has low quality of services, and unless this can be addressed, gatekeeping cannot be fully functional) could also help reduce costs by limiting bypassing lower-level facilities and self-referrals to higher-level services. Beneficiary spending ceilings, especially for primary health care, could also reduce moral hazards. Primary health care capitation and hospital reimbursement ceilings have been proposed to curtail supplier-induced demand and lengthy hospital stays.

Further, reimbursements for drugs are also growing as a share of NHIS claims. This increasing share is seen to be a result of the following: (a) decentralized procurement of drugs and limited benefits from economies of scale, (b) limited monitoring and enforcement of drug pricing markups, (c) limited control over prescription, and (d) prescribing behavior in favor of more expensive drugs. As a result, the average drug prices in Ghana are several-fold above international reference pricing. This could be controlled through better enforcements, monitoring, and a NHIS pricing list that strictly adheres to drug pricing policies and markups.

Although use of curative care has increased, little indication is seen whether cost-effective interventions are encouraged, or whether the balance of health promotion and preventive care is maintained. Treatment costs, especially for noncommunicable diseases, can be reduced significantly if the population regularly avails itself of preventive/maintenance care and screening services. Also, the inclusion within the public subsidies (or NHIS benefits package) of certain public health goods, such as family planning commodities, could help the population from meeting the unmet needs (which is significant). The NHIS benefits package is comprehensive but does not necessarily allow for a balance of cost-effective interventions, health promotion, and preventive services. The current premium rates are too low to afford this benefits package, and further consideration is required to reduce or to refine the benefits package with a more balanced service provision.

In recent NHIS budgets, the transfer of funds from NHIS's budget to MOH has been growing. It is not clear why such large subsidies are going back to MOH. Would it be more effective if the funds augmented demand-side financing and covered a larger share of the health system's operating costs by tapping NHIS's provider payment mechanisms? It would be important for MOH and NHIS to reassess the situation, including the benefits of the incentives generated from the provider–payer split.

Finally, operational inefficiencies could also be addressed. The claims processing system is still manual and faces claims processing bottlenecks. Automation of the system could help reduce some of these inefficiencies, but it would require with it a significant investment in hardware, software, skills development, and recurrent spending for maintenance and upkeep. DMHIS could play a significant role in monitoring and purchasing.

Further, MOH could address inefficiencies in the health service delivery system, particularly the limited lower-level infrastructure and the limited HWs, a situation that encourages the population to bypass lower-level facilities in favor of higher-level facilities. These lead to high administrative

costs, because overheads are higher in higher-level facilities. Further, incentives drawn up to encourage improved productivity and a skewed distribution of HWs also would help to reduce inefficiencies in the health system.

Given that NHIS has been effective for less than a decade, measuring its policy effects closely is key, and the impact of NHIS on the population's welfare must be assessed well. Institutional HMISs are still weak and strengthening them remains a priority in some agencies, including strengthening their capacity for data analysis and reporting. In parallel, household-level surveys should adopt modules that follow NHIS program coverage and its effect.

Finally, MOH could benefit from developing a comprehensive health financing strategy that provides a medium-term approach, that helps prioritize areas, and that is synergized with the HSMTDP.

Summary of Key Reform Options

Specific policy options are analyzed and discussed in the context of broader health system reforms. Table 5.1 offers a summary.

Table 5.1 Structural Reform Areas and Options

Structural component	*Options*
Decentralization and governance	
Decentralization	Policy and legal framework • Clearer policy framework required for health. Either move the agenda to support devolution or stay with the current modality of decentralization through delegation and deconcentration. What is to be devolved and what is not? • Develop one legal framework for health system decentralization. • Strengthen capacity for monitoring and evaluation at central and regional levels. Provide oversight and support to the districts. Financing framework • Clearer financing framework in health, with greater accountability: adopt some existing mechanisms, such as DACF, to consolidate the various funds and flows, integrate planning and budgeting processes, integrate M&E, and develop equalization/equity formula and performance-based financing mechanisms. • Local authorities could have more control over budget/expenditures. Most of their resources are centrally executed or earmarked there to specific programs or initiatives. HR roles and functions • Clearer staff roles and lines of authority, especially when interacting with District Assemblies and District Health Management Teams.
Private sector	Policy and regulatory framework • Private sector policy to be refined so that PPP engagement can be realized in the health sector (service delivery, procurement, supply chain, preservice training, and so on); an appropriate regulatory environment is created with incentives for the private sector to support the public sector agenda.

	HR roles and functions • Review and strengthen regulatory capacity for licensing and accreditation. • Strengthen the capacity of the private sector unit at MOH to do a better job of collaborating and coordinating with MOFEP and the National Planning Commission. Coordination and partnerships • Provide an oversight and coordination role on some of the following activities: (a) work with MOFEP to improve access to credit for the private sector in health; (b) work with NHIA to advance the agenda for accreditation of the private sector. • Form partnerships with the private sector (such as through PPP). The partnership with CHAG on service delivery is one example. There may be other opportunities for (contracting in or contracting out) laboratory services, BOT, procurement, transportation, leasing equipment, and so on.
Health service delivery	
Physical capital: infrastructure, medical and ICT equipment, and vehicles	*Infrastructure* Policy • Set infrastructure policy, standards, and guidelines, based on principles of equity and efficiency. HR roles and functions • Reorganize the infrastructure department (BEU) at MOH. Planning and coordination • Improve planning between the public and non-public sectors by coordinating mechanisms for new infrastructure. • To ensure completion and functionality, plan and implement construction with appropriate budgets for capital investments and for recurrent budgets. Improve recurrent budgets to allow for HRH, equipment, and building depreciation/maintenance so that they are parallel with one another.

(continued next page)

Table 5.1 *(continued)*

Structural component	*Options*
	Medical Regulatory framework • Develop a regulatory framework for equipment management. Standards, inventory, and monitoring • Develop a medical equipment list for all health facilities. Use it in NHIS accreditation standards, licensing, and other areas. • Regularly check on inventory. Plan for the replacement of outdated or aged medical equipment based on appropriate budgets. • Provide recurrent budgets for medical equipment maintenance and reagents. *ICT* Regulatory framework • Develop an HMIS framework for the health sector. Standards, inventory, and monitoring • Develop an ICT needs assessment that addresses electronic, mobile, and other areas. • Develop a health data dictionary. • Review and upgrade hospital HMIS. • Review and upgrade district-level HMIS. *Transport policy* • Refine and develop an integrated TMS policy for MOH and its agencies. The goal is to reduce duplication and inefficiencies and provide greater equity. *Partnerships and coordination* • Review the current private sector engagement for affordability, efficiency, and effectiveness; consider the options to work with the private sector on delivery and maintenance services.

Human resources for health	Policy and standards • Refine HRH's policy framework and five-year plans. • Have MOH and the Ministry of Education refine or develop the HRH Education Policy Framework. Accountability • Pilot incentive schemes and evaluate their outcomes before scaling up. • Consider financial and nonfinancial incentives. • Develop performance contracts and improve accountability. Partnership and monitoring • Develop plans for upgrading the skills of the District Health Management Teams. • Develop plans for skills enhancement or recruitment of appropriate nonclinical staff. Focus on management, accounting, epidemiology, M&E, ICT, and project management. • Engage in dialogue with the private sector on education, delivery of services, and management of district programs. • Develop an HRH database that regularly monitors and updates HWs in the public and non-public sectors.
Pharmaceuticals	Policy and regulatory framework • Improve regulatory capacity. • Develop policy and standards for local drug manufacturing. HR roles and functions • Review the role and functions of the MOH department responsible for pharmaceutical procurement and supply chain. Pricing and financing • Introduce more rational reimbursement methods, including capitation for basic primary care medicines, bundling in G-DRG payments, reference pricing, or other modern reimbursement methods. • Reduce expenditures for generic medicines by pooling procurement. • Consider adding copayments on drugs.

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Table 5.1 *(continued)*

Structural component	*Options*
	Partnership and coordination • Strengthen supply chain capacity. Consider private sector partnership or contracting for supply chain/transport, and other options. • Improve information systems and introduce incentives for rational use of medicines. • Update drug list based on medical appropriateness criteria. • Develop communication strategies for consumers and providers. • Conduct audits to ensure quality of drugs procured by agents/GMP and drugs available at health facilities.
Health financing	
Strategy	• Develop a health financing strategy. • Support demand-side financing initiatives. • Reduce fragmentation in health financing flows and funds. • Improve expenditure management and tracking systems and support NHAs. • Firm up plans for devolution of financing functions.
NHIS eligibility changes	• Focus on the poor (support and scale up common targeting). • Consider refining the eligibility for the exempt group. • Develop incentives to encourage enrollment.
NHIS basic benefits package	• Reassess the basic benefits package on the basis of its cost effectiveness, financial protection, and sustainability. • Consider developing cost sharing, at least for certain services and for certain beneficiary groups such as the nonpoor. • Improve coordination with vertical public health programs.
NHIS revenues	• Assess an increase in the VAT earmark and SSNIT contributions. • Introduce sin taxes. • Consider exemption of beneficiaries based on means testing. • Assess a one-time premium or fee on members.

	• Create further incentives to encourage enrollment of informal sector workers. • Consider income-related premiums. • Assess the role and appropriate level for the reserve fund.
Provider payment reforms	• Implement payment systems that encourage efficiency, quality, cost-effective service utilization, and better coordination across the continuum of care. Options include the appropriate mix of capitation, other bundled payment systems, blended payment systems, various managed care approaches, and modern pay-for-performance systems. • Review the current G-DRG, which separates services from drug reimbursement. • Review the pricing structure under G-DRG. • Review incentives and their effect on utilization patterns, including drug use.
Cost containment	• Improve audits for fraud prevention. • Improve gatekeeping to reduce unnecessary use of services or reduce the use of primary services at higher-level facilities.
Administrative reforms	• Review and upgrade the Central Claims Processing Center's HMIS. • Review and integrate the NHIS beneficiaries database with the claims reimbursement database. • Use data to support evidence-based policies and systems. • Centralize some controls. • Support strengthening the decentralized systems. • Refine the role of DMHIS and upgrade skills.

Source: World Bank staff.
Note: BOT = build, operate, and transfer; GMP = good manufacturing practice; HR = human resources; ICT = information and communication technology; MOFEP = Ministry of Finance and Economic Planning; NHA = National Health Account; SSNIT = Social Security and National Insurance Trust.

Note

1. The AMFm project was launched in 2009 and is hosted by the Global Fund's malaria control program. The chief aim of AMFm is to ensure that people suffering from malaria have access to inexpensive and effective antimalarial treatment. AMFm is a financing mechanism designed to subsidize the most effective antimalaria drugs, artemisinin-based combination therapiest (ACTs). See the Global Fund's website at http://www.theglobalfund.org/en/amfm/.

Reference

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Ghana is undergoing major demographic, epidemiological, and nutrition transitions, while the government is operationalizing its National Health Insurance Scheme (NHIS) to cover the entire population. But much work remains to be done. Ghana's health system performance in the areas of child and maternal health is worse than in other countries with comparable income and health spending levels. There are significant issues with NHIS coverage, equity, and financial sustainability as well as substantial shortages and maldistributions of health manpower and infrastructure. *The Health Sector in Ghana: A Comprehensive Assessment* analyzes Ghana's health system performance and highlights the range of policy options needed to improve health system performance and to ensure effective implementation of the NHIS.

This timely volume discusses some of the key policy debates in Ghana's health sector: decentralization and governance, private sector partnerships, the strengthening of health systems, and health financing. The book brings together the key elements of health system development and challenges, and links them to health financing and delivery performance. The study reviews the demand-side NHIS financing reform, the reform's coverage of the population and its effect on service use, and challenges in the financial sustainability of the NHIS. It also provides a holistic treatment of Ghana's health policy reform needs.

"The book is an excellent assessment of the health sector in Ghana. It provides a discussion on the policy reforms, as well as a situation analysis of changes over time in strengthening health service delivery, in health service use, and in health financing dynamics. The book provides an opportunity for policy makers and for policy analysts to understand the health reforms made in Ghana, the strengths and the current challenges, and provides lessons learnt. It is a must read!"

—**Dr. Sylvester Anemana**
Chief Director
Ministry of Health, Ghana

"This book provides the first comprehensive assessment of the context and initial experience of a low-middle-income African country at the introduction of social health insurance. It offers lessons for Ghana but helps to guide and inform other countries on the continent and low-income countries in other regions with aspirations of introducing health insurance as a way of financing health care for its citizens. There are lessons for both encouragement and caution. Either way, the book's analysis is an essential input into rational policy making on social health insurance and health care financing."

—**Maureen Lewis**
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Georgetown University, Washington, DC

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