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Health Partners GHANA

Evaluation of the Free Maternal Health Care Initiative in Ghana

LRPS-CAB-2012-9103261

Volume II (Annexes)

May 18th, 2013

Laarstraat 43, B-2840 Reet Belgium
E-mail hera@hera.eu

tel. +32-3-8445930
fax. +32-3-8448221

www.hera.eu

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1 TERMS OF REFERENCE

BACKGROUND

The health sector is organized on a 3 tier system (primary, secondary and tertiary levels). The primary level health services are provided at the district level and below and they include, a district hospital usually located at the district capital, health centres at the sub-district level and the Community-based Health Planning Services (CHPS) at the community level. Secondary level services are provided by the regional hospitals whilst the teaching hospitals are responsible for the provision of tertiary services. Delivery services are provided at all the service delivery points except the community level (CHPS) where only emergency deliveries are accepted. All public health facilities with the exception of most CHPS are accredited by the National Health Insurance Authority (NHIA) to provide clinical services including delivery services. Private health facilities that satisfy NHIA requirements are also accredited to provide delivery services.

Available evidence suggests that increasing women's access to skilled medical care at child birth, pregnancy and the early post-partum period protects the mother and child from death and/or illness at birth. Conscious of this evidence, the Ministry of Health adopted the skilled delivery approach for maternal and child health services. Actions were initiated to ensure universal coverage to skilled delivery highlighting prevention, early detection and management of pregnancy and pregnancy related complications including post-partum and neonatal period. Efforts were made to move basic health services as close as possible to the communities. Sufficient support in the form of equipment and supplies were also provided.

Despite these initiatives, skilled delivery, as indicated in the DHS, 2008 and routine reports fell below expectation and Maternal Mortality Ratio had not significantly changed as indicated in the 2007 maternal health survey. Skilled delivery coverage in the 2008 DHS was 59% whiles routine coverage was 45.6%, 49.5% and 52.23% in 2009, 2010 and 2011 respectively. The maternal mortality survey conducted in 2007 estimated the Maternal Mortality Ratio to be 451/100,000.

In an effort to further improve skilled delivery coverage (42.2% in 2008) and ensure equitable access to skilled delivery services, the government in 2008 introduced the free maternal health care initiative. The aim of the initiative is to reduce maternal mortality in Ghana. It was designed to increase uptake of antenatal, delivery and post-natal care services through the registration of all pregnant women and exemptions from payment of registration charges and NHIS premium.

Initially the Ministry of health reimbursed facilities directly for free maternal health services. After about six months period the procedure was changed and financing arrangements for the Free Maternal Health Care Services are now pursued through the National Health Insurance Authority (NHIA). The NHIA therefore reimburses all vetted and approved claims to accredited service providers for services provided. In order to ensure the smooth implementation of the policy, implementation guidelines were issued to all agencies and stakeholders.

The guideline that was drawn for the implementation of the initiative gave the definition of a maternal death as death arising due to complications of pregnancy or delivery, up to the end of post-natal period (six weeks after delivery).

The free maternal health care initiative provided for a specific benefit package. Under the package all pregnant women not currently registered with the NHIS are exempted from payment of NHIS premium and registration charges while the waiting period between registration and accessing services is waived. The initiative also ascribes similar relief to women who present to accredited health facilities with pregnancy related complications as a result of a miscarriage or abortion. Women who deliver at home or in an unaccredited health facility and subsequently present with post-partum complications would enjoy similar relief. The initiative provides for pregnant women to access all the above maternity services under the NHIS benefit package. Family planning is not included under the NHIS benefits package.

The free maternal health care initiative has been running since June 2008 and there is the need to justify its continued implementation in the present form or in an amended form. No meaningful evaluation has been done since its inception to assess how well the initiative has contributed to improving supervised delivery coverage and consequently reducing deaths due to pregnancy or delivery.

OBJECTIVES AND SCOPE OF WORK OF THE CONSULTANCY

The overall objective of the evaluation is to understand whether the intended objectives of the free maternal delivery care policy as implemented are being achieved. It may not be possible to determine the impact of the free maternal health policy on maternal mortality. However, other measurements will provide a picture of the relevance, effectiveness, and impact of the policy.

Primary Objectives

1. Evaluate the impact of the MoH's free maternal health care policy on utilization of skilled delivery services in Ghana

2. Evaluate the impact of the free maternal health care policy on quality of maternal health services

Secondary Objectives

1. Ascertain the profile of beneficiaries of the free maternal health care policy. Indicate the profile of net beneficiaries in terms of geographical location and distance to nearest health facility, income and educational levels and how these variables influenced their health seeking behaviours.

2. Describe the process and challenges in the implementation of the guidelines on free maternal health care policy at all levels of service delivery.

3. Describe the process and challenges in the implementation of the guidelines on free maternal health care policy within the NHIS and the MOH.

4. Ascertain the perspectives of the beneficiaries (pregnant women and other stakeholders) of the policy including understanding reasons why women do not or are not able to take advantage of the policy

5. To draw lessons that will feed into the revision of the policy and for future initiatives.

Geographically, the scope of the evaluation should cover the implementation of the free maternal care policy throughout Ghana. Coverage data and details on the profile of beneficiaries should refer to the entire country. Perspectives of beneficiaries may, however, be relevant only for the location in which they accessed free maternal care.

Temporally, the scope of the evaluation should cover the inception of the policy since June 2008 until December 2011.

EVALUATION CRITERIA

The external evaluation will be guided by OECD/DAC evaluation criteria, with a focus on relevance, effectiveness, efficiency (cost-effectiveness), sustainability and impact.

3. Relevance (the extent to which the activity is suited to the priorities and policies of the target group)

To what extent was the free maternal care policy relevant to the overall objective of reducing maternal mortality?

Did the policy address a key constraint to reducing maternal mortality? To the extent possible, determine whether offering free maternal care was the optimal method of reducing maternal mortality.

ii. Effectiveness (a measure of the extent to which the activity achieves the objectives)

Did the policy influence access and utilization of skilled delivery services in Ghana? Can changes in use of skilled delivery services be correlated with or attributed to the free maternal care policy?

The free maternal care policy aimed to increase coverage for poor pregnant women. To what extent was this objective achieved and did bridge the equity gap in terms of utilization?

Ascertain the profile of beneficiaries of the free maternal health care policy. Indicate the profile of net beneficiaries in terms of geographical location and distance to nearest health facility, income and educational levels and how these variables influenced their health seeking behaviours.

Estimate how many deaths might have been averted based on increased usage of skilled delivery attendance

iii. Efficiency (measures the outputs in relation to the inputs. Signifies that the policy is the least costly method of reducing maternal mortality and increasing access to skilled delivery).

Is the free maternal health care the most cost efficient option for increasing access and utilisation of skilled delivery in Ghana?

Is the health delivery system operating efficiently in terms of fund flows, staff response time to maternal health issues?

iv. Impact (the positive and negative impacts of the intervention)

Describe the process and challenges in the implementation of the guidelines on free maternal health care policy at all levels. Were there any unintended consequences of offering free maternal care?

Ascertain the perspectives of the beneficiaries (pregnant women) of the policy including understanding reasons why women do not or are not able to take advantage of the policy.

v. Sustainability "is concerned with measuring whether the benefits of an activity are likely to continue after the initial funding period."

Financial Sustainability: Determine the annual cost of the free maternal health care policy and the extent to which it has been fully funded 2008 – 2011. Are there any funding gaps?

Based on current trends, does MOH anticipate being able to continue funding the policy in its current form? Have other forms of the policy been considered and, if so, have they been costed? What would be their impact on financial sustainability?

TASK OF THE CONSULTANTS

The consultant will work with the Director, PPME of the Ministry of Health and the Director of Family Health services of the Ghana Health Service (GHS) to finalise the design and inception plan for the evaluation. The consultant will further work with a local technical team comprising the CEO of the NHIS, Director PPME of the Ministry of Health, Director PPME of the GHS and other stakeholders to coordinate, conduct and disseminate the findings of the evaluation. The consultant is expected to undertake the following specific tasks:

Inception Phase

1. Carry out a desk-review of relevant documents provided and or requested for the study.

2. Develop an inception report, detailing the evaluation design, methodology, indicators, tools, work plan. This will be developed and finalized in consultation with the technical team set up by the Ministry of Health for the purpose.

3. Develop a Sampling Design and Data Collection & Management Protocol that captures in addition to other relevant variables, Basic demographic variables including religion, socio-cultural practices and socio-economic status of the people.

Evaluation Phase

1. Conduct interviews with key informants

2. Facilitate recruitment and training of field staff (supervisors, interviewers, observers/ record reviewers) and pre-testing of data collection tools

3. Develop and submit the first draft of the evaluation report. Brief the Ministry of Health, NHIA, and local partners. The reports should be comprehensive and provide detailed specific findings as well as key recommendations for improving implementation

4. The consultant will be expected to compile and submit the draft report, make a presentation to the Ministry of health and its Agencies, incorporate comments and submit a final report within 30 days after receiving final comments.

DELIVERABLES

1. Inception Report detailing the evaluation design, methodology, tools, work plan and budget
2. Draft evaluation report.
3. Power point presentation of findings to stakeholders
4. Final evaluation report, including amendments made following comments by the steering committee

TIME-FRAME

Evaluation to be completed within 70 days.

METHODOLOGY

The consultant will perform a desk review, conduct key informant interviews, and undertake limited primary data collection. A mix of quantitative and qualitative methods will be expected. The successful consultant will be expected to recommend appropriate tools for the study. Primary data collection should include providers (public/private) and by level of service delivery (hospital/maternity homes/health centers), the district schemes, NHIA, and the policy makers (MOH).

Existing Data sources (list not exhaustive)

1. NHIA administrative databases – claims, registration etc.
2. Institutional Antenatal/Delivery registers
3. Household surveys- DHS (2008), MICS (2006,2011) specify years
4. Maternal mortality survey, 2007
5. Independent review reports, 2008-2010
6. Family Health Annual Report
7. GHS annual Report
8. NHIA Annual Report
9. MOH Annual Report, 2008
10. Citizen assessment report (NDPC, 2008)
11. APR NDPC
12. Financial data from MOH
13. Financial data from NHIA

ROLE OF THE MINISTRY OF HEALTH

Ministry of Health will provide logistics and relevant documents and be the link between the consultant and the health facilities, communities and other key informers. Ministry of Health will also review tools and provide support in the evaluation process. Ministry of Health will make available venues for discussions and mobilize the required persons for interviews. The consultant will be responsible for guiding the entire evaluation process and all other specific responsibilities as stipulated in the Terms of Reference.

ROLE OF THE NATIONAL HEALTH INSURANCE AUTHORITY

The National Health Insurance Authority will provide all supporting documents needed to aid the evaluation process and make available personnel of the authority for interaction with the consultant when the need arises. The NHIA shall collaborate with the Ministry of Health to oversee the evaluation process.

SUPERVISION

The contractor will be supervised by Chief of Health and Nutrition, and M&E Specialist both of UNICEF.

2 REPLIES TO MOH COMMENTS ON THE DRAFT REPORT

Comments by the Ministry of Health	Replies
Page 5: Based on the most up-to-date information from GHS and teaching hospitals, the facility-based delivery rate reached 77.9% if the 3% proportion is applied. This figure excludes some private providers not captured in the DHIMS and quasi-governmental hospitals (e.g. 37 military hospital and Police Hospital). When compared to the MICS figure, this raises some concern about applying the 3% as basis of expected deliveries.	We have changed the text to reflect the uncertainty in the estimated rates and the incompleteness of the data. We have, however, maintained the figure because it is primarily used to illustrate regional disparities.
Page 9: Analysis of NHIS membership by socio-economic quintile is a bit tricky with the current design of survey questionnaires. While the proportion of "ever registered" has a reasonably equitable distribution across the socio-economic quintiles, there is large inequity among active members (expressed as ever registered multiplied by cardholders – card seen and card not seen, table NHI.1A in the MICS report). Since only active members can access services under NHIS, the MOH finds this measure to be a better indicator of equity compared to "ever registrants". Ideally, the MOH would be interested in the probability of accessing free maternal services by socio-economic quintile per the latest event of pregnancy. This analysis should have been based on proportion of active members benefitting from the policy and who gave birth the preceding year over total number of deliveries in the same period (by socio-economic quintile). This analysis of information, which is available in the MICS dataset, would better address the secondary objective 1 in the TOR.	We have reviewed the MICS report. Unfortunately we could not gain access to the MICS database. Our graphic is based on table NHI.3A of the report. The number of women who ever registered is much larger than the number of current insurance card holders, primarily because 28% of women ever registered did not renew their cards (table NHI.2A). We cannot calculate the number of deliveries among current card holders, and we have no information on how the insurance coverage was obtained among current card holders. (We could have made this estimation if we would have had access to the database) However, NHI coverage for maternity services is not dependent on card ownership. It is provided immediately following registration. Many women benefitting from the free registration deliver before their card is issued. We therefore maintain that we have presented the best estimate of equity of access to the free maternal care initiative that we can arrive at on the basis of the published MICS report. We have not made any changes.

Page 19: How does the high caesarean section impact on the free delivery initiative in terms of cost? It would be interesting if you would discuss this figure in relation to the generally accepted ideal rate for CS. Is there any indication of supplier induced demand?	The cost implications of an increasing Caesarean section rates are mentioned a little further in the same paragraph. Furthermore, under 3.2.2.1 we report that the increased income of the sampled hospitals for maternity services cannot entirely be explained by the increased volume of deliveries. The increased proportion of Caesarean sections is certainly one of the contributing factors although our data do not allow us to estimate the exact contribution. The "high" Caesarean section rate of 18% in our sampled hospitals is due to the profile of our sample which included a teaching hospital and a regional hospital. No inference can be made from these data on the national Caesarean section rate. Caesarean section rates can only be estimated on the basis of population data. The MICS 2011 estimated a Caesarean section rate of 11.4% which is well within the WHO indicative rate for adequate obstetric coverage of 5% to 15%. We made some changes in the paragraph to strengthen the explanation.
Page 21: It will be appreciated if this (the rate of stillbirths) can be referenced to other standards.	We have included a reference
Page 23: Since you collected detailed information about HR, would it be possible to triangulate this statement (on partographs) with your HR findings?	We have modified the text
Page 28: It would make sense to link these elements (cost of the initiative) to the elements of GOG's budget i.e.: 1. Compensation of employees 2. Goods and Services 3. Assets	We have linked the human resources cost to the HR budget (but modified it in the final report to link it to HR expenditures on recommendation from the MoH) The main cost of goods and services is covered with internally generated funds, primarily insurance claims which are analysed in the report. Investments in infrastructure and other assets are mentioned, but we do not think that a systematic review of the MoH asset budget will contribute to the analysis. We did not make any changes.

Page 29: Expenditure figures, i.e. financial statements, would provide a better pictures of true spending on compensation of employees than budget figures. MOH recommends to update this section based on actual spending.	We have rewritten paragraph 3.2.1.2 based on data obtained from MoH PPME
Page 42: Would this indicate that 30% of women who became pregnant were using contraception at the time they became pregnant?!	It should not be surprising that women who became pregnant while using contraception would be highly represented among those seeking an induced abortion. 20% of them reported failure of contraceptive pills, condoms or injected contraceptives. The remaining 10% used traditional or other methods. Only 1% had missing data. No changes made in the text.
Page 43: The MICS 2011 has information about deliveries within the preceding years, where they delivered, their NHIS card holder status and how membership was achieved.	We cannot find this information in the MICS report. The tables on NHIS membership and the tables on place of delivery cannot be triangulated. The information could be generated from the MICS database, but we did not have access to it. We have mentioned this in the text
Page 44: Please see comments about equity estimation based on survey data above (related to MICS)	The paragraph contained erroneous information and we changed it. In fact the NHIS questionnaire of the MICS was applied to all women age 15 to 49 in the household survey. It cannot be linked to data on deliveries in the reproductive health. Paragraph changed

3 SAMPLING OF HEALTH FACILITIES INCLUDED IN THE STUDY

The health facilities were sampled by a purposive sampling process. The sampling frame and the sampling criteria were agreed in negotiation with the Steering Committee. The final sample was reviewed and adjusted by the Steering Committee. The sampling procedure is described in detail in the Inception Report. The sampling frame included only hospitals. In 2010, hospitals accounted for two thirds (65.3%) of deliveries in health facilities. *[MoH 2011-4]*

Table 1. Sampling frame of health facilities by type and ownership

	Government	Mission	Private	Quasi-Govt.	Total
Primary Hospital	79	41	73	2	**195**
Secondary Hospital	7			1	**8**
Tertiary Hospital	1				**1**
	87	**40**	**74**	**3**	**204**

Through a purposive sampling procedure we selected the following 21 hospitals:

Table 2. List of sampled hospitals

Region	Facility	Type	Ownership	Ur/Ru
ASHANTI	SILOAM HOSPITAL	PRIMARY HOSPITAL	PRIVATE	Urban
	ST.PATRICK HOSPITAL	PRIMARY HOSPITAL	MISSION	Rural
BRONG AHAFO	SUNYANI MUNICIPAL HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Urban
	MUNICIPAL HOSPITAL- GOASO	PRIMARY HOSPITAL	GOVERNMENT	Rural
CENTRAL REGION	WINNEBA MUNICIPAL HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Urban
	TWIFO PRASO GOVERNMENT HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Rural
EASTERN REGION	SUHUM GOVERNMENT HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Urban
	ST DOMINIC HOSPITAL	PRIMARY HOSPITAL	MISSION	Rural
GREATER ACCRA	ACHIMOTA HOSPITAL	PRIMARY HOSPITAL	QUASI - GOVT	Urban
	MANNA MISSION HOSPITAL	PRIMARY HOSPITAL	MISSION	Urban
NORTHERN REGION	TAMALE CENTRAL HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Urban
	TAMALE TEACHING HOSPITAL	TERTIARY HOSPITAL	GOVERNMENT	Urban
	WALEWALE HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Rural
UPPER EAST	AFRIKIIDS MEDICAL CENTER	PRIMARY HOSPITAL	PRIVATE	Urban
	DISTRICT HOSPITAL-SANDEMA	PRIMARY HOSPITAL	GOVERNMENT	Rural
UPPER WEST	REGIONAL HOSPITAL , WA	SECONDARY HOSPITAL	GOVERNMENT	Urban
	TUMU DISTRICT HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Rural
VOLTA REGION	COMBONI HOSPITAL	PRIMARY HOSPITAL	MISSION	Rural
	HO MUNICIPAL HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Urban
WESTERN REGION	ST MARTIN DE PORRES HOSPITAL	PRIMARY HOSPITAL	MISSION	Rural
	TAKORADI DISTRICT HOSPITAL	PRIMARY HOSPITAL	GOVERNMENT	Urban

4 STAFF WHO PARTICIPATED IN THE QUALITY OF SERVICE ASSESSMENT

Agnes Adjei	Principal Midwifery Officer	Tumu District Hospital
A. D- Aberimah	Senior Pharmacist in-charge	District Hospital Sandema
Agnes Seddu	Permanent Midwife	Afrikiids Medical Center
Asantewaa Christian	Principal Midwifery Officer	Achimota Hospital
Beatrice Abalo	Principal Midwifery Officer	Walewale Hospital
Comfort Digarusa	Midwife	Tumu District Hospital
Christie Adonu	Matron	St. Patrick Hospital
Daniel Appiajyer	Head of Pharmacy	Regional Hospital, Wa
David Kaleo	Nursing Administrator	Walewale Hospital
Ebito Martina	Maternity Midwifery Officer	Tumu District Hospital
Edwin S. Dugah	Pharmacist	Tumu District Hospital
Eronica Edem Parkoo	Senior Staff Midwife	Comboni Hospital
Esther Dodoo	Dep. Director of Nursing Services, Obs-Gyn	Tamale Teaching Hospital
Felix Seth Larbi	Nurse Administrator	St. Dominic Hospital
Josephine Dandzo	Matron	Manna Mission Hospital
Lawrencia Bayuo	In-Charge, Antenatal Clinic	Tumu District Hospital
Lydia Azantia	Responsible, Labour Ward	Tamale Central Hospital
Margaret Lomo Kwami	Deputy Director of Nursing Services	Suhum Govt Hospital
Margaret Oklikah	Acting Nurse Manager	Winneba Municipal Hospital
Martha Bajama	Principal Midwifery Officer	Walewale Hospital
Mary Afful	In-Charge, Maternity	Siloam Hospital
Mary K.Otoo	In-Charge, Maternity	Takoradi District Hospital
Mary Nangpup	In-Charge, Maternity	Municipal Hospital - Guaso
Monica Oppong	In-Charge, Maternity	Sunyani Municipal Hospital
Nusrata Issah	Midwife in-charge	Regional Hospital, Wa
Patience Asigbey	Deputy Director of Nursing Services	Ho Municipal Hospital
Rose Simara	Maternity Midwifery Officer	Tumu District Hospital
Rose Simara	Maternity Midwifery Officer	Tumu District Hospital
Sarah Ampomah	Deputy Director of Nursing Services	Twifo Praso Govt Hospital
Saratu Tahira	Maternity Midwifery Officer	Tumu District Hospital
Sister Claire Tasagna	Midwife in-charge	District Hospital Sandema
Vero Blay	In-Charge, Maternity	St. Martin de Porres Hospital

5 KEY INFORMANTS INTERVIEWED

Ministry of Health	
Emmanuel Owusu-Ansah	Head of Policy
Frank Nyonator	Director, Human Resources
Sylvester Anemana	Chief Director
Christian Health Association of Ghana	
Gilbert Buckle	Executive Director
Ghana Health Services	
Aaron Offei	Regional Director of Health Services, Ashanti Region
Alex Bapula	District Director of Health Services Sisala East District
Alexis Nang-Beifubah	Regional Director of Health Services, Upper West Region
Anthony Ofosu	National Deputy Director of Policy, Planning, Monitoring and Evaluation
Atsu Seake-Kwawu	Municipal Director of Health, Ho Municipal
Basilia Sayee	District Director of Health Services, Wa West District
Beatrice Appah	Municipal Director of Health Services, Offinso District
Dora Kyeiwah	Deputy Director of Nursing Services, Public Health, Western Region
Ellen Sheila Sarpong-Akorsah	District Director of Health Services, South Tongu District
Emmanuel Tinkorang	Deputy Regional Director of Public Health, Brong Ahafo Region
Erasmus Agongo	National Director of Policy, Planning, Monitoring and Evaluation
Florence Asoyire	District Director of Health Services, Nadowli District
Gloria Quansah Asare	National Director, Family Health Division
Helen Apengyeb	District Public Health Nurse, Tumu District
Irene Agyepong	Professor (former Reg. Director of Health Services, Greater Accra Region)
Joan Eleeza	Deputy Director on Nursing Services, Volta Region
John Abenyeri	District Director of Health Services, West Mamprusi District
Joseph Bolbie	District Director of Health Services, Nadowli West District
Juliana Adiale	District Director of Health Services, Builsa District
Kamsis Ali	District Director of Health Services, Tamale Metro District
Kwaku Anin Karikari	Regional Director of Health Services, Western Region
Koffi Issa	Deputy Director of Public Health, Upper West Region
L. D. Amoussou-Gohoungo	Municipal Director of Health Services, Awutu-Efutu Senya District
Linda Vanotoo	Regional Director of Health Services, Greater Accra Region
Louis Apasera	Principal Nursing Officer, Public Health, Upper West Region
Margaret Forson	Deputy Director of Nursing Services, Central Region
Margaret Hmini	Deputy Director of Nursing Services, Northern Region
Margaret Lomo Kwami	Deputy Director of Nursing Services, Eastern Region
Martha Larbi	Deputy Director of Nursing Services, Brong Ahafo Region
Mary Paulina Bazaabon	Deputy Director of Nursing Services, Ashanti Region
McDamien Dedzo	Regional Director of Health Services, Eastern Region
Nana Owusu-Ensaw	Acting District Director of Health Services, Kwaebirerem District
Olivia Achuliba	Deputy Director of Public Health, Upper East Region

Patricia Fellah	District Director of Health Services, Bolgatanga Municipal District
Patrick Aboagye	National Deputy Director, Family Health Division
Paulina Appiah	Municipal Director of Health Services, Sunyani Municipal District
Robert Wavel	District Nursing Officer, Tumu District
Rosina Ta-ang Yenli	Deputy Director of Nursing Services, Upper West Region
Sarah Ampomah	Deputy Director of Nursing Services, Central Region
Sebastian Samdoare	District Director of Health Services, Lawra District
Windfred Ofosu	Deputy Director of Public Health, Volta Region
National Health Insurance Authority	
Abdul Reheman Moomen	Acting Regional Manager, Northern Region
Abubakami Froimi	M&E Officer, Northern Region
Abubakar Suleman	District Manager, Tumu District
Acheampong Korankye	Sub-Metro Manager, Bantama District
Agustine Boataye	Senior M&E Officer, Northern Region
Akpitipulah Donaldson Sunday	Acting District Manager, Builsa District
Albert Joseph Bondzie	District Manager, Kpeshie District
Augustine Acquah	Senior M&E Officer, Central Region
Ayine Roland Abane	District Manager, Bolgatanga Municipal District
Bernard Brown	District Manager, Okai-Quaye (Ga) District
Celine Saayeng	Municipal Manager, Wa Municipal District
Charles Enti	Sub-Metro Manager, Sekondi-Takoradi Metropolitan District
Dauda Mahama	Regional M&E Officer, Eastern Region
Ebenezer Boye Debrah	Regional Claims Manager, Eastern Region
Ebenezer Owusu Boateng	Acting Regional Manager, Ashanti Region
Elijah Sam	Claims Manager Twifo Heman Lower Denkyira District
Emmanuel Setongo	Regional ICT Coordinator, Northern Region
Foster Agyei Korang	Regional Manager, Brong Ahafo Region
George Apetiga	District Manager, West Mamprusi District
John Awuku-Ahevi	District Manager Kwaebirerem District
Joseph Ahadjie	District Manager South Tongu District
Josiah Doam Kittoe	District Manager Twifo Heman Lower Denkyira District
Lydia Baaba Dsane-Selby	National Director of Clinical Audit
Martin Amponsah	Municipal Manager, Offinso District
Mawuko Tsigbey	District Manager, Ho Municipal District
Perry Nelson	Acting National Director, Claims
Prosper Kofi Pi-Bansa	Regional M&E Officer, Volta Region
Rebecca Akatua	National Operations Manager
Reginald Asirifi-Addo	Regional M&E Officer, Western Region
Ruth Baku	Midwifery Officer, Tumu Sub-District
Sylvester Mensah	National Chief Executive
Timdogo Rashid Mohammed	Regional M&E Officer, Upper West Region
Yakubu Ilyas Salifu	Provider Relations Officer, Upper East Region

Health Facilities	
Abdul -Rahman Abdalah	NHIS Coordinator, Wa Regional Hospital
Abdulai Abukari	Medical Superintendent, Walewale Hospital
Agnes Adjei	Principal Midwifery Officer, Tumu District Hospital
Anyoka Douglas	Accountant, District Hospital Sandema
Ayaric Patience	Principal Midwifery Officer, Tamale Teaching Hospital
Bismark Awuni	Head of Laboratory, Afrikids Medical Centre
Chris Opoku Fofie	Obstetrician – Gynaecologist, Wa Regional Hospital
Christian Abban Sappor	Administrator, St Patrick Hospital
Comfort D. Aaruba	Midwife, Tumu District Hospital
David Aduama	Consultant Obstetrician, Achimota Hospital
Didas Azanoere	Administrator, Afrikids Medical Centre
Ebito Martina	Midwifery Officer, Tumu District Hospital
Edwin S. Dugah	Pharmacist in Charge, Tumu District Hospital
Elvis Tufyor	Accountant, Tamale Central Hospital
Emmanuel E. Ambus	Accountant, Walewale Hospital
Emmanuel Tetteh Ashong	Medical Superintendent, Suhum Government Hospital
Ernest Aguze	Biomedical Scientist, District Hospital Sandema
Ernest Quaye	Medical Officer, St Dominique Hospital
Felix Seth Larbi	Nursing Administrator, St Dominique Hospital
Fred Adjei Otubuah	Medical Superintendent, Takoradi Municipal Hospital
George Kwame Prah	Medical Superintendent, Winneba Municipal Hospital
Hashmiru M. Kanneh	Administrator, Walewale Hospital
Hayford Frempong	Head of Administration, Winneba Municipal Hospital
Iddrisu A. Tanko	Deputy Director of Administration, Tamale Teaching Hospital
Innocentia Anthonio	Principal Nursing Officer, Ho Municipal Hospital
James Kandawini	Head of Finance, Winneba Municipal Hospital
John Abakah	Health Service Administrator, St Martin de Porres Hospital
John Benjamin Annan	Med Sup/Ag District Director, Twifo Praso Govt Hospital
Karim Kuuri	Director of Finance, Tamale Teaching Hospital
Ken Sego	Chief Executive Officer, Tamale Teaching Hospital
Kofi Gafatsi Normanyo	Medical Superintendent, Ho Municipal Hospital
Konjar Sampson S. Namiak	Administrator, Municipal Hospital - Guaso
Lawrencia Bayuo	In-Charge, Antenatal Care, Tumu District Hospital
Margaret Oklikah	Acting Nurse Manager, Winneba Municipal Hospital
Mark Aglobitsa	Medical Superintendent, Achimota Hospital
Martha Bagama	Principal Midwifery Officer, Walewale Hospital
Michaela Kusi	Hospital Administrator, Siloam Hospital
Momodou Cham	Medical Superintendent, Comboni Hospital
Nicholas T. K. Adjimani	Director of Pharmacy, Tamale Teaching Hospital
Onuzo Chike	Obstetrician-Gynaecologist, Manna Mission Hospital
Patience Asigbey	Deputy Director of Nursing Services, Ho Municipal Hospital

Patrick Owuiredu Bampoh	Medical Superintendent, Tamale Central Hospital
Phillip Kweku Brew	Hospital Administrator, Twifo Praso Govt Hospital
Rita Acquah	Principal Health Service Administrator, Suhum Government Hospital
Rose Simara	Midwifery Officer, Tumu District Hospital
Saratu Tajora	Midwifery Officer, Tumu District Hospital
Seth Mensah Ablorh	Medical Director, Manna Mission Hospital
Simon Ayamboya	Finance Officer, Afrikids Medical Centre
Tay-Suka Happy	Principal Nursing Officer, Public Health, Comboni Hospital
Zachari Buckari	Medical Superintendent, Tumu District Hospital

6 SELECTION OF GROUPS FOR COMMUNITY DISCUSSIONS

With assistance from the Steering Committee, we selected three districts that were located in the three main geographic regions of Ghana, that had low utilisation rates of facility-based delivery services, and that had a district hospital and other health facilities. The following districts were selected:

Selected districts for community discussions

West Mamprusi District (Northern Region)	
Population	**168,011**
Population Density	**35.2 inh/km^2**
Proportion skilled deliveries	**8.6%**
Health Facilities	**13**
• District Hospitals	1
• Polyclinics	1
• Primary and community level facilities	11
Sene District (Brong Ahafo Region)	
Population	**118,810**
Population Density	**15.7 inh/km^2**
Proportion skilled deliveries	**19.3%**
Health Facilities	**13**
• District Hospitals	1
• Primary and community level facilities	12
Jomoro District (Western Region)	
Population	**150,107**
Population Density	**103.7 inh/km^2**
Proportion skilled deliveries	**17.6%**
Health Facilities	**22**
• District Hospitals	1
• Primary and community level facilities	21

Data Sources:
For Health Facilities and skilled deliveries: Ghana Health Service (personal communication)
For District Population: Ghana Statistical Service (http://www.statsghana.gov.gh/pop_stats.html)
For Population Density: www.citypopulation.de

Teams of two experienced social scientists spent an average of five days in each district, working with District Assemblies and District Health Teams to identify communities and groups with distinct profiles that may influence their utilisation of health facilities for deliveries. Group discussions were held with 10 participants after they were informed of the purpose and had signed informed consent forms. The purpose of the discussions was

1. to solicit information on the factors that determine the location and the conditions under which women deliver their infants in communities with low utilisation of skilled attendance at deliveries;

2. to ascertain whether these factors have changed over the past six years, or are like to change in the immediate future, and if these changes have anything to do with the introduction of free maternal health services under the NHIS.

The teams of facilitators developed their own facilitation guides for these discussions. The following group discussions were held:

Community Discussions

Districts	Communities	Groups
Sene East **Sene West**	Hausakope Dadetoklo Ningo Shaffa Lassi	4 female and one male group with 8-10 participants each
West Mamprusi	Nasia Kukua Guabuliga Tinguri Gbani	4 female and one male group with 10 participants each
Jomoro	Allengenzule Ekpu Anlomatuope	3 female groups with 10 participants each

The discussions were summarised by the facilitators in three individual district reports (available on request).

7 DATA COLLECTION TOOLS

7.1 Form 01: Review of obstetric records

Evaluating the Free Maternal Health Care Initiative in Ghana

Form 01 - Obstetric Record Review

Form 01 - Page 1

Health Facility Name

Patient´s Record Number

Age

Parity

Duration of this pregnancy in weeks

Date of birth delivery (day/month/year)

Marital status
- married
- single
- widowed
- divorced
- unknown / not available

Religion
- Christian
- Moslem
- Traditional
- other
- unknown / not available

Distance to facility
- < 1 km
- 1 - 4 km
- 5 - 9 km
- >= 10 km
- unknown
- Not available

Occupation
- Professional
- Artesan
- Trader
- Farmer
- other
- para-professional
- unknown / not available

Husband's occupation
- not applicable
- Professional
- Artesan
- Trader
- Farmer
- para-professional
- unknown / not available

Education
- No formal education
- Primary school
- JHS vocacional
- SHS
- University
- Post-graduate
- Other
- not available

Antenatal care
- Yes
- No
- Not known

Number antenatal visits during this pregnancy

Complications of pregnancy (more than one can apply)
- none noted
- hypertensive state
- placental abruption
- other

Referral
- self-referred
- from CHPS
- from health centre / maternity
- from primary hospital level
- not known

Stage of labour on arrival
- 1st Stage
- 2nd Stage
- 3rd Stage
- not known / other

HIV status
- known
- not known

Are PMTCT services provided
- yes
- no

if PMTCT is provided, protocol for HIV+
- not applicable
- yes
- no

Form 01 - Obstetric Record Review

Form 01 - Page 2

Parthograph completed
- Yes
- No
- no evidence

Complications of delivery (more than one can apply)
- none noted
- breech / transverse lie
- placenta praevia
- distocia
- other Specify

Mode of delivery
- spontaneous vaginal
- assisted (forceps or vacuum)
- Cesarean section
- other
- not recorded

Attendant at delivery
- Obstetrician
- Physician
- Midwife
- Nurse
- other or unspecified skilled provider
- other
- not recorded

Outcome of delivery
- live single birth
- live multiple birth
- fresh stillbirth
- macerated stillbirth
- not known / not recorded

Apgar score 1 min recorded
- Yes
- No

Apgar score 5 min recorded
- Yes
- No

If multiple births
- all alive
- one dead
- all dead

Outcome of labour
- alive
- dead
- not known / not recorded

if dead, cause of death
- haemorrhage
- hypertension / eclampsia
- obstruction
- sepsis
- not reported
- other Specify

NHIS Status
- copy of NHIS card on file
- no copy of NHIS card on file
- insured but no card on file
- not insured
- not known / not recorded

Payment for delivery
- fully paid by NHIS
- partially paid by NHIS
- fully paid by user
- other sources of payment
- not recorded

Evidence of paymets made by user?
- Yes
- No

if yes, **Total user payment (in GHS)**

7.2 Form 02: Review of facility registers

Form 02 - Health Facility Registers Review Form

Facility Name: ____________

Number of DELIVERIES	2007	2008	2009	2010	2011	2012
A. Spontaneous vaginal deliveries						
B. Assisted deliveries (forceps / vacuum)						
C. Cesarean sections						
D. Not indicated						
E. Total deliveries						

NUMBER OF MATERNAL DEATHS	2007	2008	2009	2010	2011	2012
A. Haemorrhage						
B. Hypertension / Eclampsia / Toxaemia						
C. Obstructed labour						
D. Sepsis						
E. Other causes						
F. Total Maternal Deaths						

Number of Audited Maternal Deaths						

Number of Stillbirths						

7.3 Form 03: Collection of regional activity data

Form 03 - Regional data
Number of deliveries by year and type of facility

Form 03 - Page 1

Region

	2007					2008					2009				
	Government				Total Private	Government				Total Private	Government				Total Private
DELIVERIES	Tertiary hospital	Secondary hospital	Primary hospital	Health Centres & Maternity homes		Tertiary hospital	Secondary hospital	Primary hospital	Health Centres & Maternity homes		Tertiary hospital	Secondary hospital	Primary hospital	Health Centres & Maternity homes	
A. Spontaneous vaginal deliveries															
B. Assisted deliveries (forceps / vacuum)															
C. Cesarean sections															
D. Other															
F. Total deliveries															
MATERNAL DEATHS															
G. Total Maternal Deaths															
STILLBIRTHS															
H. Total Stillbirths															

Form 03 - Regional data
Number of deliveries by year and type of facility

Form 03 - Page 2

Region

	2010					2011					2012				
	Government				Total Private	Government				Total Private	Government				Total Private
DELIVERIES	Tertiary hospital	Secondary hospital	Primary hospital	Health Centres & Maternity homes		Tertiary hospital	Secondary hospital	Primary hospital	Health Centres & Maternity homes		Tertiary hospital	Secondary hospital	Primary hospital	Health Centres & Maternity homes	
A. Spontaneous vaginal deliveries															
B. Assisted deliveries (forceps / vacuum)															
C. Cesarean sections															
D. Other															
F. Total deliveries															
MATERNAL DEATHS															
G. Total Maternal Deaths															
STILLBIRTHS															
H. Total Stillbirths															

7.4 Form 4: Quality assessment checklist

Evaluating the Free Maternal Health Care Initiative in Ghana
Form 04 - Quality Assessment Check List

Form 04 - Page 1

To be done together with the matron, interviewing her, walking primarily through the maternity wards, the pharmacy and neonatal ward. Fill out one record for each health facility to be visited.

Name of informant | **Post / Responsibility** | **Health Facility** | **Region**

Ownership
- Government
- Mission
- Private
- Quasi-Government

Facility Type
- Maternity home
- Primary hospital
- Secondary hospital
- Tertiary hospital

Location Urban / Rural

Interviewer´s Name | **Date**

Maternal health services provided - check all that apply

☐ Antenatal care ☐ FamilyPlanning ☐ Normal birth deliveries ☐ Assisted deliveries ☐ Caesarean section

☐ Other Specify other services provided | Specify other services provided

Number of hospital and delivery beds

Total No. hospital beds | Total No. maternity beds | No. labour beds | No. Post-delivery beds | No. Neonatal cots

No. delivery rooms | No. delivery beds /tables | No. Operation theatre

Staff (type and numbers) currently working at maternity services

Consultant OB/GYN | Physicians | RN/ Midwives | Midwives | RN

Medical Assistant | Community H Officers | Aneasthetist (for facility) | Other staff | Number other staff

1 Infrastructure

1.1 State of infrastructure (maternity, examination rooms, delivery rooms, toilets, ward nurse area) Is each area clean and structurally sound? Are there separate rooms for labour and post-delivery? is there adequate ventilation?

1.2 Availability of water: all the time?

1.3 Is there transportation/ambulance (car, driver, fuel) and a referral facility available for obstetric complications that the facility can not handle. Is payment required? Average communication time of the response. How often do you have break-outs of ambulance services?

2 Hygiene and infection control

2.1 Does the staff have facilities for handswash? Is there soap available for handwashing?

Form 04 - Page 2

2 Hygiene and infection control (Cont)

2.2 Are there puncture-resistant, leak-proof container available? are they in use?	
2.3 How is medical waste dispose of? Is there an incinerator available and operational?	
2.4 Are there solutions available for decontamination of instruments? what are the current procedures used for decontamin	
2.5 Is there equipment available for sterilisation of instruments? is it operational?	

3 Human Resources

3.1Has all staff been trained in Emergency Obstetric Care? Does the facility provide regular updates and training sessions? When was the last training provided?	
3.2 Knowledge and availability of Treatment guidelines / protocols?	
3.3 Inquire about staff workload? availability of staff in skills and numbers. Incentives provided to staff? Other concerns staff has related to work conditions and delivery of services.	

4 Equipment and drugs

4.1 Management of drugs. Are drugs procured regularly?	
4.2 Organization of pharmacy stock (stock updated sheets, shelves with labels)	
4.3 Expired drugs or breaks in supplies of: a) Analgesics (acetaminophen, paracetamol, acetyl salycilic acid, morphine) b) Oxytocics (oxytocin, ergotamine, misoprostol) c) Anticonvulsants (magnesium sulphate, diazepam) d) Antihypertensives(hydralazine, labetalol) e) General / Local anesthetics f) IV solutions g)IV sets	

Form 04 - Page 3

4 Equipment and Drugs (Cont)

4.4 Availability and functionality of the following. Indicate location where available: at the emergency room, maternity service, operating theatre):
a) Ambubag (manual resuscitator), face mask, tubing, oxigen nipple
b) Oxygen cilinder with flow meter, flow valve, volume meter, cylinder key, tubing (easily movable), oxygen

5 Obstetrict practice

5.1 BEmOC services provided (i.e. are they provided 24/7, by qualified personnel, mains constraints for the provision of these services, availability of necessary equipment,drugs and supplies for providing them, others?)
a) Administration of antibiotics,
b) Oxytocics and anticonvulsants;
c) Manual removal of placenta,

5.2 CEmOC services provided, (i.e. are they provided 24/7, by qualified personnel, mains constraints for the provision of these services, availability of necessary equipment,drugs and supplies for providing them, others?)
a) Caesarean section,
b) blood transfusion,
c) care of sick and low-birth weight newborns, including resuscitation)

5.3 Use of partogram, delivery log (check charts of patient´s in labour and post-delivery wards)

5.4 Is there a scorecard APGAR on display? Is the Apga score assessed and recorded (check chart´s of current in-patients)

5.5 Supervision : Register of supervision report, date of last supervision, quality of findings and recommendations

6 Record keeping

6.1Collection and management of data, availability of statistics (which registers available, completeness of data). Check for example: maternity registers, c/section register.

Form 04 - Page 4

6 Record Keeping (Cont)

6.2 Review and analysis of data (by whom, how often, any decisions taken after data analysis). When was the last time this exercise took place? What was the result of this analysis

7 Patient friendliness and confidentiality

7.1 Do the examination rooms and labour and delivery rooms offer sufficient privacy for both patients and staff?

7.2 What is being done to improve staff-patient communication?

8 Other observations /general impressions

8.1 Write other observations and general impressions you might have

7.5 Form 5: Guide for key informant interviews

0	**INTERVIEW NUMBER**
0.1	Interviewer
0.2	Date of interview
0.3	Level (National, Regional, District, Facility)
1	**IDENTIFICATION OF INTERVIEWEE**
1.1	Name
1.2	Telephone
1.3	E-Mail
1.4	Position
1.5	Institution / Facility *(for health facilities use the ID Code)*
1.6	Region *(use only for regional and district level interviews)*
1.7	District *(use only for district level interviews)*
2	**INTRODUCTION OF THE INITIATIVE**
2.1	Tell me briefly, where and when and how the free maternal health care initiative was introduced *(in regional, district and facility interviews ask specifically about when it was introduced in this region, district or facility)*
2.2	What (if anything) links the introduction of the initiative to the NHIA accreditation process?
2.3	What is your perception / opinion about this process? *(e.g. was it well prepared, consistent, etc.)*
2.4	Briefly describe the situation prior to the introduction of the initiative *(seek information specific to the region or district or facility)*
2.5	What was done to make the initiative known to the public?
2.6	What is your opinion about this process? *(Was there sufficient communication? Does the public know?)*
2.7	What was done to introduce the initiative to health care providers? *(Specific to region, district or facility)*
2.8	What is your opinion about the process? *(Was there sufficient consultation? Sufficient guidance on implementation? Etc.)*
3	**IMPLEMENTATION OF THE INITIATIVE**
3.1	Does the initiative eliminate all user charges for obstetric deliveries? *(If the answer is "Yes" prompt with examples, for instance "drugs" or "OR charges". If the answer is "No", ask what specific charges exist in different types of facilities)*
3.2	What is the role of your institution *(organisation, office, facility)* in implementing the initiative?
3.3	Is this role clearly defined? By whom? Through which document? *(get copy of document if possible)*
3.4	Has this role or function changed over time? *(when? How? By whom? Ask for documentation)*
3.5	What is your opinion about the definition of roles and responsibilities for the implementation of the initiative?
3.6	What are the bottlenecks in the implementation of the initiative? *(Ask for bottlenecks specific to the institution, region, district or facility)*
4	**FINANCING AND MANAGEMENT PROCEDURES**
4.1	What are the funding mechanism for the initiative? How well have these mechanisms operated? Is the volume of funding satisfactory?
4.2	What is the capacity of different levels of the health systems to meet the financial and managerial requirements for the implementation of the initative? *(at national level, ask about NHIA, regions districts and facilities; At regional level ask about the region, the districts and the facilities; at district level ask about the district and the facilities; at facility level ask about this specific facility)*
4.3	Describe the process of submitting claims for maternal health services to the NHIS and of receiving reimbursement.
4.4	Has this process changed over time (between 2003 and 2012)?

4.5	How well is this process operating? *(Are claims paid in time? Are they paid in full? Etc.)*
4.6	What is the mechanism for reviewing and auditing the claims? Is this mechanism effective?
4.7	Estimate what proportion of claims for maternal health services are submitted for women who were registered in the NHIS under the Free Maternal Health Care Initiative. *(collect only those estimates that are relevant to the level of interviewee: national, regional, district, facility)*
5	**POTENTIAL CONSTRAINTS**
5.1	What are the main factors limiting the provision of the services under the free maternal health care initiative?
5.2	What actions have been taken to address these limiting factors? *(specific to the facility, district or region)*
5.3	Has the initiative increased the work load for maternity care? *(nationally, in your region, in your district, in your facility)* Estimate by how much.
5.4	If the answer to 5.3 is "Yes": what has been done to meet the additional resource requirement? *(human resources, infrastructure, etc.)*
6	**POTENTIAL IMPACT**
6.1	How important is the cost of services among the factors preventing women from delivering in health facilities? *(specific information for the region, district or facility)*
6.2	Has the implementation of the initiative increased the utilisation of skilled attendance at delivery? *(specific information for the region, district or facility)*
6.3	Has the implementation of the initiative improved the equity in the utilisation of skilled attendance at delivery? In which way? *(specific information for the region, district or facility)*
6.4	Has the implementation of the initiative affected the quality of services delivered? In which way? *(specific information for the region, district or facility)*
6.5	Has the implementation of the initiative affected pregnancy outcome? E.g. maternal mortality? *(specific information for the region, district or facility)*
7	**SUSTAINABILITY**
7.1	Estimate the proportion of women registered in NHIS under the initiative, who renewed their registration by paying NHIS fees after expiry of their free registration.
7.2	What would be the effect of gradually phasing out of the initiative?
7.3	What would be required to mitigate potential negative effects of phasing out?
7.4	What is your estimate of the financing requirments and what are the potential financing sources for continuing the initiative?
7.5	What needs to be done to secure the continuation of this initiative in the short, medium and long term?
8	**OVERALL OPINIONS AND SUGGESTIONS**
8.1	Do you see the continuation of this initiative as a priority? Why?
8.2	Do you believe the initiative should be discontinued? Why?
8.3	Is this initiative sustainable? (Why do you think it is? Why do you think it is not?)
8.4	Do you have any suggestions for improving the implementation of the initiative?
8.5	Additional notes or comments
9	**DOCUMENTATION**
9.1	Documents requested
9.2	Documents received

8 COST CALCULATIONS

8.1 Cost of claims to the NHIS

Parameter		Source / Assumption / Calculation
A. Expected pregnancies	**748,426**	<u>**Source**</u>: MoH Sector Indicators 2012 (draft)
B. Pregnant women with at least one ante-natal visit (96.4%)	**721,483**	<u>**Source**</u>: MICS 2011
C. Number of women registered with the NHIS under the free registration policy	**485,460**	<u>**Source**</u>: NHIA Annual Report 2011
D. Proportion of insured pregnant women who were registered under the free NHIS registration	**67.3%**	<u>**Assumption**</u>: All women who attend an ANC clinic and who are not insured are registered with NHIS free of charge
E. Number of facility-based deliveries	**494,158**	<u>**Source**</u>: GHS data received from MoH 20/03/2013
F. High Estimate: Number of deliveries among women registered under the free NHIS registration	**332,501**	<u>**Assumption**</u>: All women registered for free deliver in a health facility (67.3% of line E)
G. Low Estimate: Number of deliveries among women registered under the free NHIS registration	**199.501**	<u>**Assumption**</u>: 60% of women registered for free deliver in a health facility (67.3% of line E)
H. High Estimate: NHIS claims for maternal health services per woman registered for free at 2008 tariffs.	**134.32**	<u>**Assumption**</u>: Based on GHS/CHAG district hospital tariffs: 3 Ante-natal and 2 post-natal visits, one general outpatient visit, 85% spontaneous vaginal delivery, 10% C-Section, 5% assisted delivery, total drug costs: 75 GH¢ for C-Section and assisted delivery, 10 GH¢ for SVD.
I. Low Estimate: NHIS claims for maternal health services per woman registered for free at 2008 tariffs.	**90.50**	<u>**Assumption**</u>: Based on GHS/CHAG district hospital tariffs: 1 Ante-natal and 2 post-natal visits, one general outpatient visit, 95% spontaneous vaginal delivery, 5% C-Section, total drug costs: 75 GH¢ for C-Section, 10 GH¢ for SVD.
J. High Estimate: Cost of NHIS claims for women registered for free in 2011	**44.66 M**	<u>**Assumption:**</u> High estimate of numbers (Row F) at high unit cost (Row H)
K. Low Estimate: Cost of NHIS claims for women registered for free in 2011	**18.05 M**	<u>**Assumption:**</u> Low estimate of numbers (Row g) at low unit cost (Row I)
L. Mean cost estimate	**31.36 M**	<u>**Calculation**</u>: Mean of Rows J and K
M. Total NHIS claims paid in 2011	**549.77 M**	<u>**Source**</u>: NHIA Annual Report 2011
N. Cost of claims attributable to the free NHIS registration of pregnant women (mean)	**5.8%**	<u>**Calculation**</u>: Row L over Row M
N. Cost of claims attributable to the free NHIS registration of pregnant women (high)	**8.3%**	<u>**Calculation**</u>: Row J over Row M
N. Cost of claims attributable to the free NHIS registration of pregnant women (low)	**3.3%**	<u>**Calculation**</u>: Row K over Row M

8.2 Foregone Insurance premium revenue

Free maternal health care registration			
Year	2008	2009	2010
Number registered	421,234	383,216	504,609
Assumption: 50% would have paid premium	210,617	191,608	252,305
Lost income at premium = 12 GHS (assumption)	2,527,404	2,299,296	3,027,654
NHIA Revenue	330,772,958	407,510,587	460,960,000
Proportional Revenue Loss	0.76%	0.56%	0.66%

Sources: NHIA Annual reports 2009-2011

8.3 Estimation of maternal lives saved

Calculation: Number of maternal lives saved 2008-2011						
	2007	2008	2009	2010	2011	Total
A. Baseline number of facility deliveries (2007 + 2.4% per year)	295,392	302,481	309,741	317,175	324,787	
B. Actual number of facility-based deliveries (GHS)	295,392	397,778	441,712	444,978	494,158	
C. Additional facility-based deliveries since 2008 (B-A)	0	95,297	131,971	127,803	169,371	
D. 15% Expected complications among the additional deliveries		14,294	19,796	19,170	25,406	
E. 5% mortality if they had delivered at home		715	990	959	1,270	
F. 1% mortality if they had delivered in hospital		143	198	192	254	
G. Lives saved (E-F)		572	792	767	1,016	3,147

Sources: GHS data received in March, EmONC survey

8.4 Cost of claims per maternal life saved

Calculation of costs of claims per maternal life saved		
	Low estimate	High estimate
Mean cost per claim (see 8.1)	90.50	134.32
Additional number of women delivering over 2007 baseline (see 8.3)	524,442	524,442
Total cost of claims	47,462,001	70,443,049
Maternal lives saved (see 8.3)	3,147	3,147
Cost of claims per maternal life saved	15,082	22,384

8.5 Estimation of DALYs per life saved

Calculation of DALYs per maternal life saved

Using the WHO GBD database			
WHO GBD Database updated 2009 (Ghana 2004)	**Deaths**	**DALYs**	**DALY per death**
Maternal conditions	3,778	263,082	69.64
Lancet 2012 GBD Study Database (West Africa 2010)			
Maternal Haemorrhage	12,644	699,938	
Maternal Sepsis	3,906	229,349	
Obstructed Labour	953	230,515	
Other Maternal Causes	18,592	1,095,116	
Total	**36,095**	**2,254,918**	**62.47**
Average between the 2 calculations			**66.05**

9 COMMUNITY COMMENTS ON COMMUNICATION IN MATERNITIES

This annex compiles some quotes about communication with health workers cited in the three reports of community consultations in West Mamprusi, Jomoro and Sene Districts. The comments have to be interpreted carefully, because they are unsubstantiated, and they may at times simply be a reflection of culturally determined miscommunication. We have therefore not grouped the comments by communities, nor identified the communities where these comments were collected. Nevertheless, they highlight a major barrier to maternity care that could be addressed without significant additional cost:

- After her delivery she was ordered rudely "*to pick up her piglets from the hospital bed for another woman to sleep*" which she thinks was very insulting. Ever since she vowed never to have her child at the health centre.
- *"… at the hospital the health workers will insult and humiliate you e.g. when they ask you to climb the labour bed they shout at you: I said climb the bed, why do you want to disturb us?"*
- *"I fear the way the nurses treat us because of the bad behaviour of the nurses. They shout at us and beat us with wood when we are in labour."*
- *"I slapped a midwife back for slapping me while I was in labour."*
- *"I work a lot during the latter part of my pregnancy to speed up my labour process so I just deliver at home to avoid being beaten up by midwives and small nurses at the hospital"*
- *"Many times, the mid-wives do not pay attention to our pains. The way the nurses behave, though now it is better, it is peaceful to deliver at home. They won't show you respect."*
- When she was crying during labour a midwife said *"shut up I did not make you pregnant did you not know about the pains of labour and delivery?"*.
- She said the nurses called her names including *"you smell badly, you behave foolishly like your cattle"* she has since never been there to have any baby. She now has five children after her experience. She said she would never go there and neither would she recommend anyone from her home to go to any health facility to be delivered.
- *"The maltreatment meted out to some women at the hospital sometimes prevents them from going there again. Health workers I believe have been trained to deal with all calibre and manner of persons. As such it is important that they patiently deliver their work to women when they are in labour."*
- *"The nurses do not respect us at all. They maltreat us so I will prefer to deliver at home so I will be free."*
- *"… we would have been very happy to attend the health facility in…… but the way the nurses talk to us and the treatments we suffer from their hands,…. it is better not to attend the facility."*