

# Christian Health Association of Ghana (CHAG)

## ANNUAL REPORT

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2013



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# Christian Health Association of Ghana

Annual Report 2013  
*Strengthening Health Systems  
to Improve Patient Safety*

**MAY, 2014**



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## Abbreviations

|               |   |
|---------------|---|
| <b>ACCM</b>   | Annual Conference & Council Meeting           |
| <b>ANC</b>    | Ante Natal Care                               |
| <b>ARI</b>    | Acute Respiratory infections                  |
| <b>ART</b>    | Anti-Retroviral Treatment                     |
| <b>BLS</b>    | Basic life Support                            |
| <b>C4C</b>    | Connect for Change                            |
| <b>CCG</b>    | Christian Council of Ghana                    |
| <b>CHAG</b>   | Christian Health Association of Ghana         |
| <b>CHC</b>    | Church Health Coordinators                    |
| <b>CHCU</b>   | Church Health Coordination Units              |
| <b>CHPS</b>   | Community Health Planning and Services        |
| <b>CQI</b>    | Continuous Quality Improvement                |
| <b>CSO</b>    | Civil Society Organisation                    |
| <b>CSS</b>    | Community System Strengthening                |
| <b>DANIDA</b> | Danish international Development Agency       |
| <b>DFID</b>   | Department for International Development      |
| <b>DPs</b>    | Development Partners                          |
| <b>DHMIS</b>  | District Health Management Information System |
| <b>GHS</b>    | Ghana Health Service                          |
| <b>GOG</b>    | Government of Ghana                           |
| <b>EMS</b>    | Emergency Medical Services                    |
| <b>ES</b>     | Executive Secretariat                         |
| <b>HR</b>     | Human Resources                               |
| <b>HSS</b>    | Health Systems Strengthening                  |
| <b>ICT</b>    | Information Communication Technology          |
| <b>IGF</b>    | Income Generating Funds                       |
| <b>IPD</b>    | In-Patient Department                         |
| <b>MDG</b>    | Millennium Development Goal                   |
| <b>MI</b> s   | Member Institutions                           |



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|               |  |
|---------------|--|
| <b>MOFEP</b>  | Ministry of Finance and Economic Planning  |
| <b>MOH</b>    | Ministry of Health                         |
| <b>MOU</b>    | Memorandum of Understanding                |
| <b>NCHS</b>   | National Catholic Health Secretariat       |
| <b>NHIA</b>   | National Health Insurance Authority        |
| <b>OPD</b>    | Out-Patient Department                     |
| <b>OPAT</b>   | Organisational Performance Assessment Tool |
| <b>PHC</b>    | Primary Health Care                        |
| <b>PHS</b>    | Presbyterian Health Service                |
| <b>PLHIV</b>  | Patients Living with HIV and AIDS          |
| <b>PMTCT</b>  | Prevention Mother to Child Transmission    |
| <b>POW</b>    | Plan of Work                               |
| <b>SDA</b>    | Seventh Day Adventist                      |
| <b>TBA</b>    | Traditional Birth Attendant                |
| <b>UTI</b>    | Urinary Tract Infection                    |
| <b>UNAIDS</b> | United Nations Population Fund             |
| <b>UNFPA</b>  | United Nations Program on HIV/AIDS         |
| <b>URTI</b>   | Upper Respiratory Tract Infection          |
| <b>WHO</b>    | World Health Organisation                  |
| <b>WISN</b>   | Work Indicator Staffing Norm               |

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## Message from the Board

On behalf of the board, I take this opportunity to thank God for the guidance of CHAG in its endeavours to provide health care to the people of Ghana in fulfilment of Christ's Healing Ministry. He has inspired us to give the best of ourselves. He has challenged us improve our services, especially for the most deprived of our country. He has encouraged us to work towards a more just society in partnership with the Government and many other agencies, guided by Christian identity and values. We are grateful to Him as He guides our efforts to respect the dignity and equal rights of all person irrespective of sex, sexual orientation, race, color, religion, political orientation, birth- or societal status.

We express our sincere thanks to all our staff; medical and non-medical, tutors, managers and coordinators for their tireless determination to play their roles diligently under at times difficult and challenging situations. We are grateful to all of them! We are also extremely proud to see that CHAG continued to employ, educate, train and invest in its staff as we appreciate them as key to our achievements and aspirations!

We express our earnest appreciation for the tremendous support we received from the Government of Ghana. We are indebted by the continued financial support, the respect and appreciation we received from the Ministry of Health and its Agencies. 2013 marked an important step towards a strategic partnership with the Ghana Health Service and a closer collaboration and alignment of our health services at the Regions and in the Districts.

Finally, we thank our donors, development partners and well-wishers for all the support, concerns, efforts and guidance that we received. We are grateful for all this generous support and goodwill.

It is our hope and prayer that the Good Lord will continue to bless us all with wisdom and strength to continue meeting the health needs of all people living in Ghana.

May God bless and continue to guide us,

**Chairman CHAG Board**  
**Dr. Kwabena Adu-Poku**



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## Acknowledgements

This annual report provides information on the performance, service outputs and impact of the entire CHAG Network for the year 2013 towards achieving the objectives of the Health Sector of Ghana. In addition, the report provides an account of the status of our Network and the role it aspires to contribute in strengthening the health sector.

CHAG wishes to acknowledge the immense support from private and philanthropic supporters, foundations, NGOs and donors to our health institutions and our network. Each in their own way has contributed to support our mission to promote the healing Ministry of Christ and to be a reliable partner in the Health Sector providing services to the people of Ghana.

We welcome your comment and suggestions.

**Dr. Gilbert Buckle**  
**Executive Director**

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# Map of Ghana



## CHAG in a Nutshell

CHAG is a Network organisation of 183 health facilities and health training institutions owned by 21 different Christian Church Denominations. CHAG provides health care to the most vulnerable and underprivileged population groups particularly in the most remote areas of Ghana.

CHAG is a recognised Agency of the Ministry of Health and works within the policies, guidelines and strategies of the Ministry of Health (MOH). Nonetheless, CHAG is autonomous and takes an independent position to advocate and promote improvements in the health sector and to promote the interest of its members and its target beneficiaries.

CHAG is directed by a Strategic Framework outlining aspirations and approaches inspired by Christian identity, purpose and values.

For more information, kindly visit CHAG website: [www.chag.org.gh](http://www.chag.org.gh)



## 1. Executive Summary

During 2013, CHAG consolidated health services provision through its network of 173 health facilities. Whereas 2 key outcome health indices show a slightly improved trend, 3 other key outcome indicators are slightly stagnating (Table 1):

*Table 1: Main Health Indicators: 2010 – 2013*

| Health Indicator     | 2010 | 2011 | 2012 | 2013 | 4-Year Trend |
|----------------------|------|------|------|------|--------------|
| Maternal Mortality   | 181  | 254  | 187  | 177  | Improving    |
| Infant Mortality     | 12.4 | 12.9 | 5.9  | 7.9  | Fluctuating  |
| Under-5 Mortality    | 11.2 | 9.2  | 6.5  | 7.7  | Fluctuating  |
| Still Births         | 37   | 29   | 25   | 23   | Improving    |
| Crude Mortality Rate | 39.7 | 25.7 | 22.4 | 23.1 | Fluctuating  |

Whereas out-patient attendance showed just a slight increase compared to 2012 (1.3%), in-patient attendance further increased by 8% compared to 2012. Provision of Maternal Health Services remained a priority area and increases were recorded in number of deliveries (1.2%) and number of Caesarean Sections (14.3%). Antenatal Care recorded an increase of 36.5% in registrants and 25% in attendance. Overall, provision of HIV/AIDS related health and counselling services increased considerably compared to previous years. Whereas profile of diagnosed conditions at OPD has not changed much, proportion of Non-Communicable diseases is increasing.

Despite an overall increase in staff employment with almost 19%, CHAG continued to struggle with serious shortages in clinical staff such as Medical Doctors, Medical Specialist and Pharmacists. Moreover, available staff is unevenly distributed across the Network putting pressure on securing equitable and quality health services. In part, this also explains the considerable variance in performance within the Network. Pressure on the Government wage-bill resulted in a reduced number of staff accepted on the government payroll than expected.

Persistent delays in NHIA claim reimbursement up to 3-6 months resulted in serious solvency constraints of all members of the Network. Moreover, NHIA tariff levels for services and commodities, although slightly adjusted, remained low and did not keep up with the devaluation of the Ghana Cedi. Available funds for capital investments and maintenance remained critically insufficient and, if not addressed, will profoundly impact on service readiness of plant and equipment.

CHAG continued to engage with the Ministry of Health (MOH), the Ghana Health Service (GHS) and many other stakeholders to strengthen the health sector through policy dialogue, technical input and sharing best practices. CHAG entered into a Memorandum of Understanding with the GHS to improve collaboration at Regional and District levels. In order to further develop the Network and strengthen service outputs, CHAG formulated a new 3-year strategic framework (2014-2016) and maintained partnerships with various donor agencies.

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## 2. Status and Performance Report CHAG

This chapter provides information on the performance, outcome and status of CHAG during 2013. It is structured along the 9 health systems blocks of the Health System Strengthening model.<sup>1</sup>

### 2.1 Leadership and Governance

Leadership and governance relates to providing the direction, structure and stewardship to guide the organization to effectively achieve desired outcomes and impact. It involves the competent and transparent use of resources as well as performance management in an accountable, equitable and responsive manner. Important and required competencies are strategic planning, organizational and institutional development, general- and financial management, monitoring and evaluation, adherence to regulation and inter-sector and network advocacy.

CHAG is a Network of autonomous health facilities. There is some degree of oversight by Church coordinating units in the majority of health facilities. The larger 7 Church denominations of CHAG operate such autonomous coordinating offices either at Presbytery, Diocesan or National level. They provide technical, logistical and program support to their corresponding health facilities. To some extent they also mobilize funding for their members. Majority of these offices have longer-term strategic plans, policies and administrative guidelines and increasingly, members operate within these guidelines.

Membership to CHAG is subject to a Christian identity, subscribing to CHAG's constitution, an annual membership fee and a regular membership audit. Governance is participatory in nature and secured through a full member council, which meets annually to discuss and approve the strategic direction of the network overseen by an elected board of representatives of the 3 founding Churches of CHAG. At the National level, CHAG is spearheaded by the Secretariat providing stewardship of CHAG, developing strategic partnerships in support of capacity development of the network and its members and articulating the network's position and interest in the policy discourse of the health sector. During 2013, CHAG finalized a new 3-year strategic framework for the entire network providing direction for all CHAG agencies to prepare work plans for the period 2014-2016.<sup>2</sup>

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<sup>1</sup> Since 2010, CHAG applies the Health System Strengthening (HSS) model to improve organizational performance and outcomes of the individual health facility. Moreover, the model is used to improve the institutional performance of the CHAG network in support of strengthening the Ghana health sector. The HSS model distinguishes 9 HSS blocks as follows: Leadership and Governance, Human Resources, Service Delivery, Finances, Technology, Health Information, Community Participation, partnerships, Research. The blocks are interdependent and mutually contribute to the delivery of quality health services (A more elaborate explanation of the HSS model is provided in annex 3).

<sup>2</sup> CHAG, Strategic Framework 2014 – 2016, Unity in Diversity, improving Health Outcomes by strengthening Health Systems, December 2013.

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Being an agency of the MOH, the Network complies with the many sector policies, procedures, treatment guidelines, staffing norms and reporting requirements. During 2013, members continued to receive facilitative support from CHCUs as well as from the secretariat to improve compliance to all these requirements as well as to all CHAGs internal guidelines and procedures.

At the National level, CHAG continued to participate in health sector meetings and technical working groups to promote member's interest, influence health sector policy and advance the health sector (e.g. Health Summit, Health Business meetings, HRH-Committee, NHIA advice committee, Parliamentary Select Committee Health, etc.). CHAG engaged into a strategic partnership with the GHS through the signing of a MOU supporting closer collaboration and improved alignment at the Regions and Districts.<sup>3</sup>

During 2013, CHAG further developed and tested the Network's corporate M&E tool. The M&E tool provides a framework of indicators and measures to assess organizational performance and health outcomes of CHAG health facilities (Annex 3). The M&E tool will be further tested on a larger scale during 2014.

## 2.2 Human Resources

Human Resources relate to all aspects of availability, functionality, performance and management of staff to attain optimum workforce productivity. The production, distribution, development, retention and utilization of a health workforce of the appropriate quantity, quality and the proper skill mix is essential to secure effective and quality health services. It involves planning, pre-service training, continuous professional development and managing the performance of both clinical and support workforce.

The total number of staff employed in CHAG health facilities in 2013 is 11,127; an increase of 1,771 (18.9%) compared to 2012.<sup>3</sup> About 60% of all staff is working with the National Catholic Health Secretariat (NCHS), 13% with the Presbyterian Health Service (PHS), 10% with the Seventh Day Adventists (SDA), 4% with the Methodist Church and 4% with the Pentecost Church. The remaining staff (9%) is employed by the further 16 charismatic church denominations under CHAG.

The proportion of clinical professional staff is about 64% whereas non-medical support staff is about 36%. About 19% of all clinical staff is made up of professional nurses (Registered General Nurses) whereas 29% consist of auxiliary nurses; health assistants (15%), enrolled nurses (8%) and community health nurses (5%). As in 2012, there is a serious shortage of MOs, medical specialist and pharmacists constituting just 2.1%, 0.5% and 0.4% of the total

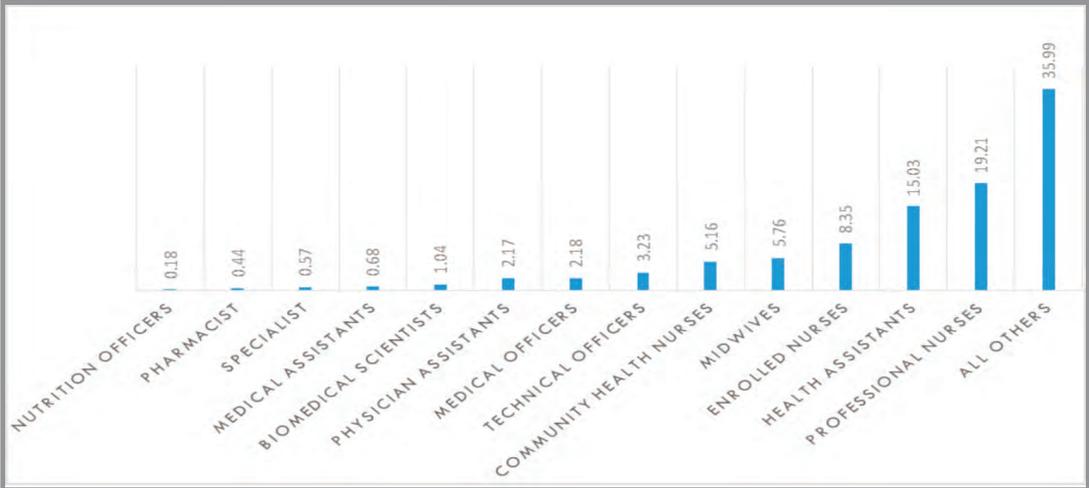
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<sup>3</sup> Memorandum of Understanding between the GHS and CHAG (December 2013).



staff strength respectively. However, the number of MOs slightly increased by 0.5% as compared to 2012 whereas the percentage of midwives of the total staff strength somewhat reduced from 6.5% to 5.7% (Figure 1).

Figure 1: Staff Percentages by Category: 2013



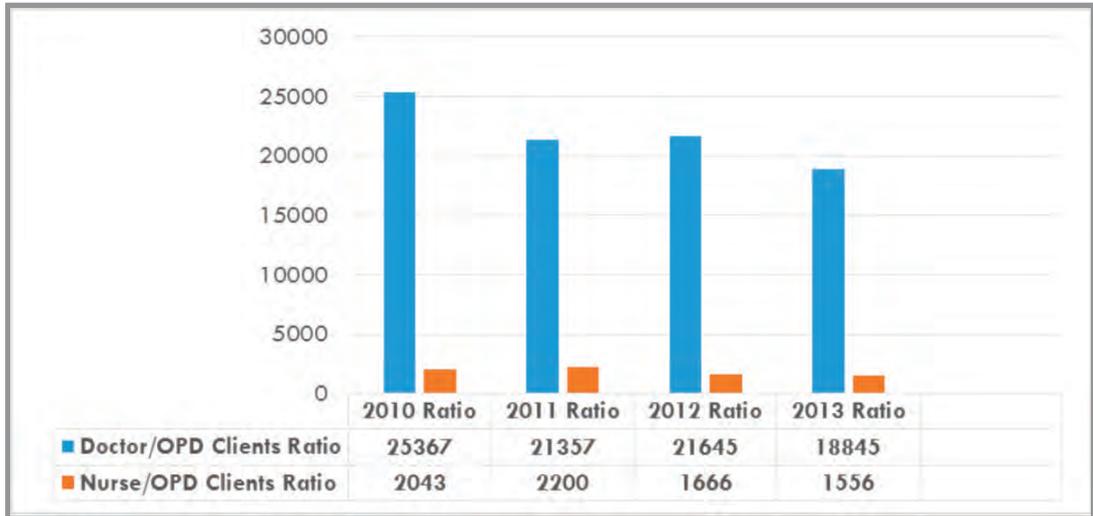
Being an agency of the MOH, most staff employed in CHAG are on GOG payroll. During 2013, an additional 1,998 employees were successfully mechanized on CHAG payroll either by new postings or replacement. As in 2012, CHAG benefited from the central posting of staff with a total of 669 new postings in 2013; 75% professional and auxiliary nurses, 13.5% MOs and medical specialists, and 7.5% new midwives (graph 2).<sup>4</sup>

During 2013, the doctor/OPD Client ratio improved considerably compared to 2012; from 21.645 clients per doctor to 18.845 clients per doctor confirming an improving 4-year trend. Increasing number of nurses resulted also in a sustained improving trend in Nurse/OPD Client ratio (Figure 2).

<sup>4</sup> This figure doesn't include direct posting from the Regions!



Figure 2: Doctor and Nurse Client Ratios (OPD): 2010 – 2013



However, increasing labor costs in the health sector required MIs to better monitor and clean up their payrolls and to institute a quarterly payroll census in the near future. On the whole, compliance to National MOH policies and HR-guidelines improved among CHAG member institutions. However, compliance to guidelines related to staff recruitment, - promotions and transfers remain a challenge for which improved coordination by the respective CHCUs is required.

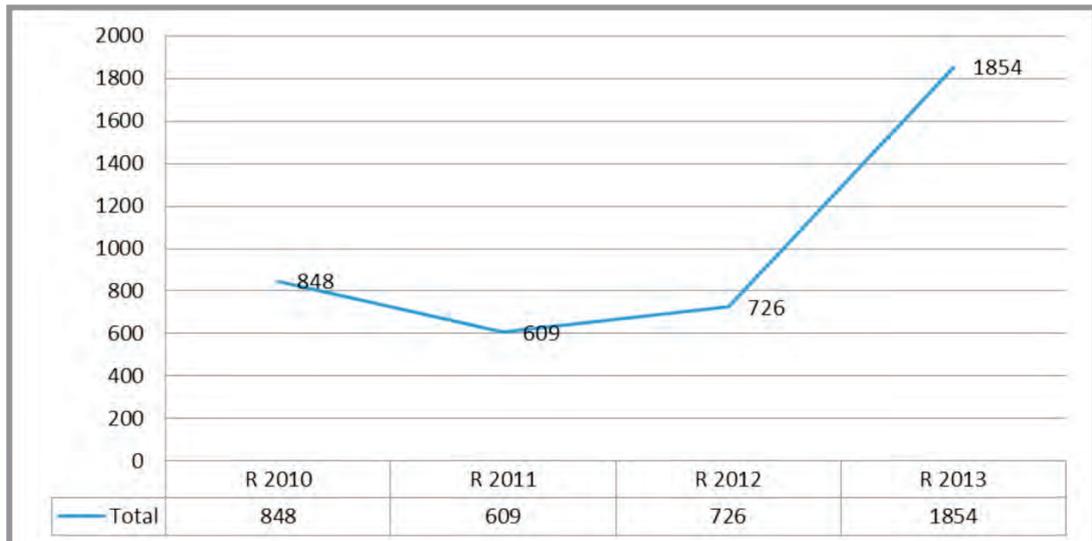
Shortages in clinical staff (MDs, nurses, physician assistant, radiographers and midwives) remain a critical challenge to most of CHAG members. In addition, professional staff are unequally distributed within the network particularly affecting 'difficult-to-reach-areas'. More staff are also leaving CHAG to join the GHS or other agencies.

CHAG continued to provide facilitative, financial and capacity training support in the area of HR management and planning to a significant number of MIs. The WHO tool on staffing needs the so called: 'Work Indicator Staffing Norm' (WISN) was adopted for use across the network. Furthermore, capacity support to CHAG members continued in the area of organizational development and training in health systems strengthening (HSS), community systems strengthening (CSS), advocacy and policy influencing (API) and organizational performance management (OPM). The HR unit of the secretariat was expanded with 4 additional staff. During 2013, CHAG joined the 'Health Sector Occupational Pension Scheme', which was established by the MOH and all its agencies in collaboration with all the Labor Unions.

## 2.2.1 Health Training Institutions

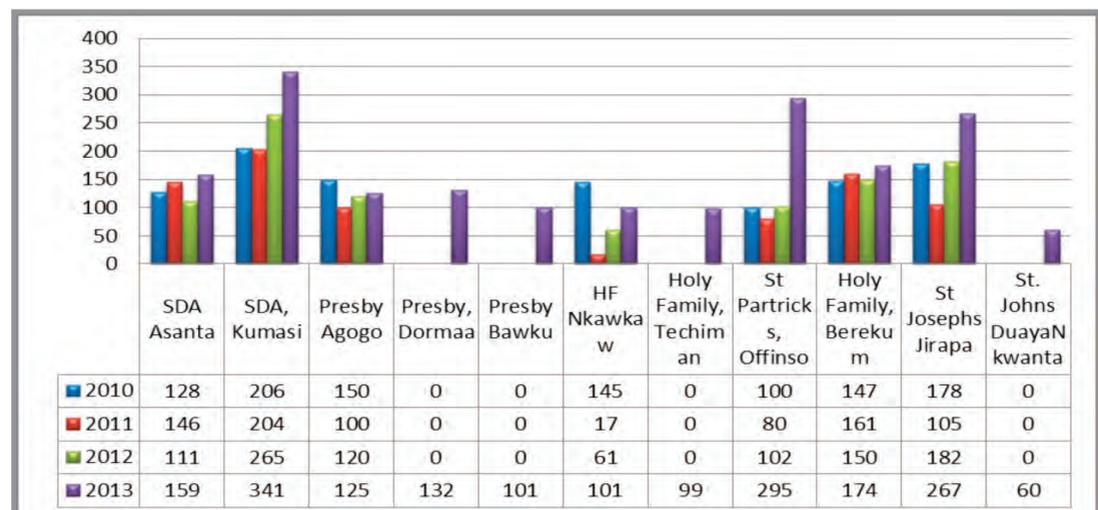
A total of 2,283 students were enrolled in the training schools of CHAG in 2013. Comparison of total enrollment rate with previous year is however hindered as some data for the period 2010-2012 are missing (Figure 3).

Figure 3: Total Student Enrolment CHAG: 2010 - 2013



Whereas most training schools enrolled similar numbers of students as in previous years, St. Patrick training school (Offinso) and St. Joseph training school (Jirapa) were able to increase student enrollment rate by 189% and 47% respectively (Figure 4).

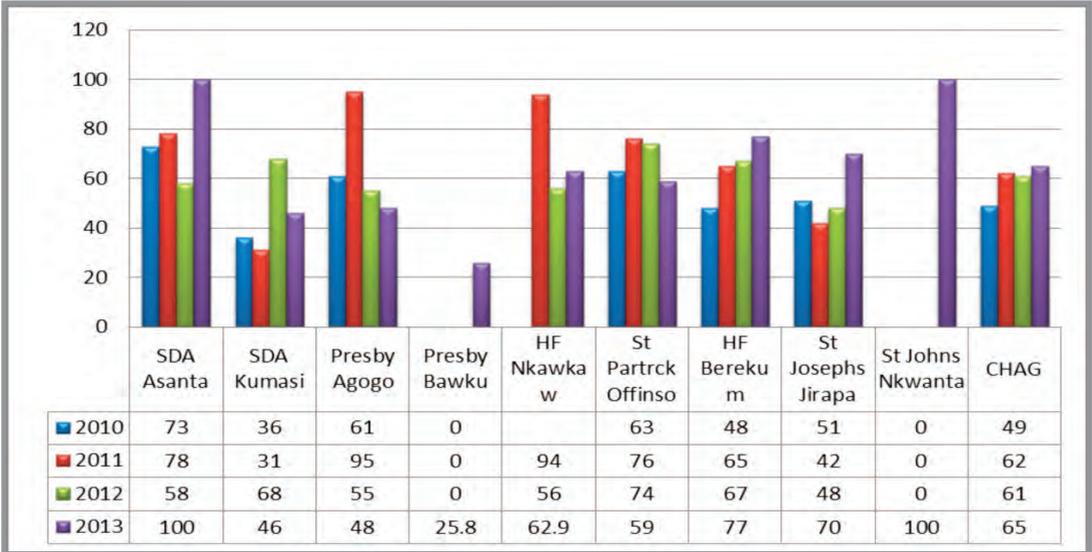
Figure 4: Student Enrolment by CHAG Training Schools: 2010 - 2013





The overall student pass rate during 2013 was 65%, a consolidation of 2012 student pass rate (61%) but considerably higher compared to the 2010 (49%). 3 out of 9 training schools show a downward trend in pass rate, whereas 4 training schools show a progressing trend (Figure 5).

Figure 5: Student Pass Rate by CHAG Training Schools: 2010 – 2013



### 2.3 Service Delivery

The principal function of the health facility is to provide quality health services and all HSS blocks are in support of that purpose. CHAG provides primary, secondary and tertiary health care as well as preventive, promotive and rehabilitative services. CHAGs health service provision is inspired by Christian identity, purpose and values with much emphasis on protection of patient rights and adherence to professional medical norms and ethics. Other important aspects are quality of care and patient safety, addressing the local disease profile and improving efficiency and effectiveness. Services are provided in line with National priorities and in accordance with standard treatment guidelines.

During 2013, CHAG continued to facilitate capacity building in the BLS and EMS services in selected health facilities. More staff were trained and the EMS programme was evaluated and redesigned to have more impact. CHAG received funding from DFID to improve mental health over a period of 5 years. The overall aim of the program is to improve the quality of life of persons suffering from mental illness with the following specific objectives: (1) Reduce stigma towards persons with mental illness; (2) Increase access to treatment, care and support for persons suffering from mental illness, and lastly; (3) to integrate mentally ill persons in their communities and provide them support to be economically productive.



### 2.3.1 Out-Patients

The increasing volume of OPD clients since 2010 is slowly stabilizing during 2013 with just a slight increase of 1.3% compared to 2012 (Table 2). Over 95% of OPD clients are insured with the National Health Insurance Scheme (NHIS).

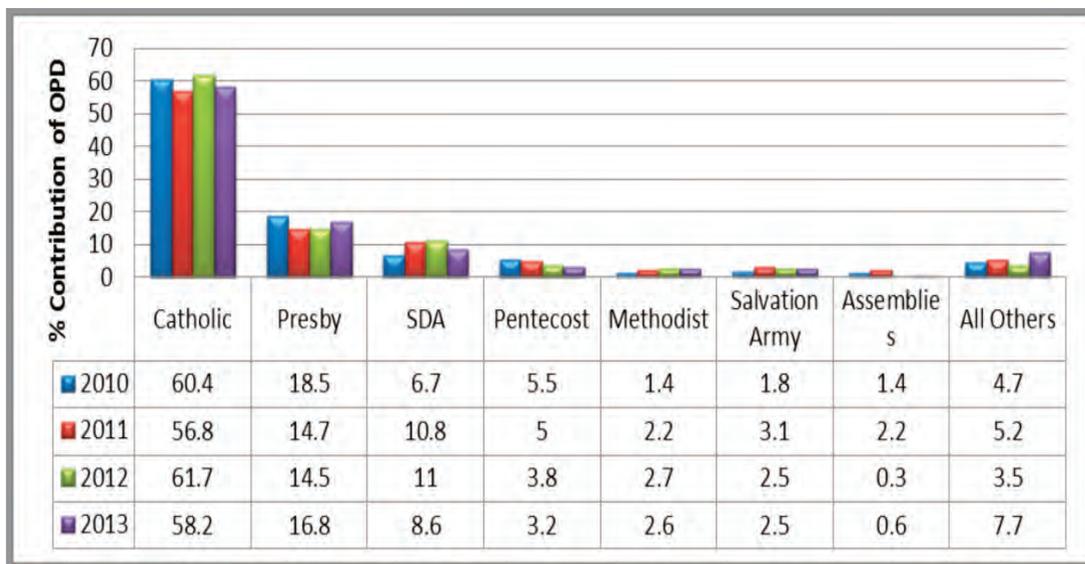
**Table 2: OPD Service Outputs: 2010 – 2013**

| OPD Clients     | 2010      | 2011      | 2012      | 2013      |
|-----------------|-----------|-----------|-----------|-----------|
| No. OPD Clients | 4,134,887 | 4,847,944 | 5,692,640 | 5,766,567 |

Source: DHIMS, 2013

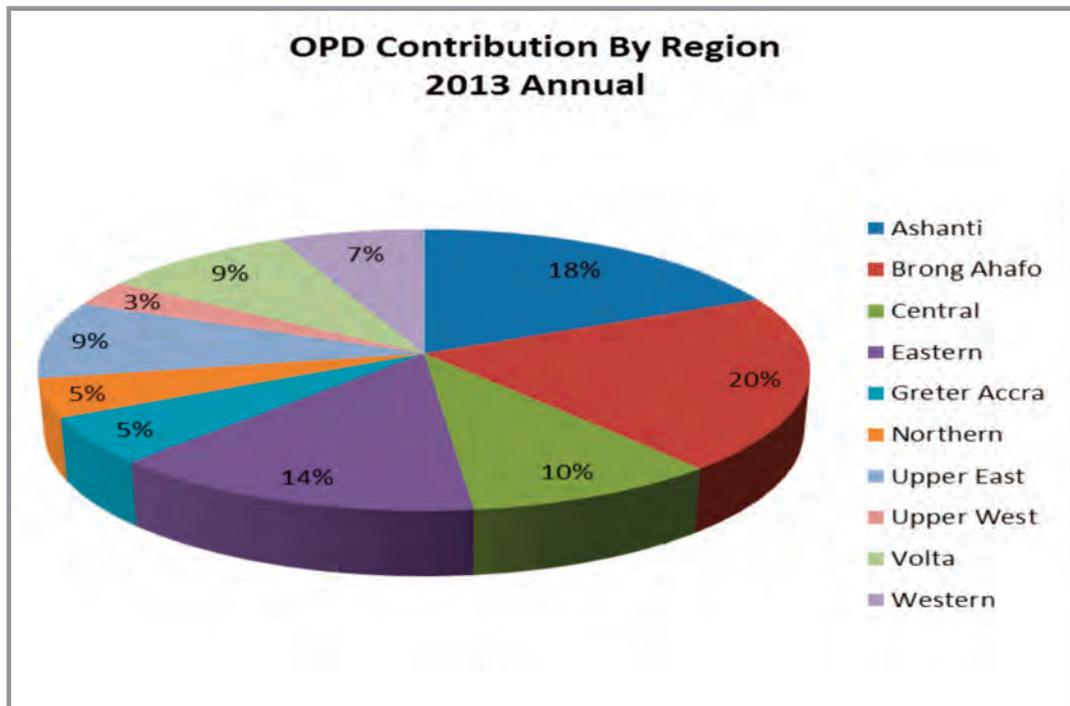
The NCHS and the PHS cater for the majority of all OPD clients within CHAG at 60.4% and 18.5% respectively. SDA and Pentecost health services provide 6.7% and 5.5% of OPD services respectively (Figure 6).

Figure 6: OPD Client Rate by Denomination: 2013



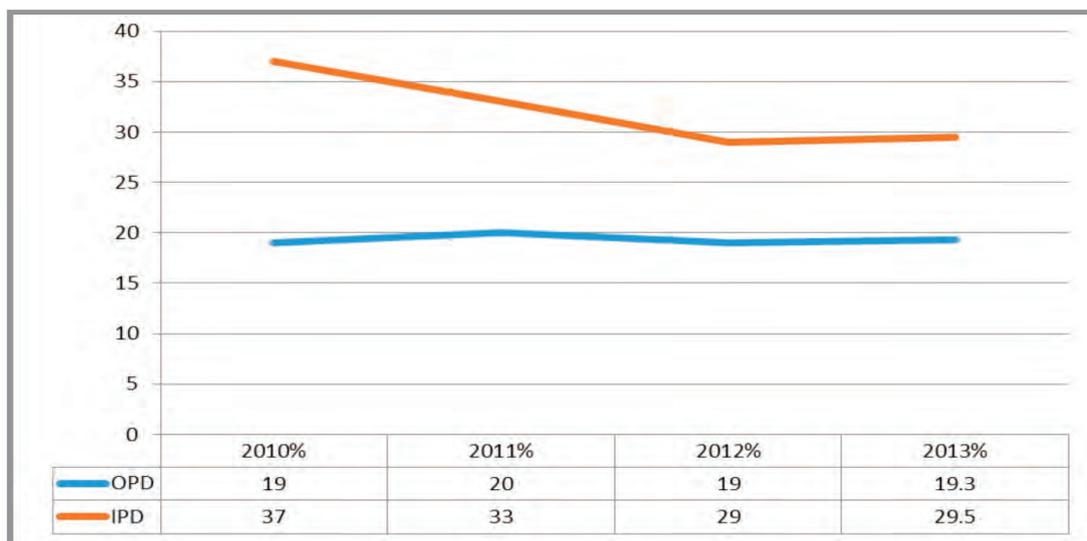
Proportion of OPD services shows significant variances between the various regions. Brong Ahafo, Ashanti, Eastern and Central Region have high OPD attendance with 20%, 18%, 14% and 10% respectively (Figure 7).

Figure 7: Proportion of OPD Attendance by Regions: 2013



The proportion of OPD and IPD clients in relation to the totals of the National Health Sector is 19.3% and 29.5% respectively, a stabilization of the 2012 volumes (Figure 8).

Figure 8: OPD and IPD Proportion to National Health Sector: 2010- 2013



### 2.3.2 In-Patients

During 2013, a total of 428,601 patients were admitted an increase of about 8% compared to 2012, sustaining an upward trend since 2010. The large majority of these patients had a valid health insurance (Table 3). Proportion of IPDs within CHAG compared to total of the National Health Sector remained stable with just a slight increase of 0.5% (29.5%).

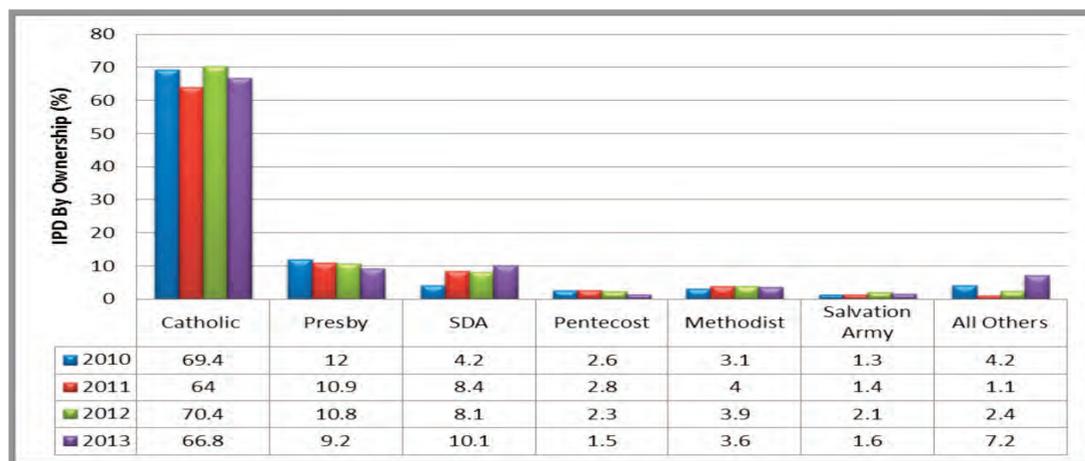
**Table 3: Total Admissions: 2010 – 2013**

| IPD Clients                    | 2010    | 2011    | 2012    | 2013    |
|--------------------------------|---------|---------|---------|---------|
| No. Admissions (IPD Clients)   | 338,998 | 394,442 | 397,240 | 428,601 |
| No. In-Patients Health Insured | 256,820 | 313,855 | 332,705 | 368,892 |

Source: DHIMS, 2013

The majority of all IPD Clients are registered by the hospitals of the Catholic, Presbyterian and the SDA health services with 66.8%, 9.2% and 10.1% respectively, a stabilisation of a 4 year trend (Figure 9).

Figure 9: Proportion Admissions by Denomination: 2010 – 2013



### 2.3.3 Maternal Health Services

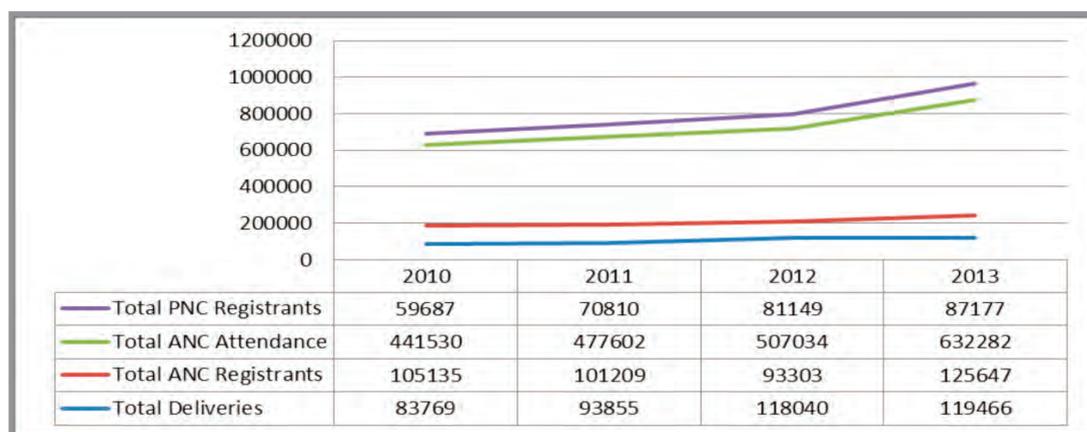
Provision of quality Maternal Health Services was a priority area for CHAG and an increase in services was recorded in all priority service areas. The total number of deliveries stabilised compared to 2012 with a slight increase of just 1.2% after a significant increase recorded during 2012 (26%). An incremental increase of 14.3% was seen in the number of Caesarean Sectio's (CS) continuing an upward trend since 2010 (37.4%). The average CS rate (% of CS on total number of deliveries) for CHAG hospitals is 18% ranging from 12% to 39%. The percentage of supervised deliveries stabilised at 98% whereas the number of maternal audits to investigate critical incidents during or after delivery increased from 141 (2012) to 185 (2013). Antenatal care improved with an increase of 36.5% in ANC registrants, 25% in ANC attendance and 7% in PNC Registrants (Table 4 and Figure 10).

**Table 4: Maternal Health Service Outputs: 2010 – 2013**

| Maternal Health Services           | 2010    | 2011    | 2012    | 2013    |
|------------------------------------|---------|---------|---------|---------|
| Total No of Deliveries             | 83,769  | 93,855  | 118,040 | 119,466 |
| Total No of CS                     | 14,044  | 15,959  | 17,839  | 19,284  |
| % Supervised Deliveries (of Total) | 77      | 79      | 98      | 87.9    |
| Total No of Maternal Audits        | 111     | 178     | 141     | 185     |
| Total ANC Registrants              | 105,135 | 101,209 | 93,303  | 125,647 |
| Total ANC Attendance               | 441,530 | 477,602 | 507,034 | 632,282 |
| Total PNC Registrants              | 59,687  | 70,810  | 81,149  | 87,177  |

Source: DHIMS, 2013

Figure 10: Maternal Service Outputs: 2010 – 2013



### 2.3.4 HIV/ AIDS Care

During 2013, CHAG continued to provide health and counselling services with respect to HIV/AIDS (Table 5).

**Table 5: HIV/AIDS Service Outputs: 2010 – 2013**

| HIV/AIDS Care                 | 2010   | 2011   | 2012   | 2013    |
|-------------------------------|--------|--------|--------|---------|
| No. Clients Counselling       | 43,238 | 45,755 | 31,451 | 36,946  |
| No. Clients Tested            | 42,395 | 43,893 | 29,330 | 32,269  |
| No. Clients Tested Positive   | 6,783  | 6,825  | 7,169  | 6,752   |
| PMTCT No. Counselling         | 84,421 | 93,821 | 73,169 | 111,470 |
| PMTCT No. Tested              | 81,215 | 87,965 | 66,421 | 92,695  |
| PMTCT No. Tested Positive     | 3,764  | 2,519  | 3,465  | 1,876   |
| All other HIV Tested Positive | 7,916  | 8,316  | 8,296  | 6,459   |
| No. Clients on ARV Treatment  | 4,661  | 5,409  | 4,096  | 5,360   |
| Total PLWHA                   | 18,463 | 17,660 | 18,930 | 18,966  |

The total number of clients tested or counselled for HIV/AIDS increased by 10% and 17.5% respectively. The total number of PMTCT clients tested and counselled also increased compared to 2012 with 39% and 52.4% respectively. Overall, the percentage of Clients tested positive for HIV/AIDS reduced with 23.3% compared to 2012, confirming a downward trend since 2010. The percentage of HIV/AIDS clients receiving ART treatment increased with 31% compared to 2012, bringing it almost back to the level of 2011.

### 2.3.5 Morbidity

Top-10 diagnostic conditions at OPD remain relatively stable with communicable diseases dominant. In 2013, Malaria constituted by far the most important disease diagnosed at OPD (45.8%), followed by Rheumatism (6.6%) and Acute Respiratory Infections (Table 6).

**Table 6: Top-10 Diagnostic Conditions OPD: 2010 – 2013**

| Diagnosed Condition         | 2010<br>% of Total | 2011<br>% of Total | 2012<br>% of Total | 2013<br>% of Total |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|
| Malaria                     | 56.3               | 55.2               | 50.0               | 45.8               |
| Acute Respiratory Infection | 10.5               | 11.0               | 10.2               | 16.2               |
| Rheumatism & Joint pains    | 5.2                | 5.3                | 5.8                | 6.6                |
| Skin Disease and Ulcers     | 6.0                | 5.7                | 5.7                | 6.2                |
| Acute Eye Infection         | 4.0                | 3.6                | 4.8                | 5.7                |
| Hypertension                | 6.3                | 5.5                | 6.0                | 4.9                |
| Diarrhoea Diseases          | 4.3                | 4.6                | 4.5                | 4.7                |
| Anaemia                     | 2.8                | 2.8                | 4.0                | 3.9                |
| Urinary Tract Infection     | -                  | 2.5                | 2.9                | 3.5                |
| Intestinal Worms            | 2.3                | -                  | -                  | 2.5                |

Source: CHAG Minimum Data Set, 2013

The top-10 diagnostic for admissions are largely in line with OPD diagnostics (Table 7).

**Table 7: Top-10 Diagnostic Conditions Admissions: 2012 – 2013**

| Diagnosed Condition        | 2010 - 2011          | 2012<br>% of Total | 2013<br>% of Total |
|----------------------------|----------------------|--------------------|--------------------|
| Malaria                    |                      | 52.8               | 50.3               |
| Anaemia                    |                      | 13.0               | 11.0               |
| Fibroid                    | NO DATA<br>AVAILABLE | 4.6                | 8.5                |
| Diarrhoea                  |                      | 5.7                | 6.1                |
| Hypertension               |                      | 5.9                | 5.9                |
| Pneumonia                  |                      | 4.5                | 4.7                |
| Gastroenteritis            |                      | 3.3                | 3.9                |
| Asthma / Bronchitis / URTI |                      | 3.9                | 3.8                |
| UTI                        |                      | -                  | 3.1                |
| Typhoid                    |                      | 3.5                | 2.6                |

Source: CHAG Minimum Data Set, 2013



Of the non-communicable diseases, only hypertension features prominently in top-10 diagnostics with 179,489 cases and 554 deaths (0.3%). Nonetheless, non-communicable diseases, conditions and deaths are on the increase. Overall, 22,150 clients of road accidents were recorded with 121 deaths (1%). The total number of diagnosed common mental health conditions was 5,216. Finally, a total number of 35,340 clients were diagnosed with Diabetes Mellitus, of which 128 clients died (0.4%).

Suspected conditions with potential serious Public Health implications were reported as follows (Table 8).

**Table 8: Suspected Conditions of Public Health importance: 2013**

| Diagnosed Condition      | 2010 - 2012          | 2013   |
|--------------------------|----------------------|--------|
| Shigella                 | NO DATA<br>AVAILABLE | 2.352  |
| Guinea Worm              |                      | 2      |
| Influenza Like illnesses |                      | 3.254  |
| Lymphatic Filariasis     |                      | 229    |
| Viral Hemorrhagic Fever  |                      | 184    |
| Yellow Fever             |                      | 6      |
| Typhoid Fever            |                      | 72.072 |

Source: CHAG Minimum Data Set, 2013

### 2.3.6 Mortality

A total of 8,662 clients died during 2013 of which about 39% (3,337 cases) died from one of the ten most diagnosed conditions. The top-10 conditions for morbidity didn't change, with HIV/AIDS related deaths ranked highest with 16.6%, followed by Septicemia (14.9%), CVA (14.5%), Malaria (12.8%) and Severe Anaemia (10.1%) (Table 9).

**Table 9: Top-10 Causes Mortality: 2010 – 2013**

| Diagnosed Condition | 2010 | 2011 | 2012 | 2013 |
|---------------------|------|------|------|------|
| HIV/AIDS            | 14.2 | 16.8 | 15.9 | 16.6 |
| Septicemia          | 12   | 13.3 | 15.3 | 14.9 |
| CVA                 | 12.4 | 14.0 | 15.8 | 14.5 |
| Malaria             | 28   | 18.7 | 13.5 | 12.8 |
| Severe Anaemia      | 5.1  | 4.4  | 12.8 | 10.1 |
| Hypertension        | 7.3  | 7.0  | 7.6  | 7.7  |
| Cirrhosis of liver  | 3.7  | 3.7  | 4.5  | 6.7  |
| Asphyxia            | -    | -    | -    | 5.9  |
| Broncho Pneumonia   | 7.3  | 13.3 | 4.3  | 5.5  |
| Sepsis              | 6.0  | 4.9  | 5.3  | 5.3  |

Source: CHAG Minimum Data Set, 2013



### 2.3.7 Key Health Indicators

During 2013, CHAG slightly improved outcomes in 2 key health indices confirming a 4-year improving trend. However 3 other key outcome indicators show an unstable and fluctuating trend (Table 10, next page).

**Table 10: Health Indicators: 2010 – 2013**

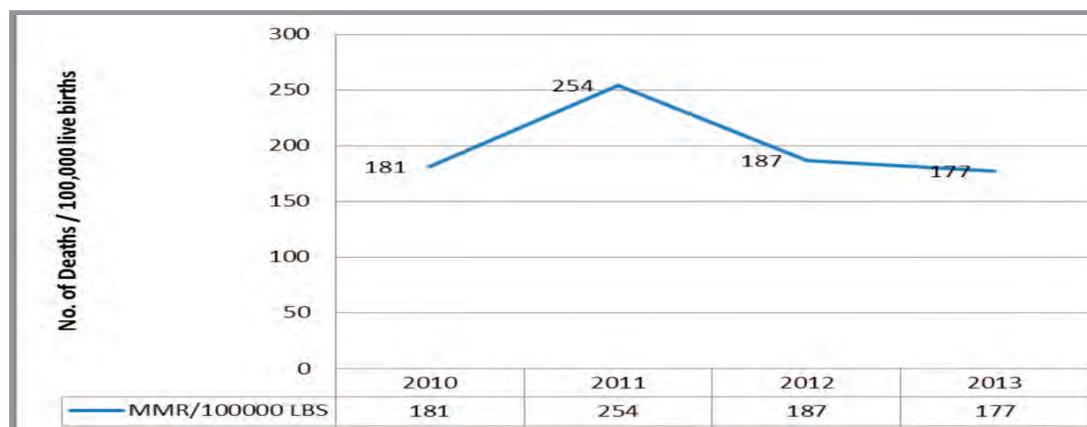
| Health Indicator     | 2010 | 2011 | 2012 | 2013 |
|----------------------|------|------|------|------|
| Maternal Mortality   | 181  | 254  | 187  | 177  |
| Infant Mortality     | 12.4 | 12.9 | 5.9  | 7.9  |
| Under-5 Mortality    | 11.2 | 9.2  | 6.5  | 7.7  |
| Still Births         | 37   | 29   | 25   | 23   |
| Crude Mortality Rate | 39.7 | 25.7 | 22.4 | 23.1 |

Source: CHAG Minimum Data Set & DHIMS, 2013

#### Maternal Mortality

Overall, Maternal Mortality (MM: No of pregnancy related deaths / 100,000 live births) improved considerably. However, MM rate still remains higher compared to the National average of Ghana (155/100.000) (Figure 11).

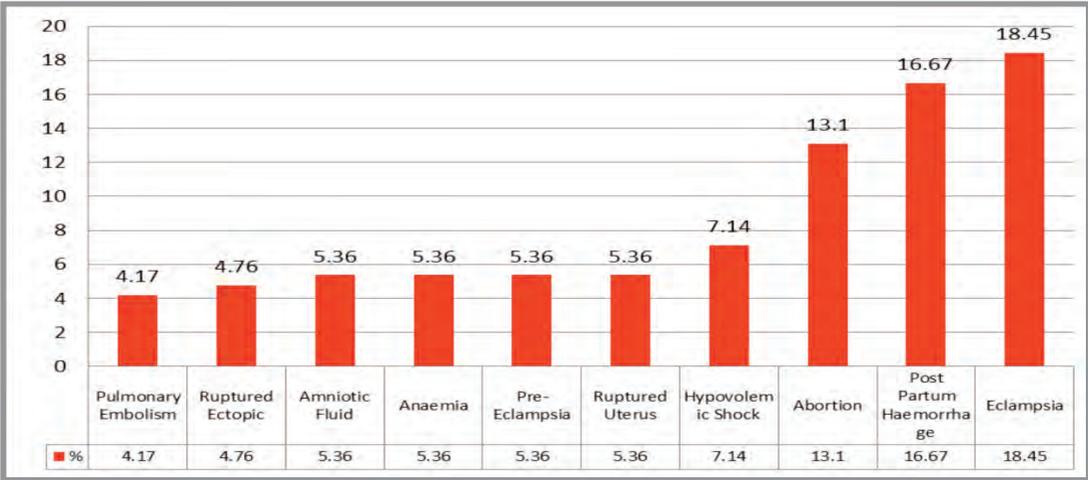
Figure 11: Maternal Mortality Rate: 2010 – 2013



The MM Rate across the network showed a high variance. About 30% of CHAG hospitals remained under the National MMR average ranging from 0 to 166/100,000. About half of these hospitals trailed just under or against the National IMMR average. About 30% of CHAG hospitals showed a considerable higher MMR compared to the National average with marked out-liners. Profile of main causes for MM hasn't changed compared to previous years. Eclampsia, PPH and complications due to abortion are the main causes with 18.4%, 16.6% and 13.1% respectively (Figure 12, next page).



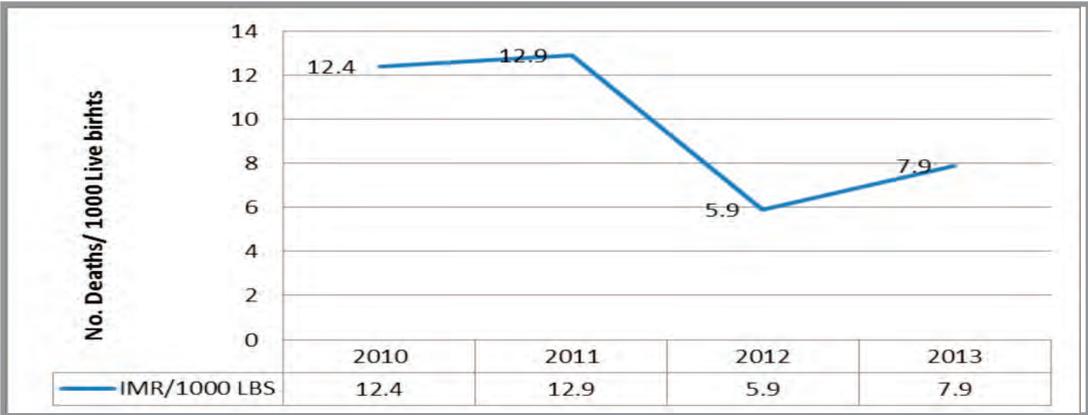
Figure 12: Top-10 Causes of Maternal Deaths: 2013



**Infant Mortality**

After a dramatic improvement during 2012, Institutional Infant Mortality Rate (IMR: Number of deaths / 1,000 live births) is fluctuating from 5.9% to 7.9% in 2013, slightly over the National average of 6.7% (Figure 13).

Figure 13: Infant Mortality Rate: 2010 – 2013



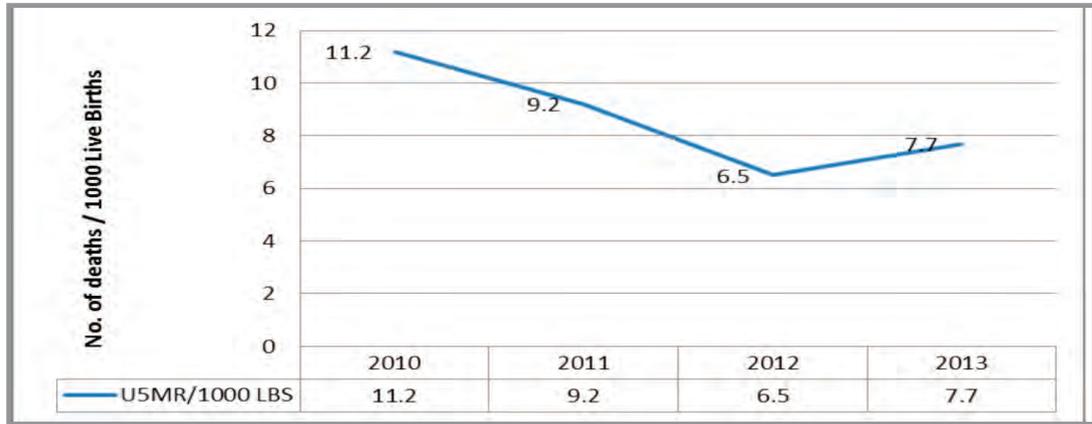
However, as with other indices, the IMR varies widely across the network. Slightly less than half of CHAG hospitals record a lower IMR compared to the National average. About 1/3 of CHAG hospitals record a higher IMR compared to the National average with outliers over 30/1,000.

**Under-Five Mortality**

The stable improving trend of the Institutional Under-Five Mortality rate (U5MR: Number of deaths / 1,000 live births) since 2010 is disrupted, with an increase of 1.2% compared to 2012 (6.5%) (Figure 14).



Figure 14: Under-5 Mortality Rate: 2010 – 2013

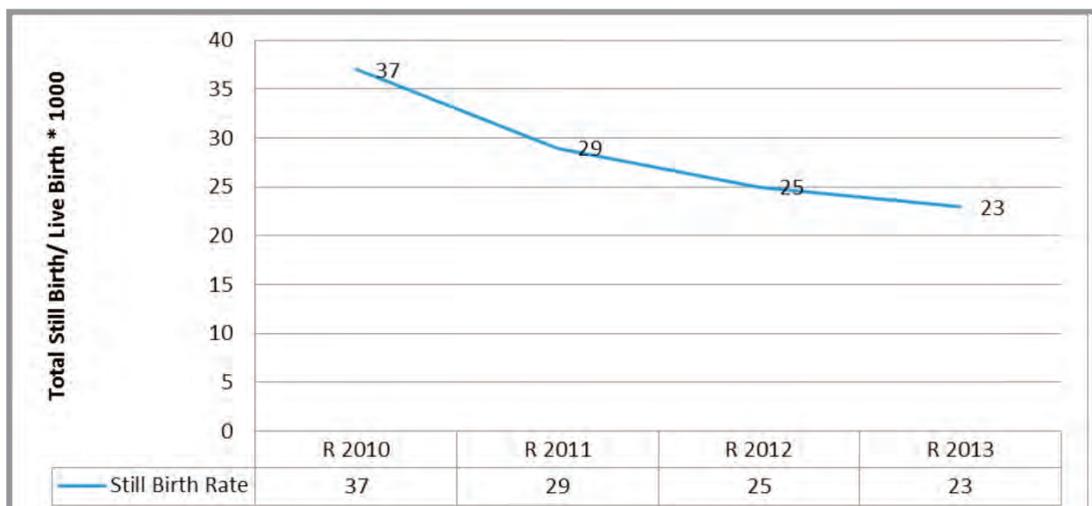


U5MR trails about 3% from the National average (4.6%) with considerable variances within the Network. Almost 2/3 of CHAG hospitals recorded zero (0) U5M. Approximately ¼ of CHAG hospitals recorded a higher U5MR compared to the National average with some outliers over 15/1,000.

### Still Births

Still-births (Total number of fresh and macerated inter-uterine deaths / 1,000 live births) showed a slight and stable decrease from 2.5% (2012) to 2.3% (2013) continuing an improving trend since 2010 indicating improved obstetric care services (Figure 15).

Figure 15: Still Birth Rate: 2010 – 2013

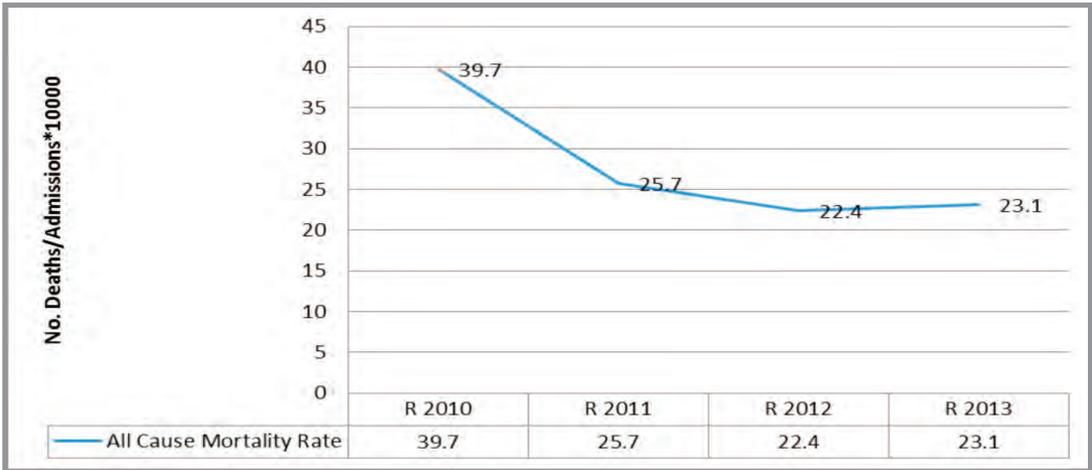


However, CHAG health facilities still trailed the National average of fresh still births by a small margin of 0.5%. There is however a wide variance among CHAG hospitals. Only a small minority of hospitals remained below the National average, while a majority record above the National average with a quarter of this group of hospitals even doubling the National average.

**Crude Mortality Rate**

The average institutional Crude Mortality Rate (Number of deaths / 10.000 Admissions) for CHAG was 23.1/10,000 a slight worsening of 0.7% compared to 2012 but still below the National average of 24/10,000 admissions (Figure 16).

Figure 16: Crude Mortality Rate: 2010 - 2013



A small minority of CHAG hospitals scored however higher than the National average with 2 outliers showing a crude mortality rate of 50/10,000 admissions.

**2.3.8 Quality of Care & Patient Safety**

Improving the quality of care remained high on the agenda and was addressed through a number of specific initiatives. A quality improvement programme to reduce institutional under-5 child mortality continued in all NCHS hospitals. The programme applies the Continuous Quality Improvement model (CQI). The NCHS also introduced a strategy to reduce stigma and discrimination against HIV/AIDS clients by mainstreaming HIV/AIDS care into regular OPD services. CHAG continued to pilot the HSS approach in 27 health facilities focusing on improving maternal health interventions and outcomes.

The 25th Annual Conference and Council Meeting (ACCM) was entirely devoted to improve patient safety in CHAG health facilities particularly in the areas: (1) Environment and Care;

‘45th ACCM Statement and Action Framework’, CHAG, 2013.



(2) Infection prevention and control; (3) Patient's identification and records management; (4) Medical errors and lastly; (5) Safe surgery. The ACCM endorsed an action framework outlining an ambitious agenda to progress patient safety and quality of care over the years to come (Table 11).<sup>5</sup>

**Table 11: Action framework to improve Patient Safety and quality of Care**

| HSS Block                          | Main Thematic Areas  |
|------------------------------------|--|
| <b>Leadership &amp; Governance</b> | <ul style="list-style-type: none"> <li>• Provide and ensure adherence to policies, plans and guidelines on Patient Safety;</li> <li>• Develop indicators and measures that will enable the monitoring of Patient safety and quality of care at the health facility.</li> </ul> |
| <b>Human Resources</b>             | <ul style="list-style-type: none"> <li>• Develop staff awareness, skills and competencies in the implementation of practices that promote patient safety and quality of care.</li> </ul>   |
| <b>Service Delivery</b>            | <ul style="list-style-type: none"> <li>• Make available and adhere to standard and best practices protocols and patient safety and quality of care at the health facility.</li> </ul>  |
| <b>Health Financing</b>            | <ul style="list-style-type: none"> <li>• Allocate financial resources to support the implementation and of interventions that support the improvement of patient safety.</li> </ul>  |
| <b>Health Technology</b>           | <ul style="list-style-type: none"> <li>• Create a safe environment for employees and patients;</li> </ul>  |
| <b>Health Information</b>          | <ul style="list-style-type: none"> <li>• Ensure that supplies meet the required standards of quality and safety.</li> </ul>  |
| <b>Community Ownership</b>         | <ul style="list-style-type: none"> <li>• Ensure the availability and use of data on patient safety to support management decision making.</li> </ul>   |
| <b>Participation</b>               | <ul style="list-style-type: none"> <li>• Collaborate with community members and their leaders to increase their awareness of patient safety issues and how they can contribute to ensuring it.</li> </ul>  |
| <b>Health Research</b>             | <ul style="list-style-type: none"> <li>• Participate and contribute to National health policy and planning for a on patient safety.</li> </ul>   |
|                                    | <ul style="list-style-type: none"> <li>• Institute an operational research agenda relevant to patient safety.</li> </ul>   |

## 2.4 Health Financing

Health financing is concerned with the mobilization, allocation and management of financial resources for the purpose of financing affordable public health care for CHAGs target beneficiaries; the vulnerable and underserved population of Ghana. This function of the health system involves revenue collection, pooling of resources and the efficient use of these, not only for direct health expenditure but also for financing all in-direct expenses such as salary and wages of staff and capital investments.

Financing of CHAG was mainly through the GOG (Salaries and Personnel Compensation), Non-Tax Revenues (IGF) mainly through health insurance claims (NHIS and others) and Donor support, mostly through project grants. IGF, remained the largest source of income

<sup>5</sup> '45th ACCM Statement and Action Framework', CHAG, 2013.

with 65% of total income, followed by GOG and Donor support with 34% and 1% respectively. 85% of IGF was generated through claim payments by NHIA whereas 15% was generated through direct payments by clients for services rendered. Actual expenditure (income) of GOG exceeded approved budget by 12% whereas actual expenditure of IGF for salaries, services and assets trailed approved budgets with 36%, 22% 79.5% respectively (Table 12).<sup>6</sup>

**Table 12: Network Budget & Expenditure by Budget Line and Source: 2013**

| Budget       | Approved Budget |             |           | Actual Expenditure |                     |                  |
|--------------|-----------------|-------------|-----------|--------------------|---------------------|------------------|
|              | GOG             | IGF         | Donor     | GOG                | IGF                 | Donor            |
| Salaries     | 125,088,844     | 40,434,454  | -         | 140,381,748 (112%) | 25,880,066 (64%)    | -                |
| Services     | 150,640         | 279,369,689 | 3,120,666 | -                  | 238,607,097 (78%) * | 3,120,666 (100%) |
| Assets       | -               | 25,749,446  | -         | -                  | 5,275,968 (20.5%)   | -                |
| <b>Total</b> | 125,239,484     | 345,553,589 | 3,120,666 | 140,381,748        | 269,763,131         | 3,120,666        |

**\*Estimate by extrapolation based on 65% Data from CHAG members!  
Source: CHAG Financial Report, 2013**

The majority of CHAG members were financially solvent although some continued to require financial support from their parent churches in the areas of staff salaries and capital expenses. Overall, CHAG hospitals improved their financial and revenue administration and management. Financial solvency for Catholic hospitals was improved by pooled procurement arrangements for drugs and medical equipment.

NHIA claim management and administration further improved across the network. An electronic claim pilot in conjunction with the NHIA continued in 11 CHAG institutions. However, persistent delays in NHIA claim reimbursement remained a serious concern with an average delay of 4-6 months resulting in serious liquidity problems in many CHAG health facilities. In addition, tariffs for medicine were considered to be too low and not in line with inflation levels. Tariffs for specialized medical services at secondary and tertiary hospital level remained low and remained an issue of concern and debate with the NHIA. CHAG engaged in a critical dialogue with NHIA, MOH and other stakeholders on the proposed roll-out of the new health financing modality ('Capitation') in other regions of Ghana as it is likely to be disadvantageous for smaller health facilities and could easily undermine the policy of universal access of health care, particularly for the poor.

## 2.5 Health Technology

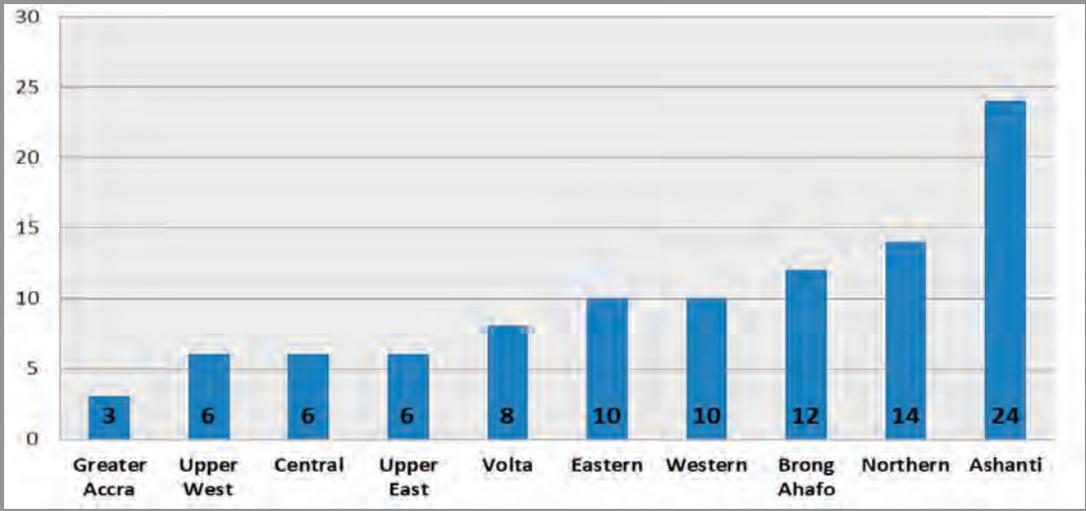
Health technology relates to all aspects of infrastructures, buildings, medical equipment, amenities, medicines, vaccines, laboratory equipment and E-health applications. It furthermore relates to all procedures, systems and skills required to manage these issues adequately to ascertain and maintain a high and uninterrupted level of service readiness by the health facility.

<sup>6</sup> This overview doesn't provide donor contributions to individual CHAG members, which may be rather substantial!



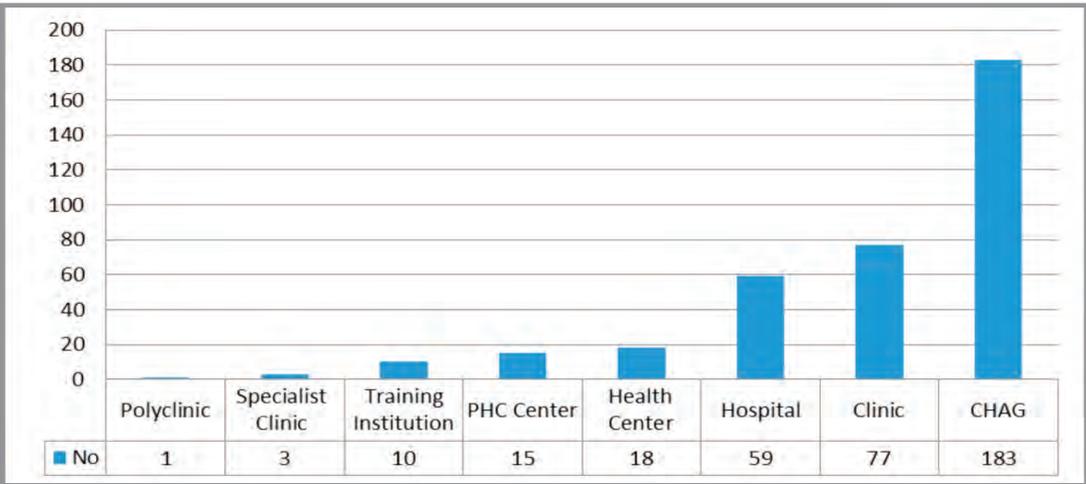
The CHAG network comprises of 183 health facilities and health training institutions. In all, the network accounts for approximately 5.3% of the total health infrastructure in Ghana. CHAG health facilities are unevenly distributed in the ten regions of the country and particularly located in isolated districts and areas (Figure 17, next page).

Figure 17: Proportion CHAG Facilities by Region



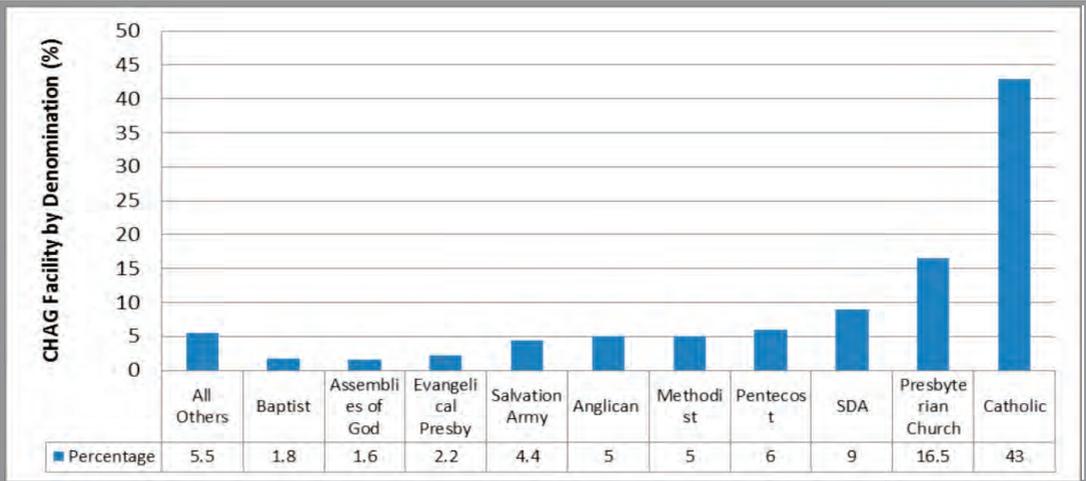
Of the 183 facilities, a majority is made up by clinics (42%) and hospitals (32%). The remaining facilities are made up by health centres (10%), PHC centres (8%), Training institutions (5%), specialist clinics (2%) and polyclinics (1%) (Figure 18).

Figure 18: Number CHAG Facilities by Type



A large majority of CHAG facilities is owned by the NCHS (43%) followed by the Presbyterian Church (16.5%) and the SDA (9%). The Salvation Army, Anglican Church, the Methodist and the Church of Pentecost each own about 4.5% of facilities. The remaining 14 other Church denominations own each less than 1% of CHAG facilities (Figure 19, next page).

Figure 19: CHAG Facility by Denomination



\*All other denominations includes; Word Alive Mission, WEC, Siloam, Run, Church of God, Church of Christ, Saviour, Manna Missions, Lighthouse, Global Evangelical and AME – Zion

On average, levels of service readiness for CHAG facilities is sufficient across the network. However, maintenance and renovation of buildings remains a concern with limited funds available, limited support from GOG/MOH and a common lack of maintenance culture. More attention and support is required to improve appropriate electricity back-up systems (e.g. increase solar power systems) and to improve service readiness of medical equipment with considerable numbers of important equipment obsolete or inadequate. Overall, shortages in essential medicines and consumables are limited and if at all, they occurred as a result of liquidity problems of the health facility mostly due to late reimbursement of NHIS claims. Vaccines were commonly available through the GHS.

**2.6 Health Information**

Health information relates to all systems, procedures and staff aimed at the timely collection, analysis and dissemination of information for the purpose of planning, managing, monitoring and evaluating health services. Important aspects of health information are quality, reliability, timeliness and usage of service data both for DHIMS-II (MOH) as well as for the CHAG minimum health service data-set. Different stakeholders at various levels of the health sector (e.g. community, health facility management, GHS, CHAG) have an interest in reliable and useful information.



Being an agency of the MOH, CHAG health facilities continued to provide routine health-service data within the Government DHMIS-II system. DHMIS-II data submission was satisfactory however limited feedback was received from the GHS and the use of information for evaluation of performance, planning and management at the individual health facility level is limited and can improve significantly. Although DHMIS-II data are aggregated at the District, Region and National level, the possibility to extract disaggregated CHAG data at these respective levels remained a challenge. Next to DHMIS-II data, CHAG health facilities submitted routine health-service data bi-annually to CHAG for performance reporting. Submission rate of this routine data for 2013 was 90%, a 6% improvement compared to 2012. Overall, CHAH hospitals report close to 100% however about 50% report too late! Reporting of smaller CHAG health facilities remains a challenge over the years and can be improved (Table 13).

**Table 13: Reporting Rate of Members: 2010 - 2013**

| Facility   | 2010 | 2011 | 2012 | 2013 |
|------------|------|------|------|------|
| Hospitals  | 81%  | 97%  | 90%  | 97%  |
| All Others | 80%  | 69%  | 81%  | 87%  |
| Overall    | 80%  | 78%  | 84%  | 90%  |

Source: CHAG Report, 2013

CHAG continued to invest and improve data management at the health facility level. Most health facilities trained health information officers and other frontline staff in data collection and management. Additionally, the capacity of managers was built in the use of information for analysis and decision making. A newly and customized ICT software for health records, school management and student records continued to be piloted in 3 health institutions and 1 training school.

## 2.7 Community Ownership and Participation

Community ownership and participation refers to mechanisms, systems and processes that allow communities to influence policies, planning, operation, use and benefits of health services. It relate to the extent to which health facilities engage with communities in order to make health services more fitting and more relevant for the local context and its specific disease burden. Community participation aims at improving acceptability of health services by the community and strengthening behaviors that promote and preserve health. Health facilities engage with communities through formal and informal leadership structures and by partnering with local groups, initiatives and plans. Community ownership and participation in health service delivery assumes astute appreciation and knowledge of prevailing local traditions and believes that may influence health seeking behavior.

CHAG continued to implement the National PHC policy through its focus on basic health care provision and maintaining and extending outreach services through community consultation and engagement. Across the network, communities were generally consulted



to improve acceptability of services. However, extent and quality of community engagement can improve across the network.

Following recommendations of the 45th ACCM (2012) a conceptual framework was developed to assist health facilities to purposefully engage with the communities they serve. CHAG recommends that the health facility establishes firm links with the communities it serves. By engaging with the community, the health facility is able to improve relevance of its services. Moreover, it is proved that involvement and responsiveness of communities in service provision increases health seeking behavior. In engaging with the community the health facility is able to capitalize on five main community features: (1) Leadership structures; (2) Groups, networks and organizations; (3) resources, people and ideas; (4) Plans, programs and activities; (5) Tradition, culture and beliefs. For each one of these community features, the framework provides a set of key principles (Table 14).

**Table 14: Community Engagement Framework**

|  |   |
|--|---|
| <b>Be Mindful of Traditions, Culture and Beliefs</b>                     | <ul style="list-style-type: none"> <li>Investigate; Understand; Appreciate &amp; Value; Use when helpful &amp; supportive; Support Change if needed!</li> </ul>   |
| <b>Cooperate with Community Groups, Networks and Organisations</b>       | <ul style="list-style-type: none"> <li>Demonstrate Respect; Cherish Partnership; Build capacity; Be Inclusive; Ask Views, Dialogue!</li> </ul>  |
| <b>Engage Community Leadership; Traditional, Religious and Political</b> | <ul style="list-style-type: none"> <li>Don't Upset, Neglect, Control, Disregard or Disrespect!</li> </ul>   |
| <b>Make use of Community Resources, People and Ideas</b>                 | <ul style="list-style-type: none"> <li>Share resources; Address Challenges; Know opponents of progress; facilitate, mediate and reconcile; Make the most of Opportunities; Celebrate Achievements!</li> </ul> |
| <b>Get involved in Community Plans, Programmes and Activities</b>        | <ul style="list-style-type: none"> <li>Work together; Plan &amp; Implement jointly; Monitor Results; Support equity and fairness!</li> </ul>  |

## 2.8 Partnership for Health

Partnerships in health are based on the mutual dependency of different partners in achieving a common goal. Each partner is expected to make financial, technical or material contributions in a coordinated manner aimed at strengthening service delivery. The need for partnerships in the health sector is recognized in various health sector policy documents in recent years. Effective partnerships are based on commitment, communication, cooperation and coordination. Important aspects and advantages of partnerships are: (1) improving access to services; (2) access to complementary resources; (3) improved focus and coordination and lastly; (4) improved capacity, innovation and expertise.



Late 2013, CHAG and the GHS agreed on a Memorandum of Understanding (MOU) to improve cooperation for better health service delivery. <sup>7</sup> The MOU aims to improve collaboration between CHAG Member Institutions (MIs) and the GHS in the Region, the Districts and Sub-Districts. The MOU defines general principles of cooperation between the GHS and CHAG based on; (1) National policies for Public-Private-Partnerships (PPP); (2) Autonomy of partners as complementary agencies under the MOH; (3) Adherence to National and Statutory Professional Standards, Values and Ethics; (4) Appreciation of the Local Government Act (2003) and the emerging, decentralized institutional arrangements anticipated for the health sector, and finally; (5) Consideration local burden of diseases for intervention. The MOU identifies specific thematic areas to progress collaboration and to guide operational and performance based agreements at the Region, District and Sub-Districts (Table 15).

**Table 15: Thematic Areas Memorandum of Understanding CHAG - GHS**

| HSS Block                                      | Main Thematic Areas   |
|--|---|
| <b>Leadership &amp; Governance</b>             | <ul style="list-style-type: none"> <li>Recognize and adhere to each other's organisational structures, lines of authority and communications at all levels;</li> <li>Jointly prepare health plans and programs for Region, District and Sub-District;</li> <li>Integrate M&amp;E</li> </ul>   |
| <b>Human Resources Health</b>                  | <ul style="list-style-type: none"> <li>Mutually engage and participate in capacity support activities;</li> <li>Jointly prepare and implement professional capacity development programmes;</li> <li>Equitable distribution of technical staff to facilities irrespective of ownership;</li> <li>Establish and maintain common HR data-base.</li> </ul> |
| <b>Service Delivery</b>                        | <ul style="list-style-type: none"> <li>Work together and promote comprehensive health care delivery;</li> <li>Encourage innovations in health care delivery;</li> <li>Promote complementarity and avoid duplication.</li> </ul>   |
| <b>Health Financing</b>                        | <ul style="list-style-type: none"> <li>Work together to secure financial sustainability of health facilities (NHIS);</li> <li>Jointly finance professional capacity development programs.</li> </ul>  |
| <b>Health Technology</b>                       | <ul style="list-style-type: none"> <li>Share health technologies where appropriate and required;</li> <li>Ensure transparent management of Health technologies at all levels.</li> </ul>  |
| <b>Health Information</b>                      | <ul style="list-style-type: none"> <li>Agree on and provide health data that support the establishment of a comprehensive health information data base;</li> <li>Have equal access to the national health information database.</li> </ul>  |
| <b>Community Ownership &amp; Participation</b> | <ul style="list-style-type: none"> <li>Committed to establish and manage CHPS zones in a complementary manner;</li> <li>Jointly plan complementary outreach health services with involvement of respective communities.</li> </ul>  |
| <b>Participation For Health</b>                | <ul style="list-style-type: none"> <li>Promote and develop new partnerships for service delivery if opportunities arise.</li> </ul>   |
| <b>Health Research</b>                         | <ul style="list-style-type: none"> <li>Define and implement a joint, strategic, appropriate and relevant research agenda for health.</li> </ul>   |

<sup>7</sup> Memorandum of Understanding between the Ghana Health Service and the Christian Health Association of Ghana, 2013.

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As part of its role to advocate for the interest of its constituent members, CHAG continued to provide inputs in the organizational and institutional development of the health sector and the strengthening of the health system. CHAG continued to be an actively engaged with many stakeholders in the health sector and contributed to National health sector committees, reviews, workshops and technical fora shaping strategies, policies, bills and health sector plans.<sup>8</sup>

Whereas traditional donor support to CHAG health facilities is reducing, some partnerships with local and international -donors and agencies were initiated across the network in support of specific projects. At the national level, CHAG maintained strategic partnerships with DANIDA, Cordaid and UNFPA. CHAG also started to implement a primary mental health care programme with support from DFID.

## 2.9 Research for Health

Health research relates to the generation and application of information, evidence and knowledge to improve health systems, health management and health service delivery. CHAG is particularly interested in operational research which looks into causes of common or critical problems in the implementation of health services in the health facility. The purpose of operational research is to promote contextual solutions and improve the quality and effectiveness of health services management and care. Operational research can relate to all aspects of managing the health facility as well as to all aspects of managing and implementing health services.

Across the network, CHAG engaged in various innovative interventions and evaluations. The HSS pilot project was evaluated providing several useful lessons for roll-out across the entire CHAG network. The CHAG research groups (8) developed specific research questions for their respective areas.

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<sup>8</sup> The Key Policy committees in which CHAG participate are: (1) Inter-Agency coordinating meeting, (2) Monthly Partner Meeting; (3) Health Insurance WB Inter-agency Steering Committee; (4) NHIA Capitation technical steering Committee; (5) National Health Summit Planning Committee; (6) Ghana AIDS Commission; (7) MOH Budget Committee; (8) Country coordinating Committee Global Fund; (9) MOH/CHAG MOU Partner steering Committee; (10) Parliament select C0mmittee on Health.

### 3. Critical Challenges

Critical challenges across CHAG's network of health facilities remain rather similar to the ones observed in 2012 and have been addressed through various programs of the secretariat, CHCUs and individual health facilities and training schools throughout 2013 (Table 16).

**Table 16: Critical Challenges & Future Agenda of the Network**

| HSS Block                          | Critical Challenge & Future Agenda  |
|------------------------------------|---|
| <b>Leadership &amp; Governance</b> | <ul style="list-style-type: none"> <li>Continued training and education in leadership, governance, management and organisational and institutional development across the network;</li> <li>Development of institutional arrangements for the CHAG network at the Region, District and sub district levels in the context of the imminent decentralisation policy of the Ministry of Health;</li> <li>Update and improve CHAG membership criteria as well as conduct a regular CHAG membership audit;</li> <li>Strengthen the governance system within the CHAG network.</li> </ul> |
| <b>Human Resources Health</b>      | <ul style="list-style-type: none"> <li>Critical shortage and un-equal distribution of key professional health staff across network;</li> <li>Considerable attrition rate of professional staff;</li> <li>Inadequate HR planning, management and supervision across the network;</li> <li>Non-compliance with some MoH policy and procedures and use of varied HR management guidelines.</li> <li>Poor to average student exam results of training schools.</li> </ul>   |
| <b>Service Delivery</b>            | <ul style="list-style-type: none"> <li>Improve health planning in context of local disease burden in collaboration with local authorities, GHS and communities;</li> <li>Need to promote and continuously improve patient safety and quality of care;</li> <li>Documentation, exchange and application of good practices across the network.</li> </ul>   |
| <b>Health Financing</b>            | <ul style="list-style-type: none"> <li>Persistent delays in NHIS claim reimbursement;</li> <li>Low NHIS tariffs (medicines, specialist services, etc.);</li> <li>Insufficient funds for capital investments and maintenance across the network;</li> <li>Un-timely and incomplete financial reporting by CHAG members.</li> </ul>   |
| <b>Health Technology</b>           | <ul style="list-style-type: none"> <li>Dilapidated health facility plant and equipment;</li> <li>Limited maintenance culture, budgets and –plans;</li> <li>High cost of equipment and drugs.</li> </ul>   |
| <b>Health Information</b>          | <ul style="list-style-type: none"> <li>Prevailing in-adequate data management and use for decision making at the health facility level;</li> <li>In-ability of DHIMS-II to provide disaggregated data on CHAG at all levels;</li> <li>Late and incomplete submission of CHAG minimum data-set by members.</li> </ul>  |
| <b>Community Ownership</b>         | <ul style="list-style-type: none"> <li>Continuously strengthen health facility-community engagement;</li> <li>Document and disseminate good examples and lessons learnt.</li> </ul>   |
| <b>Participation</b>               | <ul style="list-style-type: none"> <li>Improve collaboration between CHAG health facilities and GHS at the Region, District and sub-district levels;</li> <li>Develop a strategic Public-Private-Partnership agenda;</li> <li>Update and comply with Memorandum of Understanding (MOU) between CHAG and MOH;</li> <li>Establish MOU between CHAG and GHS at the Regional and District level;</li> <li>Secure long-term funding beyond 2016.</li> </ul>  |
| <b>Health Research</b>             | <ul style="list-style-type: none"> <li>Limited systematic research of innovative work carried out within CHAG;</li> <li>Lack of an operational and institutional research agenda;</li> <li>Limited dissemination of research initiatives for CHAG and the health sector.</li> </ul>   |

## Annex 1: Board Members

During 2013, the board served its last year of service (Table 17).

**Table 17: Board Members of CHAG: 2013**

|    | <b>Name</b>                      | <b>Representing</b>                      |
|----|----------------------------------|--|
| 1  | Rev. Mgrs. Frank Egbi (Chariman) | Catholic Bishops' Conference             |
| 2  | Sr. Wilhelmina A. Mensah         | Ghana Catholic Bishops' Conference Ghana |
| 3  | Mr. Simeon K. Amuzu              | Ghana Catholic Bishops' Conference       |
| 4  | Mrs. Isabella Abban              | Ghana Catholic Bishops' Conference       |
| 5  | Dr. Mozes Adibo                  | Ghana Catholic Bishops' Conference       |
| 6  | Mr. George A. Adjei (Esq.)       | Ghana Catholic Bishops' Conference       |
| 7  | Dr. Wilfred Labi-Addo            | Ghana Catholic Bishops' Conference       |
| 8  | Mr. James Tobiga                 | Ghana Catholic Bishops' Conference       |
| 9  | Cdr. (rtd) Godwin E. Osei        | Ghana Catholic Bishops' Conference       |
| 10 | Ms. Annie A.F. Appoh             | Ghana Catholic Bishops' Conference       |
| 11 | Mr. Kwesi Botwe                  | Christian Council of Ghana               |
| 12 | Mr. Sam Sarpong-Appiah           | Christian Council of Ghana               |
| 13 | Mrs. Selina Ardayfio             | Christian Council of Ghana               |
| 14 | Dr. (Mrs.) Mamaa Entsua-Mensah   | Ghana Pentecostal Council                |
| 15 | Mr. Joseph Kwama Wumbee          | Ghana Pentecostal Council                |
| 16 | Rev. D.A. Koranteng              | Ghana Pentecostal Council                |
| 17 | Dr. Gilbert Buckle               | Executive Director CHAG                  |

A new board was inaugurated in March 2014 with representatives of the Ghana Catholic Bishops Conference, The Christian Council of Ghana and the Ghana Pentecostal Council (Table 18).

**Table 18: Board Members of CHAG: 2014**

|    | <b>Name</b>                         | <b>Representing</b>                |
|----|-------------------------------------|------------------------------------|
| 1  | Dr. Kwabena Adu-Poku (Chairman)     | Ghana Catholic Bishops' Conference |
| 2  | Rev. Ted Nelson-Adjakpey            | Ghana Catholic Bishops' Conference |
| 3  | Mr. Alex Osei Owusu, Esq.           | Ghana Catholic Bishops' Conference |
| 4  | Mr. Yaw Asamoah                     | Ghana Catholic Bishops' Conference |
| 5  | Mr. Maurice Adu-Amankwah            | Ghana Catholic Bishops' Conference |
| 6  | Dr. Mrs. Agatha Bonney              | Ghana Catholic Bishops' Conference |
| 7  | Col. Mrs monica Andoh               | Ghana Catholic Bishops' Conference |
| 8  | Mr. George A. Adjei, esq.           | Ghana Catholic Bishops' Conference |
| 9  | Mr. Christopher Nartey              | Ghana Catholic Bishops' Conference |
| 10 | Dr. Yao Yeboah                      | Ghana Pentecostal Council          |
| 11 | Dr. Fred Kutsienyo                  | Christian Council of Ghana         |
| 12 | Mr. Sam Sarpong Appiah              | Christian Council of Ghana         |
| 13 | Presbyter Jonas Gershon Dzordzordzi | Christian Council of Ghana         |
| 14 | Major Heather Craig                 | Christian Council of Ghana         |
| 15 | Mr. Bernard Clement K. Botwe        | Christian Council of Ghana         |
| 16 | Dr. Gilbert Buckle                  | Executive Director CHAG            |



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## Annex 2: The Health System Strengthening Model

CHAG applies the Health System Strengthening model (HSS) to improve and assess organizational performance and outcomes of the individual health facility and to tailor capacity support programs both, at the institutional and the individual staff level. The HSS model distinguishes 9 building blocks which are appreciated as interdependent and mutually needed to deliver quality health services. The 9 building blocks are the following: (1) Leadership and Governance; (2) Human Resources; (3) Service Delivery; (4) Finances; (5) Technology; (6) Health Information; (7) Community Participation; (8) Partnerships and finally; (9) Research.

The 9 building blocks, being sub-systems of the larger health system, must be understood together in a dynamic architecture of interactions and synergies. It is the multiple relationships and interactions among the blocks - how one affects and influences the others, and is in turn affected by them - that constitutes the dynamic and ever changing character of the health system. Critical in the HSS approach is the central role of people! People are key in the system as mediators, beneficiaries and as actors driving and improving the system itself. Health workers, managers, community members and policy-makers are at the center, influencing each of the building blocks. Each of these blocks in themselves, constitute an array of other sub-systems. For example, within the sub-system of service delivery there may be the sub-systems of laboratory services, OPD services, In-patient services or outreach services. Among all of these sub-systems are – to a varying degree - reactions, synergies and interactions with all of the health system's other building blocks.

Health System Strengthening (HSS) implies effecting appropriate changes to processes, procedures, structures and functions of the 9 health system blocks and their relationships. The concept of HSS refers to the continuous efforts to update maintain and strengthen the 9 building blocks in a comprehensive manner, thereby improving the functioning of the health facility or the larger health system and achieving its outcomes in terms of increased access and quality of health services, improved responsiveness to the burden of disease and, ultimately, better health outcomes for the population.

### Annex 3: Corporate M&E System

The Organisational Performance Assessment Tool (OPAT) is a M&E tool helping the health facility to periodically assess its organizational capacity and the extent to deliver desired health outcomes. The OPAT provides a framework of indicators and measures to assess organizational performance and outcomes of CHAG health facilities in each of the 9 HSS blocks (Table 19 and Table 20). CHAG uses the OPAT for consolidate reporting and strategic capacity development of the network and individual members.

**Table 19: Health Facility Organizational Capacity: Indicators and Measures**

| HSS Block                          | Indicator                          | Measure   |
|------------------------------------|------------------------------------|---|
| <b>Leadership &amp; Governance</b> | Regulatory Compliance              | Validity of Registration                        |
|                                    |                                    | Audited Financial Report                        |
|                                    |                                    | MOH/CHAG Memorandum of Understanding            |
|                                    |                                    | CHAG Guidelines                                 |
|                                    | Strategic Management               | Use of Strategic Plan                           |
| Management Capacity                | Preparation Annual Plan and Budget |   |
|                                    | Implementation Annual Plan         |   |
| <b>Human Resources</b>             | Staff Coverage                     | Workforce Strength                              |
|                                    | Staff Motivation                   | Staff Satisfaction                              |
|                                    | Staff Competence                   | Staff Development                               |
| <b>Service Delivery</b>            | Organization of Care               | Availability Basic Health Services              |
|                                    |                                    | Accessibility Basic Health Services             |
|                                    |                                    | Availability Advanced Health Services           |
|                                    |                                    | Referral System and Practices                   |
|                                    | Quality Assurance                  | Quality of Care                                 |
| <b>Finances</b>                    | Financial Management               | Financial Sustainability                        |
|                                    |                                    | Financial Administration                        |
|                                    |                                    | Budget Management                               |
| <b>Technology</b>                  | General Service Readiness          | Basic Utilities                                 |
|                                    |                                    | Basic Diagnostic Equipment                      |
|                                    |                                    | Infection Control Equipment and Amenities       |
|                                    |                                    | Laboratory Tests and Equipment                  |
|                                    |                                    | Essential Medicines                             |
| <b>Health Information</b>          | Data Management and Use            | Timeliness Reporting                            |
|                                    |                                    | Data Integrity                                  |
|                                    |                                    | Information Usage                               |
| <b>Community Participation</b>     | Community Engagement               | Community Collaboration                         |
| <b>Partnership</b>                 | Key Stakeholder Engagement         | Collaboration with Health Sector Administration |
| <b>Research</b>                    | Operational Research               | Research Agenda                                 |

*Table 20: Health Facility Outcomes and Impacts: Indicators and Measures*

| Indicator                           | No  | Measure                             |
|-------------------------------------|-----|-------------------------------------|
| <b>1. Health Outcomes</b>           | 1.1 | Under-Five Mortality                |
|                                     | 1.2 | Neo-Natal Mortality                 |
|                                     | 1.3 | Maternal Mortality                  |
|                                     | 1.4 | Malaria Mortality                   |
|                                     | 1.5 | Malaria Incidence                   |
|                                     | 1.6 | HIV Prevalence                      |
| <b>2. Responsiveness</b>            | 2.1 | Client Satisfaction                 |
| <b>3. Financial Risk Protection</b> | 3.1 | Health Insurance Coverage           |
| <b>4. Service Utilisation</b>       | 4.1 | Out-Patient Ratio                   |
|                                     | 4.2 | In-Patient Ratio                    |
|                                     | 4.3 | Immunization Ratio                  |
|                                     | 4.4 | Ante-Natal visits per client        |
|                                     | 4.5 | Referral Ratio                      |
| <b>5. Quality and Safety</b>        | 5.1 | Fresh Still Births                  |
|                                     | 5.2 | Compliance with Treatment Protocols |
|                                     | 5.3 | Post-Surgical Wound Infection       |
| <b>6. Efficiency</b>                | 6.1 | Client-Cost Ratio                   |
|                                     | 6.2 | Bed Occupancy Ratio                 |

## Annex 4: Member Institutions

**Table 21: Member Institutions by Health Facility Type, Denomination and Region**

| Facility  | Type              | Denomination        | Region        |
|---|-------------------|---------------------|---------------|
| 1 Church of Christ Mission Clinic, Bomso-Kumasi | Clinic            | Church Christ Mis.  | Ashanti       |
| 2 Bryant Hospital, Obuasi-Adansi                | Hospital          | Church of Pentecost | Ashanti       |
| 3 St. Luke's Hospital, Kasei                    | Hospital          | Church of Pentecost | Ashanti       |
| 4 Alpha Medical Centre, Madina                  | Hospital          | Church of Pentecost | Greater-Accra |
| 5 Pentecost Clinic, Kasapin                     | Clinic            | Church of Pentecost | Brong-Ahafo   |
| 6 Pentecost Clinic, Kpasa                       | Clinic            | Church of Pentecost | Volta         |
| 7 Pentecost Clinic, Yawmatwa                    | Clinic            | Church of Pentecost | Western       |
| 8 Pentecost Community Clinic, Twifu Agona       | Clinic            | Church of Pentecost | Central       |
| 9 Pentecost Clinic, Ayanfuri                    | Clinic            | Church of Pentecost | Central       |
| 10 Pentecost Clinic, Tarkwa                     | Clinic            | Church of Pentecost | Western       |
| 11 Emmanuel Medical Centre, East Legon          | Specialist Clinic | Church of Pentecost | Greater-Accra |
| 12 Janie Speaks A.M.E Zion Hospital, Afrancho   | Hospital          | AME – Zion Church   | Ashanti       |
| 13 Anglican Health Centre, Tano-Odumase         | Health Centre     | Anglican Church     | Ashanti       |
| 14 Anglican Clinic, Sefwi-Bonzain               | Clinic            | Anglican Church     | Western       |
| 15 Anglican Eye Clinic, Jachie                  | Clinic            | Anglican Church     | Ashanti       |
| 16 Bishop Anglioby Memorial Clinic, Sefwi-B     | Clinic            | Anglican Church     | Western       |
| 17 St. Mark's Anglican Clinic, Subiri           | Clinic            | Anglican Church     | Western       |
| 18 Anglican Clinic, Widnaba                     | Clinic            | Anglican Church     | Upper East    |
| 19 Christian Eye Centre, Cape Coast             | Specialist Clinic | Anglican Church     | Central       |
| 20 Christian Eye Centre, Abesim                 | Specialist Clinic | Anglican Church     | Brong-Ahafo   |
| 21 Anglican Clinic, Yelwoko                     | Clinic            | Anglican Church     | Upper East    |
| 22 Saboba Medical Centre, Saboba                | Hospital          | Ass. of God Church  | Northern      |
| 23 The Kings Medical Centre, Bontanga           | Hospital          | Ass. of God Church  | Northern      |
| 24 Ass. of God H'lth Services, Nakpanduri       | Clinic            | Ass. of God Church  | Northern      |
| 25 Baptist Medical Centre, Nalerigu             | Hospital          | Baptist Church      | Northern      |
| 26 Coast for Christ Baptist Hospital            | Hospital          | Baptist Church      | Central       |
| 27 Calvary Baptist Micro-Clinic, Cape Coast     | Clinic            | Baptist Church      | Central       |
| 28 God's Glory Baptist Clinic, Kronom – Kum     | Clinic            | Baptist Church      | Ashanti       |
| 29 St. Martin's Hospital, Agroyesum             | Hospital          | Catholic Church     | Ashanti       |
| 30 St. Peter's Hospital, Jacobu                 | Hospital          | Catholic Church     | Ashanti       |
| 31 Our Lady Grace Hospital, Breman-Asikuma      | Hospital          | Catholic Church     | Central       |
| 32 St. Francis Xavier Hospital, Assin-Fosu      | Hospital          | Catholic Church     | Central       |
| 33 St. Elizabeth Hospital, Hwidiem              | Hospital          | Catholic Church     | Brong-Ahafo   |

|    |   |               |                 |             |
|----|---|---------------|-----------------|-------------|
| 34 | Mathias Hospital, Yeji                    | Hospital      | Catholic Church | Brong-Ahafo |
| 35 | St. Michael's Hospital, Pramso            | Hospital      | Catholic Church | Ashanti     |
| 36 | Holy Family Hospital, Berekum             | Hospital      | Catholic Church | Brong-Ahafo |
| 37 | Catholic Hospital, Apam                   | Hospital      | Catholic Church | Central     |
| 38 | St. Mary's Hospital, Drobo                | Hospital      | Catholic Church | Brong-Ahafo |
| 39 | St. Joseph's Hospital, Jirapa             | Hospital      | Catholic Church | Upper West  |
| 40 | Mary Theresa Hospital, Dodi-Papase        | Hospital      | Catholic Church | Volta       |
| 41 | Sacred Heart Hospital, Weme-Abor          | Hospital      | Catholic Church | Volta       |
| 42 | St. Anthony's Hospital, Dzodze            | Hospital      | Catholic Church | Volta       |
| 43 | Anfoega Catholic Hospital, Anfoega        | Hospital      | Catholic Church | Volta       |
| 44 | Margaret Marquart Cath. Hosp, Kpando      | Hospital      | Catholic Church | Volta       |
| 45 | St. Dominic's Hospital, Akwatia           | Hospital      | Catholic Church | Eastern     |
| 46 | Holy Family Hospital, Nkawkaw             | Hospital      | Catholic Church | Eastern     |
| 47 | St. Theresa's Hospital, Nandom            | Hospital      | Catholic Church | Upper West  |
| 48 | St. Martin's Hospital, Agomanya           | Hospital      | Catholic Church | Eastern     |
| 49 | St. Joseph's Hospital, Koforidua          | Hospital      | Catholic Church | Eastern     |
| 50 | St. Theresa's Hospital, Nkoranza          | Hospital      | Catholic Church | Brong-Ahafo |
| 51 | St. Joseph's Hospital, Nkwanta            | Hospital      | Catholic Church | Volta       |
| 52 | Catholic Hospital, Battor                 | Hospital      | Catholic Church | Volta       |
| 53 | St. Martin de Porres Hospital, Eikwe      | Hospital      | Catholic Church | Western     |
| 54 | St. Patrick's Hospital, Maase-Offinso     | Hospital      | Catholic Church | Ashanti     |
| 55 | St. John of God Hospital, Sefwi-Asafo     | Hospital      | Catholic Church | Western     |
| 56 | Comboni Hospital, Sogakope                | Hospital      | Catholic Church | Volta       |
| 57 | St. John of God Hosp., Duayaw-Nkwanta     | Hospital      | Catholic Church | Brong-Ahafo |
| 58 | Holy Family Hospital, Techiman            | Hospital      | Catholic Church | Brong-Ahafo |
| 59 | Fr. Thomas A. R. Memo. Hosp, Asankragwa   | Hospital      | Catholic Church | Western     |
| 60 | West Gonja Hospital, Damango              | Hospital      | Catholic Church | Northern    |
| 61 | Merci Women's Hospital, Mankessim         | Hospital      | Catholic Church | Central     |
| 62 | St. Louis Health Centre, Bodwesango       | Health Centre | Catholic Church | Ashanti     |
| 63 | Benito Menni Health Centre, Dompooase     | Health Centre | Catholic Church | Ashanti     |
| 64 | Sacred Heart Health Centre, Beपोase       | Health Centre | Catholic Church | Ashanti     |
| 65 | St. John's Health Centre, Domeabra        | Health Centre | Catholic Church | Ashanti     |
| 66 | St. Theresa Health Centre, Zorko          | Health Centre | Catholic Church | Upper East  |
| 67 | St. Lucas Health Centre, Wiaga            | Health Centre | Catholic Church | Upper East  |
| 68 | Martyrs of Uganda Health Centre, Sirigu   | Health Centre | Catholic Church | Upper East  |
| 69 | St. Joseph Health Centre, Nakolo          | Health Centre | Catholic Church | Upper East  |
| 70 | Holy Spirit HC, Kwesi Fante, Afram Plains | Health Centre | Catholic Church | Eastern     |
| 71 | Tuna Health Centre                        | Health Centre | Catholic Church | Northern    |

|     |  |                |                 |               |
|-----|--|----------------|-----------------|---------------|
| 72  | St. Luke's Health Centre, Seniagya           | Health Centre  | Catholic Church | Ashanti       |
| 73  | Imma. Concept. of Mary H. Centre, Kongo      | Health Centre  | Catholic Church | Upper East    |
| 74  | Tatale Health Centre, Tatale                 | Health Centre  | Catholic Church | Northern      |
| 75  | St. Mary's Clinic, Yapesa                    | Clinic         | Catholic Church | Ashanti       |
| 76  | St. Thomas Gen. & Maternity, Hiaa            | Clinic         | Catholic Church | Ashanti       |
| 77  | St. Edward's Clinic, Dwinyama                | Clinic         | Catholic Church | Ashanti       |
| 78  | Holy Child Clinic, Fijai                     | Clinic         | Catholic Church | Western       |
| 79  | Notre Dame Clinic, Nsawam                    | Clinic         | Catholic Church | Eastern       |
| 80  | St. Peter's Clinic/Maternity Home, Ntobroso  | Clinic         | Catholic Church | Ashanti       |
| 81  | Catholic Clinic, Akim-Swedru                 | Clinic         | Catholic Church | Eastern       |
| 82  | St. John's Clinic, Akim-Ofoase               | Clinic         | Catholic Church | Eastern       |
| 83  | St. Andrew's Clinic and Maternity, Kordieba  | Clinic         | Catholic Church | Greater-Accra |
| 84  | St. Joseph Clinic & Mat Home, Chamba         | Clinic         | Catholic Church | Northern      |
| 85  | St. Ann's Maternity Clinic, Donyina          | Clinic         | Catholic Church | Ashanti       |
| 86  | St. Gregory Catholic Clinic, Gomoa Budum     | Clinic         | Catholic Church | Central       |
| 87  | Mater Ecclesiae Clinic, Sokode               | Clinic         | Catholic Church | Volta         |
| 88  | St. George's Clinic, Liati                   | Clinic         | Catholic Church | Volta         |
| 89  | St. Martin's PHC/ Maternity Clinic, Bui      | Clinic         | Catholic Church | Upper East    |
| 90  | St. Luke's Catholic PHC Clinic, Chinderi     | Clinic         | Catholic Church | Volta         |
| 91  | Catholic Clinic, Oku Ejura                   | Clinic         | Catholic Church | Ashanti       |
| 92  | St. Joseph's Clinic, Abira                   | Clinic         | Catholic Church | Ashanti       |
| 93  | St. Joseph Clinic & Mat, Kwahu-Tafo          | Clinic         | Catholic Church | Eastern       |
| 94  | St. Michael's Catholic Clinic, Ntronang-Akim | Clinic         | Catholic Church | Eastern       |
| 95  | St. Joseph's HC, Kalba                       | Clinic         | Catholic Church | Northern      |
| 96  | Holy Child Clinic, Egyam                     | Clinic         | Catholic Church | Western       |
| 97  | Catholic Clinic/PHC Unit, Salaga             | Clinic         | Catholic Church | Northern      |
| 98  | St. Lucy's Polyclinic, Tamale                | Clinic         | Catholic Church | Northern      |
| 99  | Holy Cross Clinic/maternity, Sambuli         | Clinic         | Catholic Church | Northern      |
| 100 | Abease PHC Project, Prang/Abease             | PHC            | Catholic Church | Brong-Ahafo   |
| 101 | Catholic PHC, Bole                           | PHC            | Catholic Church | Northern      |
| 102 | Wa Diocese PHC Project                       | PHC            | Catholic Church | Upper West    |
| 103 | Our Lady of Rocio PHC, Walewale              | PHC            | Catholic Church | Northern      |
| 104 | Orthopaedic Training Centre, Nsawam          | Training Inst. | Catholic Church | Eastern       |
| 105 | Holy Family Midwifery College, Berekum       | Training Inst. | Catholic Church | Brong-Ahafo   |
| 106 | St. Joseph's Midwifery College, Jirapa       | Training Inst. | Catholic Church | Upper West    |
| 107 | Holy Family Nurses Train.College, Nkawkaw    | Training Inst. | Catholic Church | Eastern       |
| 108 | St. Patrick's Midwif. School, Maase-Offinso  | Training Inst. | Catholic Church | Ashanti       |
| 109 | Church of God Clinic, Essienimpong           | Clinic         | Church of God   | Ashanti       |

|     |   |               |                     |               |
|-----|---|---------------|---------------------|---------------|
| 110 | EP Nazareth Healing Complex, Vane Avatime     | Clinic        | Evangelical Presby. | Volta         |
| 111 | EP Dan Moser Memo. Clinic, Dambai             | Clinic        | Evangelical Presby. | Volta         |
| 112 | EP Clinic, Wapuli                             | Clinic        | Evangelical Presby. | Northern      |
| 113 | EP Church Health Services, Ho                 | PHC           | Evangelical Presby. | Volta         |
| 114 | Global Evangelical Mission Hospital, Apromase | Hospital      | Global Evan. Church | Ashanti       |
| 115 | Lighthouse Mission Hospital, North Kaneshie   | Hospital      | Lighthouse Mission  | Greater-Accra |
| 116 | Manna Mission Hosp, Teshie-Nungua             | Hospital      | Manna Mission       | Greater-Accra |
| 117 | Methodist Faith Healing Hospital, Ankaase     | Hospital      | Methodist Church    | Ashanti       |
| 118 | Methodist Hospital, Wenchi                    | Hospital      | Methodist Church    | Brong-Ahafo   |
| 119 | Methodist Clinic, Senchi                      | Clinic        | Methodist Church    | Ashanti       |
| 120 | Lake Bosumtwi Methodist Clinic, Amakom        | Clinic        | Methodist Church    | Ashanti       |
| 121 | Methodist Clinic, Bebu – Anyiaem              | Clinic        | Methodist Church    | Ashanti       |
| 122 | Methodist Clinic, Nyameani                    | Clinic        | Methodist Church    | Ashanti       |
| 123 | Methodist Clinic, Brodekwano                  | Clinic        | Methodist Church    | Ashanti       |
| 124 | Methodist Clinic, Lawra                       | Clinic        | Methodist Church    | Upper West    |
| 125 | Methodist Clinic, Aburaso                     | Clinic        | Methodist Church    | Ashanti       |
| 126 | Presbyterian Hospital, Agogo,                 | Hospital      | Presby. Church      | Brong-Ahafo   |
| 127 | Presbyterian Hospital, Bawku                  | Hospital      | Presby. Church      | Upper East    |
| 128 | Presbyterian Hospital, Dormaa-Ahenkro         | Hospital      | Presby. Church      | Brong-Ahafo   |
| 129 | Presbyterian Hospital, Donkorkrom             | Hospital      | Presby. Church      | Eastern       |
| 130 | Garu Health Centre, Garu                      | Health Centre | Presby. Church      | Upper East    |
| 131 | Tease Presby Health Centre, Afram Plains      | Health Centre | Presby. Church      | Eastern       |
| 132 | Widana Health Centre, Widana                  | Health Centre | Presby. Church      | Upper East    |
| 133 | Kom Clinic, Aburi                             | Clinic        | Presby. Church      | Eastern       |
| 134 | Presbyterian Clinic, Papueso-Enchi            | Clinic        | Presby. Church      | Western       |
| 135 | Presbyterian Clinic, Assin-Praso              | Clinic        | Presby. Church      | Central       |
| 136 | Presbyterian Clinic, Assin Nsuta              | Clinic        | Presby. Church      | Central       |
| 137 | Presbyterian Clinic, Kwamebikrom              | Clinic        | Presby. Church      | Brong-Ahafo   |
| 138 | Presbyterian Clinic, Aboabo                   | Clinic        | Presby. Church      | Brong-Ahafo   |
| 139 | Presbyterian Clinic, KojoKumikrom             | Clinic        | Presby. Church      | Brong-Ahafo   |
| 140 | Presbyterian Clinic, Kwamesua                 | Clinic        | Presby. Church      | Brong-Ahafo   |
| 141 | Presbyterian Clinic, Kyeremasu                | Clinic        | Presby. Church      | Brong-Ahafo   |
| 142 | Jenjemireja Clinic, Drobo                     | Clinic        | Presby. Church      | Brong-Ahafo   |
| 143 | Presbyterian Clinic, Langbinsi-Gambaga        | Clinic        | Presby. Church      | Northern      |
| 144 | Presbyterian PHC, Enchi                       | PHC           | Presby. Church      | Western       |
| 145 | Presbyterian PHC, Agogo                       | PHC           | Presby. Church      | Ashanti       |
| 146 | Presbyterian PHC, Bawku                       | PHC           | Presby. Church      | Upper East    |
| 147 | Presbyterian PHC, Sandema                     | PHC           | Presby. Church      | Upper East    |

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| 148 | Presbyterian PHC, Bolgatanga                     | PHC            | Presby. Church     | Upper East    |
| 149 | Presby PHC Project, Dormaa-Ahenkro               | PHC            | Presby. Church     | Brong-Ahafo   |
| 150 | Woriyanga Presby. Health Centre, Bawku           | PHC            | Presby. Church     | Upper East    |
| 151 | Ekye Presbyterian Health Centre, Ekye            | PHC            | Presby. Church     | Eastern       |
| 152 | Kwahu-Praso Presby Clinic, Kwahu-Praso           | PHC            | Presby. Church     | Eastern       |
| 153 | Abetifi Presbyterian PHC, Abetifi                | PHC            | Presby. Church     | Eastern       |
| 154 | Nurses Training College, Agogo                   | Training Inst. | Presby. Church     | Ashanti       |
| 155 | Presby. Nurses Training College, Bawku,          | Training Inst. | Presby. Church     | Upper East    |
| 156 | Sight for Africa Eye clinic, Accra               | Clinic         | RUN Mission        | Greater-Accra |
| 157 | Hawa Mem. Saviour Hospital, Akim-Osiem           | Hospital       | Saviour Church     | Eastern       |
| 158 | Seventh-Day Adventist Hospital, Asamang          | Hospital       | Seventh Day Advent | Ashanti       |
| 159 | Seventh-Day Adventist Hospital, Wiamaosi-Ashanti | Hospital       | Seventh Day Advent | Ashanti       |
| 160 | Akoma Mem. SDA Hosp. Kortwia-Abodom              | Hospital       | Seventh Day Advent | Ashanti       |
| 161 | Seventh-Day Adv. Hosp., Dominase                 | Hospital       | Seventh Day Advent | Ashanti       |
| 162 | Seventh-Day Adv. Hosp., Kwadaso-Kumasi           | Hospital       | Seventh Day Advent | Ashanti       |
| 163 | SDA Hospital, Koforidua                          | Hospital       | Seventh Day Advent | Eastern       |
| 164 | SDA Hospital, Sunyani                            | Hospital       | Seventh Day Advent | Brong-Ahafo   |
| 165 | Seventh-Day Adventist Hospital, Tamale           | Hospital       | Seventh Day Advent | Northern      |
| 166 | SDA Clinic, New Gbawe                            | Clinic         | Seventh Day Advent | Greater-Accra |
| 167 | SDA Clinic and Maternity, Sefwi-Asawinso         | Clinic         | Seventh Day Advent | Western       |
| 168 | SDA Clinic, Kofikrom                             | Clinic         | Seventh Day Advent | Western       |
| 169 | Nagel Memorial Clinic, Takoradi                  | Clinic         | Seventh Day Advent | Western       |
| 170 | SDA Clinic, Konkoma                              | Clinic         | Seventh Day Advent | Ashanti       |
| 171 | SDA Health Asst. Training School, Asanta         | Training Inst. | Seventh Day Advent | Western       |
| 172 | SDA Nurses Training College, Kwadaso             | Training Inst. | Seventh Day Advent | Ashanti       |
| 173 | Siloam Gospel Clinic, Bonyere                    | Clinic         | Siloam Gospel      | Western       |
| 174 | Urban Aid Health Centre, Mamobi                  | Health Centre  | The Salvation Army | Greater-Accra |
| 175 | Salvation Army Clinic, Wiamaose                  | Clinic         | The Salvation Army | Ashanti       |
| 176 | Salvation Army Clinic, Agona-Duakwa              | Clinic         | The Salvation Army | Central       |
| 177 | Salvation Army Clinic, Baa                       | Clinic         | The Salvation Army | Central       |
| 178 | Salvation Army Clinic, Anum                      | Clinic         | The Salvation Army | Eastern       |
| 179 | Salvation Army Clinic, Begoro                    | Clinic         | The Salvation Army | Eastern       |
| 180 | Salvation Army Clinic, Adaklu-Sofa               | Clinic         | The Salvation Army | Volta         |
| 181 | Salvation Army Clinic, Akim-Wenchi               | Clinic         | The Salvation Army | Eastern       |
| 182 | Kpandai Health Centre, Kpandai                   | Health Centre  | WEC Mission        | Northern      |
| 183 | Word Alive School of Nursing, Esiam              | Training Inst. | Word Alive Mission | Western       |