Overview

Ghana is a lower middle-income country with a population of 28 million, an area of 238,537 square kilometres, and a per capita gross domestic product (GDP) of US$ 1387.9 per year. Life expectancy at birth was 63 years in 2015, and the total fertility rate was 4.2. Under-5 child mortality has steadily reduced from 155 to 60 per 1000 live births and the maternal mortality ratio has also reduced, from 634 to 319 deaths per 100,000 live births in 1990 and 2015 respectively. Neonatal deaths account for almost half of the under-5 mortality rate. The country is going through a triple transition: epidemiological, demographic and economic, with a continuing high burden of communicable diseases; a rising burden of noncommunicable diseases and road traffic accidents; rural-urban migration and rapid urbanization associated with the breakdown of traditional social support systems; poor housing and sanitation, and seasonal cholera outbreaks; and health problems of adolescents and older people.

In 2014, government health expenditure as a percentage of total expenditure was 10.6% (short of the Abuja Declaration target of 15%), total health expenditure as a percentage of GDP was 3.6%, and out-of-pocket expenditure as a percentage of health expenditure was 36.2%. The National Health Insurance Scheme (NHIS), established by law in 2003 and revised in 2012, is a social insurance scheme that seeks to provide access to quality health services, financial protection against catastrophic illness and universal health coverage. The active membership is 40% coverage of the population. However, there are long delays in reimbursement of service providers due to a number of factors, including inadequate funding, moral hazards, corrupt practices and inefficiencies. The Presidential Committee set up in 2016 recommended that the scheme give priority to primary health care.

Health service delivery is broadly organized by level as primary, secondary and tertiary, and has pluralistic service providers consisting of public, private, traditional and alternative service providers. The primary level is based on PHC principles and a three-tier district health system model comprising the community level, sub-district level (health centre with sub-district health management team), and district hospital and district health management team at the apex. The community level – Community-based Health Planning and Services (CHPS) – is the base of health service organization and delivery and involves demarcation of sub-districts into CHPS zones, mobilization of communities and deployment of trained health workers for integrated basic primary care, including health promotion and disease prevention.

There is a referral system to link the various levels of care but it is currently not working well, resulting in secondary and tertiary hospitals also using significant proportions of their resources for primary care services.

Table 1 summarizes key demographic and health indicators for Ghana.
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
<th>Source</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population of country, 2016 projection (male/female ratio)</td>
<td>28 308 301 (50.9/49.1%)</td>
<td>Ghana Statistical Service (GSS): Population and Housing Census(^a)</td>
<td>2010 census population: 24 658 823 (growth rate 2.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rural/urban: 49.1/50.9%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1960 census population: 6 726 815</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>World lower middle-income countries: 66 years</td>
</tr>
<tr>
<td>Infant mortality rate per 1000 live births (2014)</td>
<td>41</td>
<td>Ghana Demographic and Health Survey (GDHS)(^c)</td>
<td>Neonatal deaths not changed much from 1990 to date</td>
</tr>
<tr>
<td>Under-5 mortality rate per 1000 live births (2014)</td>
<td>60</td>
<td>GDHS(^c)</td>
<td>Declined from 155 in 1988 but could not achieve Millennium Development Goal (MDG) 3 target of 41</td>
</tr>
<tr>
<td>Maternal mortality ratio per 100 000 live births (2015)</td>
<td>319</td>
<td>United Nations estimate(^d)</td>
<td>2007 Ghana Maternal Health Survey reported 350; MDG 5 target was 185</td>
</tr>
<tr>
<td>% coverage of fully immunized under 1 year (including pneumococcal &amp; rotavirus) (2014)</td>
<td>77%</td>
<td>GDHS(^c)</td>
<td>Increased from 50.5% in 1998 to 69% in 2003 and 79% in 2008</td>
</tr>
<tr>
<td>Income or wealth inequality (Gini coefficient) (2013)</td>
<td>0.409</td>
<td>GSS: Ghana Living Standards Survey(^e)</td>
<td>Improved from 0.373 in 1992 to 0.388 (1998), 0.406 (2006)</td>
</tr>
<tr>
<td>Total health expenditure as % of GDP (2014)</td>
<td>3.6</td>
<td>United Nations(^b)</td>
<td>Shows an increasing trend though fluctuating</td>
</tr>
<tr>
<td>General government expenditure on health as % of total expenditure on health (2013)</td>
<td>60.6</td>
<td>African Health Observatory(^f)</td>
<td>Peaked at 74.4 in 2011 and started declining</td>
</tr>
<tr>
<td>General government expenditure on health as % of total government expenditure (2013)</td>
<td>10.6</td>
<td>African Health Observatory(^f)</td>
<td>Met the Abuja Declaration target of 15% in 2005, 2007 and 2009</td>
</tr>
<tr>
<td>% of total public sector expenditure on PHC</td>
<td>60%</td>
<td>World Health Organization (WHO)(^i)</td>
<td>This is an estimate from the National Health Accounts</td>
</tr>
<tr>
<td>Per capita total expenditure on health (2014 in US$)</td>
<td>58</td>
<td>WHO(^i)</td>
<td>Compared to US$ 97 average for African Region lower middle-income countries</td>
</tr>
<tr>
<td>Out-of-pocket payments as % of total expenditure on health (2014)</td>
<td>26.8%</td>
<td>WHO(^i)</td>
<td>Fluctuating but likely to increase as unofficial co-payment is common due to long delays in NHIS reimbursements to providers</td>
</tr>
</tbody>
</table>

\(^c\) 2014 Ghana Demographic and Health Survey. Ghana Statistical Service; 2014.
\(^d\) United Nations Maternal Mortality Estimation Inter-agency Group; 2015.
\(^f\) African Health Observatory/WHO; 2016.
Timeline: key milestones in the development of primary health care in Ghana

National independence in 1957 was followed by a decade of rapid expansion of health facilities across the country, resulting in a rapid increase in access to basic medical services.

A military coup d’état in 1966, followed by five more over the next three decades, coincided with a period of economic decline and slowdown in the development of basic health services. That notwithstanding, several key events continued to shape the course of PHC development.

Government, in partnerships with religious mission hospitals in the 1970s, provided services in rural and underserved areas through mobile clinics and training and use of village health workers for community-based primary care. The findings of three projects – Brong Ahafo Basic Health Services Project (1967), Danfa Comprehensive Rural Health and Family Planning Project and Brong Ahafo Rural Integrated Development Project – informed the design of Ghana’s PHC strategy (district health system model) adopted in 1979.

In the 1980s, user fees for health services were introduced to raise revenue for medical services, which had a negative impact on access to services. A search ensued for appropriate financing mechanisms, such as community health insurance schemes, culminating in the introduction of the NHIS.

The adoption of a devolved local government system in 1988 and the return to democratic civilian rule in 1993, with three peaceful changes of government from one political party to another, provided a conducive environment for effective stakeholder engagement and popular participation in governance, discourses on public issues, and service delivery.

In the 1990s the Ministry of Health instituted the training of district health management teams and public health practitioners to provide needed leadership for the district health system and PHC. In response to the government’s Vision 2020 strategy for economic and social transformation launched in 1995, the Ministry of Health developed the Medium Term Health Strategy and embarked on health sector reforms, including the establishment of the Ghana Health Service and adoption of the health sector-wide approach. This in turn led to collaboration with health development partners in the development of a series of medium-term health plans and Common Management Arrangements that improved funding for district health services.

A Human Resources for Health Policy and Strategy was developed in 1997 and revised twice, in 2002 and 2007. Implementation of the strategy increased the production of health professionals, especially middle-level personnel, and the retention of skilled health professionals in the country.

The research findings of the Navrongo Community Health and Family Planning Project informed the development of the national CHPS strategy in 2000. Though it was embraced by communities and politicians, and demonstrated some success, implementation of the CHPS strategy faced a number of challenges, including poor community mobilization in most areas; weak capacity of the subdistricts to supervise and provide technical support; lack of alignment of vertical programmes; inadequate investment in CHPS infrastructure and equipment; and absence of dedicated funding for operations at this level. The revised policy seeks to address some of these challenges.

Figure 1 provides a timeline of key developments relevant to the Ghana PHC system.

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14 CHPS: the strategy for bridging the equity gaps in access to quality health services. Ministry of Health, 2002.
15 Community-based Health Planning and Services (CHPS): the operational policy. Ghana Health Service; 2005.
Figure 1. Timeline of key developments relevant to the Ghana PHC system

1957
Gained independence, followed by rapid expansion of medical services and training of mid-level health workers

Late 1960s to 1970s
Local initiatives include mobile clinics and training of village health workers; PHC precursor projects; Basic Health Services Project (1967–1971); Danfa Comprehensive Rural Health and Family Planning Project (1970–1979); Brong-Ahafo Rural Integrated Development Project (1975–1979)

1980s
Several PHC initiatives and structural adjustments; staff redeployment; Bamako Initiative; essential drugs list; eight elements of PHC; National Traditional Birth Attendants Programme; Strengthening District Health Systems; introduction of Ghana Demographic and Health Surveys (GDHS)

1983
User fees introduced and substantially increased in 1985, resulting in decreased service utilization

1992
Fourth Republican Constitution promulgated and multiparty elections

1993
Return to constitutional rule (fourth return to civilian rule); and Local Government Law passed

1994
Community-based Health Planning and Services (CHPS) precursor studies started in Navongo

1996
Ghana Vision 2020 (national medium-term development agenda) document with PHC focus launched

1997
First Five Year Programme of Work (POW I), 1997–2001; first Sector-wide Approach (SWAp I) introduced; first Common Management Arrangements (CMA I)

2000
CHPS policy adopted, reviewed in 2009 and 2014; Ghana Health Service established with the Ministry of Health delegating the service delivery function and retaining the policy and other functions of the sector

2003
NHIS Act No. 650 passed; first Ghana Poverty Reduction Strategy (GPRS I), 2003–2005; policy on new community health nurse training schools and increased intake

2007

2010
First Ghana Shared Growth and Development Agenda (GSGDA I), 2010–2013; economy rebased as lower middle-income country; first Health Sector Medium Term Development Plan

2014
GSGDA II, 2014–2017; Health Sector Medium Term Development Plan, 2014–2017; CMA IV

2017
A different political party took over government after 2016 parliamentary and presidential elections

Late 1960s to 1970s
Local initiatives include mobile clinics and training of village health workers; PHC precursor projects; Basic Health Services Project (1967–1971); Danfa Comprehensive Rural Health and Family Planning Project (1970–1979); Brong-Ahafo Rural Integrated Development Project (1975–1979)
Governance

Ghana has a unitary democratic government system\(^{17,18}\) comprising the executive, legislature and judiciary with separation of powers, and a decentralized local government system consisting of 216 district assemblies, with 10 regional coordinating councils performing a coordinating role. The Ministry of Health is the sector ministry providing overall policy direction to all players in the health sector: public and private entities, health development partners, nongovernmental organizations (NGOs) and health-related agencies. The Ghana Health Service\(^{19}\) is the agency responsible for providing direction and implementation of primary and secondary health services in the country, and therefore works with all service providers at all levels to ensure access to quality primary care services, including tertiary, faith-based, private, traditional and alternative service providers. PHC governance at the national level is through Common Management Arrangements agreed among the sector stakeholders through various meetings, such as sector working groups, interagency technical group meetings, business meetings and health sector reviews and summits.\(^{20,21}\) The PHC-level various technical management teams and corresponding committees, with representation from key stakeholders, are the governance structures for PHC, as illustrated in Figure 2.

**Figure 2. Ghana PHC governance and health service delivery structure**
The regional and district health management teams, representing the Ghana Health Service at regional and district levels, provide leadership for, coordinate and provide technical support to the lower levels, and report administratively to the appropriate local government bodies. Regional and district health committees, with representation from the corresponding local government, religious and traditional authorities, have advisory status, and represent the voice of communities and other stakeholders in health. The governance system at subdistrict level is weak, especially the linkages with the local government system. In CHPS zones (community level), community health teams, comprising health workers and community volunteers, deliver integrated primary care services with community health committees playing an oversight and supportive role. This is also weak in some areas. These structures will need strengthening to support PHC, irrespective of how the government’s ongoing decentralization policy is implemented in the health sector. The Coalition of NGOs in Health, an umbrella organization of NGOs with advocacy and watchdog roles and direct service delivery in the health sector, has a national secretariat and regional branches and is a key partner, as are associations of private midwives and medical practitioners. These are, however, not organized at the district level, where their integration into the district health system is vital for effective PHC.

Health financing

The main funding sources for PHC are the same as for the rest of the health system, and are broadly classified in the National Health Accounts as public, private and international funds (Figure 3). The public funds consist of those from the consolidated fund, financial credits and the NHIS funds, excluding the premiums and donor support. The international funds consist of donor funds routed through the Ministry of Finance as multilateral budget support and sector budget support or earmarked funds provided to the Ministry of Health or its agencies for programmes. The private funds are the out-of-pocket payments by households for service delivery, the health insurance premiums and other private resources spent on health. These funds are channelled through multiple routes (Figure 4).

The public contributions are increasing as the international funds are diminishing. With further analysis of the National Health Accounts, WHO reported that public and private expenditure accounted for 60% and 40% of Ghana's total PHC expenditure respectively. The results of the 2013 to 2015 National Health Accounts are not yet available, but the audited accounts of the Ministry of Health for the period showed a decreasing trend in the proportion of the public expenditure on PHC (district health services), with most of it going to pay salaries and counterpart payments, with little remaining for logistics and operations.

Figure 3. Sources and amounts of health sector funding, Ghana, 2005, 2010 and 2012 (US$ millions)

Source: Ministry of Health (2014), National Health Accounts for 2012.

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22 Ministry of Health (2014), National Health Accounts for 2012.
The government is resorting to credit financing of capital projects. The NHIS has become the main source for financing goods and services for clinical care, and any delays in reimbursement of providers has serious consequences for the quality of care; some providers are resorting to unofficial co-payment. Most of the international funds are also earmarked, and releases are often tied to conditionalities. Public health services, supervision, information gathering and community-based activities are thus left unfunded. Meanwhile, as Ghana is a lower middle-income country, international funds will continue to diminish as most development partners have started implementing graduation schemes to eventually end their support between 2020 and 2022. As the government is undergoing fiscal consolidation under the guidance of the International Monetary Fund, the fiscal space is tight for any prospects of a significant increase in government funding. The best option will be to reform the NHIS and give greater focus to PHC.

Figures 5, 6 and 7 present data on various aspects of PHC expenditure.
Human resources

The availability of trained workers at PHC level has improved significantly in the past decade due to increased production from both public and private sectors. The increased intake into training schools has not been matched by a commensurate increase in teaching and learning materials, clinical training sites and tutors, leading to lower first-time pass rates in the professional examinations, compromising the quality of graduates. In 2015, 5347 medical doctors and 69 121 nurses and midwives were registered, with an estimated 30% of doctors and 21% of nurses working in the private sector, though not fully employed.24 The human resources for health in the public sector have been increasing in the past decade, with doctor and nurse to population ratios of 1:8934 and 1:739 respectively in 2015, but the distribution is skewed in favour of teaching hospitals and urban areas, with rural and deprived areas poorly staffed, especially in the northern part of the country (Figure 8). The high standards set by the new staffing norms25 may worsen the inequities unless a quota system is set and enforced, and supported with a rural incentive system. Both public and private sectors have limited fiscal capacity to absorb the large numbers of health professionals turned out annually. This has become a political issue, with the frequent picketing of unemployed graduates at the Ministry of Health agitating for employment. Essential health worker to population density was reported to double from 1.07 in 2005 to 2.14 per 1000 population in 2015, but could be higher if there were full employment of the available workforce.

Planning and implementation

At the beginning of each planning year, the Ministry of Health issues guidelines with budget ceilings, and districts develop and submit their plans for review and collation through the regions, the Ghana Health Service, the Ministry of Health and the Ministry of Finance for parliamentary approval. Once approved, the human resources and investment budgets are centralized, and the goods and services budget is released quarterly by the Ministry of Finance through the Ministry of Health for implementation. Apart from this mainstream planning, some financiers of technical programmes and projects hold additional and separate planning sessions with districts based on their interest areas. Hence, districts have multiple plans, and implement activities for which funds are made available.

Multiple plans26 and poor coordination during implementation result in inefficiencies and suboptimal performance. For instance, the increase in staff availability has not translated into increased service coverage because of lack of logistics and funds for operations. The referral system is also compromised because providers compete for NHIS clients to generate more revenue. Thus antenatal care coverage (at least four visits)27 declined from 72% in 2012 to 63% in 2015, and skilled attendance at delivery and penta-5 vaccine coverage have stagnated at around 55% and 85–88% respectively.

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24 Acquah S. Human resources for health projections for the Ghana health sector. 2016.
26 Global Fund to Fight AIDS, Tuberculosis and Malaria, and bilateral programmes and projects.
Health information, monitoring and evaluation

Monitoring and evaluation frameworks of plans and programmes, Medical Records Policy and guidelines, and the Common Management Arrangements guide monitoring and evaluation of institutional and overall health sector performance.

The Ghana Health Service has replaced the paper-based routine health information management with an integrated Internet-based District Health Information Management System (DHIMS2). Summary data, once entered into the database at the facility level, are accessible to policy-makers and implementers at all levels by authorization, and standard and customized summary reports can be generated. Completeness, timeliness and data quality are improving but data analysis and use for decision-making are major challenges. The Ghana Health Service is currently piloting etracker, transactional data software for capturing service delivery data at peripheral health facilities that is integrated with DHIMS2 database for easy data transfer. Discussions are also ongoing for all hospitals to deploy integrated electronic medical and management records systems that are compliant with DHIMS2. These efforts aim to minimize errors, reduce workload in data entry and facilitate immediate use of data for decision-making at all levels.

The health sector uses a broad range of sectorwide indicators to monitor sector plans and programmes, and specific ones for assessing regional, district, and institutional performance. These indicators are reported through the DHIMS2 database, management reports, monitoring visits, review meetings, and peer reviews at all levels.

As part of the Common Management Arrangements with health partners, annual reviews by key stakeholders start at the facility level, through district, regional, and agency entities, to the health summit at the national level. A holistic assessment report of the sector is presented at the annual health summit, where consensus is built on key issues of the sector, followed by the signing of an aide-memoire.

In the regions and districts in particular, the health sector is acknowledged to have the most robust monitoring and evaluation system, with broad participation from local government, traditional authorities, NGOs and the private sector. However, its current inefficiencies will improve and synergy will be achieved if there is timely release of funding and if management at all levels ensures integration of the multiplicity of vertical programme monitoring visits and reviews. The routine information systems are complemented by information from periodic population-based surveys such as demographic and house surveys, multiple cluster surveys and special studies. The Research Division of the Ghana Health Service and the three research centres, together with the universities and other research institutions, have the capacity to conduct quality research to inform policy and programme implementation; however, government funding for research is almost non-existent.

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29 Medical Records Policy. Ministry of Health; 2008.
Regulatory processes

Regulatory systems in health have been developing and expanding over the years through the enactment of laws and establishment of statutory bodies to ensure equipment standardization, safe food and health products, and certification of health facilities and health professionals. The Ghana Standards Authority ensures that all products and equipment meet national or International Organization for Standardization (ISO) standards. The Food and Drugs Authority provided for in the Public Health Act No. 851\textsuperscript{30} regulates and ensures the safety of food and health products. Act No. 851 also has provisions for disease and tobacco control, vaccination and environmental sanitation. The Health Facilities Regulatory Agency\textsuperscript{31} is the regulator of both public and private orthodox health service delivery facilities, whereas the Traditional and Allied Medicine Council is responsible for traditional and allied medicine products and practice. The Health Professionals Act No. 857\textsuperscript{32} of 2013 consolidates all the laws governing the training and practice of all health professions, establishing separate regulatory bodies for medical and dental practitioners, nurses and midwives, pharmacists, pharmacy technicians and chemical sellers, and a varied group classified as allied health professionals. Medical and Dental, Nurses and Midwives, and Pharmacy Councils have developed strong regulatory systems for training, registration and renewal.

Challenges, however, still remain in post-registration monitoring and enforcement, especially regarding the operations of chemical sellers and traditional and alternative medicine practice. There is also a lack of coordination of agencies for effective and efficient regulation. The consequences are seen in occurrences of substandard foods, medicines and diagnostic equipment on the market, and unsubstantiated claims and advertisements by some traditional and alternative medicine practitioners in the media.

\textsuperscript{30} Public Health Act No. 851. Ministry of Health; 2012.
\textsuperscript{31} Health Institutions and Facilities Act No. 829. Ministry of Health; 2011.
\textsuperscript{32} Health Professionals Act No. 857. Ministry of Health; 2013.
Quality and safety

Quality and safety in PHC is ensured through effective regulation and quality assurance mechanisms in service delivery. The Food and Drugs Authority and the Pharmacy Council also implement programmes in pharmacovigilance to ensure the safety of drugs and medicines, including monitoring adverse drug reactions and adverse effects following immunization. The regulatory bodies are intensifying their efforts to seize and destroy substandard, fake and expired products, and there have been occasional cases of sanctions imposed on health facilities and professionals, and in some instances the law courts have applied fines and compensations. The increase in cases may not necessarily result from increased incidence of infringement of regulations, but may be consequent on increased vigilance by the regulatory bodies.

Quality assurance is led and coordinated by the Quality Assurance Department under the Institutional Care Division of the Ghana Health Service. The sector has developed a catalogue of quality assurance policies, standards, guidelines and protocols, the latest being the National Healthcare Quality Strategy launched in 2016, but dissemination and use of the knowledge products remains a challenge. Other challenges that need to be addressed include negative staff attitudes, poorly functioning emergency systems, and inefficient institutional and management systems.

In response to the government’s Vision 2020 strategy for economic and social transformation launched in 1995, the Ministry of Health developed the Medium Term Health Strategy and embarked on health sector reforms.

Way forward and policy considerations

The way forward to universal health coverage in Ghana is to reform the NHIS to prioritize the delivery of integrated PHC services, and to strengthen the district health services to provide integrated quality and affordable health services. A revised CHPS policy should be implemented with the active engagement of communities and other stakeholders to ensure closer-to-client basic PHC services in all communities. Subdistrict and district hospitals should be strengthened with the necessary skilled staff, logistics and infrastructure to provide backup to the CHPS level. Investment in construction of new hospitals should be limited to underserved areas.

A sustainable leadership and management development programme at all levels, especially in the districts and regions, is essential to ensure effective implementation of policies. The PHC governance system should also be strengthened to promote more participation by communities and other stakeholders and to enhance accountability. Any further decentralization of the health sector should ensure that it is supported by a human resources budget and quota system with realistic incentives that will promote equitable human resources distribution. The current numerous and siloed national agencies will also need to be realigned to provide coherent policy direction.

Authors

Faculty of Public Health,
Ghana College of Physicians and Surgeons:

Erasmus E.A. Agongo
Patrick Agana-Nsiire
Nana K.A. Enyimayew
Moses Komla Adibo
Emmanuel Nonaka Mensah
This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization, as part of the Primary Health Care Systems (PRIMASYS) initiative. PRIMASYS is funded by the Bill & Melinda Gates Foundation, and aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance. The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries.