NATIONAL CONSULTATIVE MEETING ON THE REDUCTION OF MATERNAL MORTALITY IN GHANA:

PARTNERSHIP FOR ACTION

A SYNTHESIS REPORT

MINISTRY OF HEALTH

October 2008

LIST OF FIGURES:

Acronyms

ANC	Ante Natal Care
CHEW	Community Health Extension Workers
CHN	Community Health Nurse
CHO	Community Health Officer
CHPS	Community Based Health Planning and Services
DDHS	District Director of Health Service
EPI	Expanded Program on Immunization
FANC	Focused Antenatal Care
FP	Family Planning
GAR	Greater Accra Region
GCPS	Ghana College of Physicians and Surgeons
GHS	Ghana Health Services
GOG	Government of Ghana
GPRTU	Ghana Private Road Transport Union
HIRD	High Impact Rapid Delivery
HMIS	Health Management Information Systems
HR	Human Resource
IPT	Intermitted Preventive Treatment
IMMPACT	Initiative on Maternal Mortality Programme Assessment
KATH	Komfo Anokye Teaching Hospital
KBTH	Korle-Bu Teaching Hospital
MDA	Millennium Development Authority
MDG	Millennium Development Goals
MM	Maternal Mortality
MOH	Ministry of Health
MTEF	Medium Term Expenditure Framework
NHIA	National Health Insurance Authority
NYEP	National Youth Employment Program
PNC	Post Natal Care
PPME	Policy, Planning, Monitoring and Evaluation
PPP	Public Private Partnership
QOC	Quality of Care
SRN	Senior Registered Nurse
UNDP	United Nations Development Program

ACKNOWLEDGEMENTS

This synthesis report was written by Dr Ama de-Graft Aikins (Cambridge University) and Dr. Sam Adjei (MOH), drawing on the contents of the workshop powerpoint presentations, reports of the question and answer sessions documented in a descriptive workshop report, and additional published research on fertility, maternal health and mortality in Ghana.

A descriptive report of the workshop was written by a team of raporteurs made up of Ms Susanna Larbi-Wumbee (GHS), Mr Tony Kusi (NMIMR), Ms Sally Lake MOH, PPME and Gretchen Roedde, UNFPA Consultant. This report is presented in the Annexes as extended abstracts of workshop presentations.

Editorial work on the report was done by Mr Emmanuel Owusu-Ansah, Dr Sam Adjei, Dr Ama de-Graft Aikins and Mrs Gete Bjerring.

Members of the planning committee were: Dr Cynthia Bannermann, Chairman; Dr Sam Adjei, consultant; Ms Ana Plange Secretary; Mr. Emmanuel Owusu-Ansah, Coordinator; Dr Edward Addai, Director PPME; Gete Bjerring, Adviser PPME; Ms Patience Cofie; Ms Elenor Sey; Dr. Daniel Ahinfoel; Mr Daniel Degbotse; Dr Sylvia Deganus Tema General Hospital; Dr Patrick Aboagye.

The synthesis report was reviewed by Dr Edward Addai, MOH, Dr Cynthia Bannerman, MOH, Dr. Danel Arhinful (NMIMR) and Mrs Virginia Ofusu-Amaah, Chairman of the Ministerial task steam.

The Ministry of Health would like to thank all these individuals for their efforts in putting the report together. The Ministry would also like to thank the presenters for their excellent presentation at the meeting as well as the members of the planning committee for efficient coordination of the consultative process.

EXECUTIVE SUMMARY

The Ministry of Health convened a consultative meeting of national and international stakeholders to discuss Ghana's maternal mortality burden on July 8th and 9th 2008 at the Ghana College of Physicians and Surgeons, Accra. The meeting was opened by the Minister of Health, Major (Rtd) Courage Quashigah, in an opening ceremony chaired by Mrs Virginia Ofosu-Amaah, Chairman of the National Population Council. The substantive part of the meeting constituted nine presentations focusing on the current state of maternal health services including access and utilisation of services, the importance of Public-Private Partnerships in improving maternal services and best practices in maternal healthcare across the country. Speakers included health service providers, health policy makers, private practitioners and academics.

Presentations and discussions centred on three broad areas: (1) the global perspective on MDG5; (2) the Ghanaian perspective on MDG5; and (3) local responses to Ghana's maternal mortality burden.

The global perspective on MDG5

The United Nations' fifth Millennium Development Goal (MDG 5) aims to improve maternal health. This goal is structured around two key targets: (1) to reduce maternal mortality rates by 75% between 1990 and 2015; and (2) to achieve universal coverage of skilled care at birth by 2015. Professor Wendy Graham, whose presentation focused on the global perspective on MDG5, noted that MDG5 is 'off track' globally, with several countries failing to meet both targets. Inequitable access to maternal care is a big challenge globally. Only half the world's women currently give birth with a skilled professional. In many countries, including African countries, there is a rural-urban divide: most urban women deliver with a professional; only a third of rural women have a professional at birth. Successful maternal health interventions in countries in Asia (Sri Lanka, Thailand, Malaysia, India, Bangladesh), Latin America (Honduras) and Africa (Egypt) suggest three areas of action to improve maternal health and reduce maternal mortality: (1) Family Planning to prevent pregnancy and reduce fertility rates; (2) Skilled Care at Delivery to prevent pregnancy complications; (3) Emergency Obstetric Care to prevent death by timely management of life-threatening complications. Professor Graham (2008) argued that these three responses can be further "strengthened by ante-natal and post-natal care, built upon a functioning health system, political commitment, finance and support for status and rights of women."

The Ghanaian perspective on MDG5

Dr Patrick Kuma-Aboagye, the National Reproductive Health Coordinator, observed that Ghana, like many countries, is off-track with respect to MDG5. The national target was to reduce the 1990 maternal mortality rate of 214 per 100,000 live births (national) by 3/4 to 54 per 100,000 live births by 2015. This target has not been achieved. Major causes of maternal death include hypertension, bleeding, infections, anaemia and unsafe abortion. Local evidence suggests there are problems for the three core areas identified as essential to improving maternal health, ie. family planning, skilled care at delivery and emergency obstetric care.

The 2003 Ghana Demographic and Health Survey suggests that while public knowledge of contraceptives is high contraceptive use is low. Urban areas have recorded higher rates of contraceptive use compared to rural areas. Ghanaian women give a broad range of reasons for not using contraceptives including lack of sexual activity, unmarried status, sub-fecundity or in-fecundity, breastfeeding, partner opposition, high cost, lack of access to supply centres, and fear of side effects.

There is inequality of access to skilled care at delivery. Access is dependent on regional location and income status. The three northern regions have worst access to skilled birth attendants (0-30%) and Greater Accra Region has best access (71% - 80%). Urban women in the richest and richer

categories have best access to highly skilled birth attendants such as doctors (>61% of women) and nurses/midwives (>41%).

Emergency Obstetric Care (EMOC) is poor in many regions, with the three northern regions facing the greatest challenges. A 2005 study of EMOC in the northern sector of the country observed a lack of basic infrastructure such as water and power supplies, blood transfusion services and theatres, poor geographical access to facilities and referral services. Some or all of these challenges undermines EMOC in other parts of the country. Three sets of challenges to meeting MDG5 in Ghana were outlined by speakers: (1) Funding and policy; (2) Health systems challenges; and (3) Socio-economic and socio-cultural factors.

The director of MOH's Policy Planning Monitoring and Evaluation (PPME) Unit, Dr Edward Addai noted that effective quality of care depended on an ideal set of five factors: (1) Availability (physical access); (2) Availability (essential commodities); (3) Accessibility (human resources); (4) Initial utilization; and (5) Timely continuous utilization. Identified bottlenecks suggested that these factors were not fully operational. Addai argued that improving maternal health services would require extra financial investment in the health sector. This posed a significant challenge because the health sector is financed through a complex system – with money coming from donors, out of pocket payment, the national health insurance scheme, loans and other sources - that is not always aligned. Thus to improve the quality of maternal health services two important strategies had to co-exist with financial investment:

1. Being innovative with what already exists (e.g. reallocation of staff and resources); and
2. Commitment to sustained resource mobilization.
3. Two major issues were discussed in relation to health systems challenges: (1) manpower constraints; (2) an unskilled workforce/poor quality of care.

The number of health service personnel in the major categories has increased over recent years. Despite these gains there is a general consensus that Ghana's health sector has serious manpower constraints. A critical problem that impinges on maternal health services is inequitable distribution of the health workforce. Doctors, nurses, pharmacists, technical and other staff are disproportionately distributed across the country with a significant proportion based in Greater Accra and Ashanti Regions. A second problem is one of training a critical mass of skilled health workers. For example Ghana will need 5,000 newly trained midwives if it is to attain MDG5. This requires significant financial investment.

With respect to quality of care the following national-level challenges were outlined:

- Poor access to quality maternal health services especially at community level
- Poor access to emergency obstetric care
- Low utilization of available health services (due to misconceptions about biomedical services and poor quality of care at service points)
- Poor access to Essential Newborn care
- Weak referral systems and services (compounded by poor roads, lack of transport, inadequate communications)

Finally, four sets of socio-economic and socio-cultural challenges were discussed: (1) low female literacy rate; (2) low level of women's empowerment (in some parts of the country men make decisions about household healthcare choices and practices, including decisions about the healthcare practices of their wives or female partners); (3) high levels of poverty; and (4) problematic traditional

practices such as poor health-seeking behaviours (e.g. late presentation of (reproductive) health problems gender inequality and low risk perception of maternal morbidity and mortality.

Local responses to Ghana's maternal mortality burden.

Dr Kuma-Aboagye outlined current structural level interventions that aim to address Ghana's maternal mortality burden. These interventions include: the Safe Motherhood program, which aims to improve access to Emergency Obstetric Care; Family Planning Program; High Impact Rapid Delivery (HIRD); policy oriented data gathering using Maternal Mortality Surveys, Maternal Death Notification and Maternal Death Audits.

Beyond the structural interventions, a range of Best Practice case studies were presented that offer templates for innovative interventions at facility and community levels. Dr Sylvia Deganus presented findings on the impact of FANC at three health facilities in the Greater Accra Region (Tema General Hospital, TGH), Eastern Region (New Juaben Hospital in Koforidua) and the Northern Region (Tamale General Hospital). FANC aims to improve the quality of maternal health services through a range of practices including: providing comprehensive, focused individualized care, continuous care by the same provider, emphases on birth preparedness and complication readiness, promoting partner/ support and person involvement and linking ANC, PNC and Family Planning Services. At each facility the introduction of FANC had led to concrete positive outcomes for maternal services. At TGH, key positive outcomes included: increased ANC attendance; increased use of hospital delivery facilities; decreased still birth rates; enhanced use of postnatal services; a reduction in client waiting time by 1hour 40 minutes; and improved client provider interaction. At the Tamale General Hospital institutional deliveries increased by 54% (from about 2500 in 2000 to 3850 in 2002) and there was a steep reduction in MMR in the northern region.

Mr Joe Adomako, the Amansie West District Director of Health Services, discussed the impact of the Millennium Villages Project's (MVP) experiment in integrated rural development on the maternal health profile of the district. Prior to the introduction of MVP the profile of maternal healthcare in Amansie West was poor. Problems included late ANC registration, low ANC attendance, high drop out rate IPT1-IPT3 (60%), late detection of pregnancy related complications such as anemia, malaria and eclampsia, high rate of abortions and a high mortality rate. The MVP initiative introduced a broad range of interventions targeting human resources (e.g. introducing a new cadre of community-based health workers) and service delivery (e.g. building new clinics manned by qualified midwives and offering outreach services). The interventions led to concrete improvements in maternal health services in the district: family planning acceptor rates increased, ante-natal registration increased, IPT2 coverage increased and most importantly maternal mortality rates dropped to zero in 2007.

The report makes recommendations under three broad themes: 1) Policy and financing; 2)health systems; and 3) socio-economic and socio-cultural systems.

An agenda for action covering broad of; 1)Innovative approaches to provision of IEC; 2)CHPS reorganization; 3)Support to MTT; 4) Improving quality of midwifery care 5)skilled workforce; 6)Priority interventions.

1. INTRODUCTION

At the April 2008 Health Summit, the Honourable Minister for Health Major (rtd) Courage Quarshigah declared that the maternal mortality rate in Ghana was unacceptably high and should be treated as national emergency. He argued that, like in all emergency situations, more attention and resources should be directed towards reversing the trend of high maternal mortality.

Following the Minster's declaration, a national task team on maternal mortality reduction was established to focus attention on Ghana's high maternal mortality rate and to facilitate development of appropriate interventions. The task team planned a National Consultative Meeting of national and international stakeholders to discuss Ghana's maternal mortality burden on July 8th and 9th 2008 at the Ghana College of Physicians and Surgeons, Accra.

The purpose of the meeting was to:

- Present evidence on maternal mortality from available local and international sources
- Share best practices locally and from other countries
- Recommend practical actions for achieving MDG 5

The meeting, which had the theme "Partnership for Action" was opened by the Honourable Minister for Health Major (rtd) Courage Quarshigah who in his statement emphasised the availability of nationwide maternal free delivery, a new initiative being financed through the National Health Insurance Scheme (see the Minister's statement in Annexe 3). The opening ceremony was chaired by the chairman of the National Population Council, Mrs Virginia Ofosu-Amaah.

The substantive part of the meeting constituted nine presentations focusing on the current state of maternal health services including access and utilisation of services, the importance of Public-Private Partnerships in improving maternal services and best practices in maternal healthcare across the country. Speakers included health service providers, health policy makers, private practitioners and academics. Profiles of speakers and their topics are provided in Annex 1 and summaries of their presentations are provided in Annex 3. Over two hundred delegates drawn from various sectors including the Ministry of Health and its Agencies, other Ministries, Departments and Agencies, academia, corporate bodies, NGOs and civil society organisations, media, and individuals attended the meeting and contributed to discussions on the theme of the meeting.

1.1 THIS SYNTHESIS REPORT

This report has two aims: (1) to provide a synthesis of the presentations and key issues emerging during the Question and Answer Sessions; and (2) to offer recommendations based on key insights emerging from the meeting.

The report is structured in four parts corresponding to three key areas of presentation and discussion at the meeting: (1) the global perspective on MDG5; (2) the Ghanaian perspective on MDG5; and (3) local responses to Ghana's maternal mortality burden (focusing on interventions, best practices and local expert recommendations for attaining MDG5)The final part presents ways forward and stages of action based on a thematic analysis of Ghana's maternal mortality burden and the broad set of recommendations outlined during the meeting.

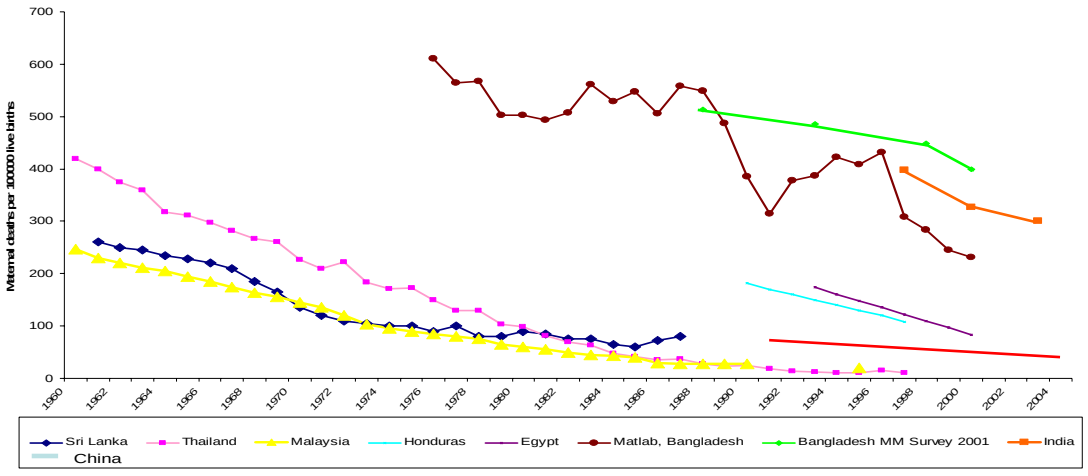
2. MDG5: The Global Context

The United Nations' fifth Millennium Development Goal (MDG 5) aims to improve maternal health. This goal is structured around two key targets:

(1) to reduce maternal mortality rates by 75% between 1990 and 2015; and (2) to achieve universal coverage of skilled care at birth by 2015. The key indicator for target (1) is the maternal mortality ratio, while that for target (2) is the proportion of deliveries attended by skilled health staff. Experts observe that MDG5 is 'off track' globally. Both targets have not been achieved in several countries especially in Sub-Saharan Africa.

However reduction of maternal mortality and improvement in coverage of skilled care are possible. Data from countries in Asia (Sri Lanka, Thailand, Malaysia, India, Bangladesh), Latin America (Honduras) and Africa (Egypt) suggest that great progress has been made in reducing maternal mortality rates between 1960 and 2004 (see Figure 1).

Figure 1 Progress in reducing maternal mortality in Asia, Latin America and Africa



2.1 Evidence-based responses to reduce maternal mortality

The existing global data on successful maternal health interventions provides important insights on what can be done to improve maternal health and reduce maternal mortality. At least three responses are identified:

- Family Planning: to prevent pregnancy and reduce fertility rates.
- Skilled Care at Delivery: to prevent pregnancy complications. In their presentation Monir Islam and Sachiyo Yoshida noted that "the higher the proportion of deliveries attended by skilled attendant in a country, the lower the country's maternal mortality ratio".
- Emergency Obstetric Care: to prevent death by timely management of life-threatening complications

Graham[1] (2008) argues that these three responses can be further "strengthened by ante-natal and post-natal care, built upon a functioning health system, political commitment, finance and support for status and rights of women."

Equity of access to quality maternal care is a key component of successful maternal healthcare. Only half the world's women currently give birth with a skilled professional. In many countries there is a rural-urban divide: most urban women deliver with a professional; only a third of rural women have a professional at birth.
Two broad factors are implicated in inequitable coverage of quality maternal care: (1) supply of care and (2) demand for care.

Reasons for inequitable coverage of quality maternal care

Supply of care	**Demand for care**
Staff availability & knowledge and skill	Educational achievement
Availability of equipment, drugs	Knowledge & awareness of health care services
Distribution of facilities	Preferences for place of delivery
Management of institutions	Cultural factors
Availability and use technology	Distance and availability of transport
	Costs of services
	Gender issues

2.2 The global maternal mortality burden: future interventions

Graham (2008) argues that to reduce the global maternal mortality burden at least six future interventions are required:

1. Renewed focus on family planning, skilled care at delivery & emergency obstetric care
2. Recruitment and training of more health professionals
3. Greater financial investment in maternal health services
4. Robust tracking of progress & accountability. This should include measuring maternal mortality indicators at population and health services levels as a means of understanding and addressing the global maternal mortality burden (see Box 2). Graham quotes Johansson and Stewart (2002) of the UNDP who argue that "a millennium development goal which cannot be monitored cannot be met or missed".
5. Securing and sustaining political commitment
6. Facilitating productive alliances between key international and local stakeholders. These should include: Funders; Research institutions; advocates, civil society, NGOs, parliamentarians; Think Tanks; Media; and Government bodies.

[1] Professor Wendy Graham, Presentation at the Consultative meeting 2008.

Tracking progress: Methods for measuring maternal mortality indicators

Population based methods	Health services based methods
Census	Health and disease records
Civil registration	Service records
Surveys or surveillance	Health administrative records

To end this section and to situate Ghana's maternal mortality burden within the global context Wendy Graham's Five Take-Home messages are worth emphasising:

1. Progress in reducing maternal mortality is possible in our lifetime
2. We know what needs to be done to save lives
3. Equity of coverage to quality maternity services is key
4. Measuring maternal mortality is an agent for change
5. Reducing maternal mortality is global collective responsibility

3. MDG5: THE GHANAIAN CONTEXT

3.1 Available Evidence on Maternal Health and Mortality

Ghana, like many African countries, is off-track with respect to MDG5 (Kuma-Aboagye, MMCM, 2008). The national target was to reduce the 1990 maternal mortality rate of 214 per 100,000 live births (national) by three quaters to 54 per 100,000 live births by 2015. This target has not been achieved.

Maternal Mortality Ratios: 1982-2007

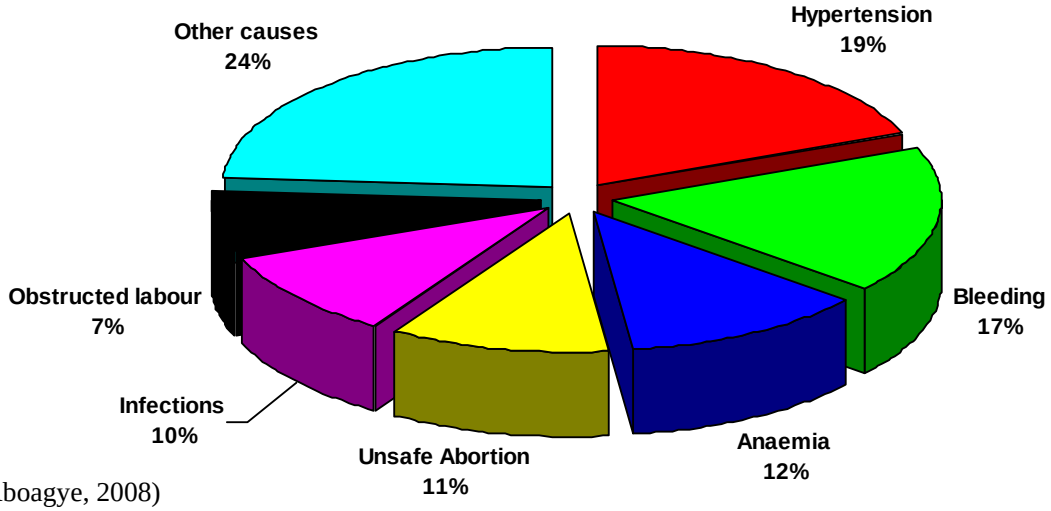
Year	MMR/100,000 LB	Source
1982	214	1993 National Maternal Mortality Survey
1990	758, 857	Kassena Nankani District
1990	740	WHO, UNICEF, UNFPA model estimate
1995	590	WHO, UNICEF, UNFPA model estimate
2000	540	WHO, UNICEF, UNFPA model estimate
2000	734	Central Region, Immpact,

(Aboagye, MMCM, 2008)

Causes of maternal deaths are presented in Figure 2. It is important to note that Hypertension is the premier cause of maternal death – almost a fifth of all deaths are attributable to this condition[2]. This data might be linked to the well-documented phenomenon of Ghanaian female obesity (a risk factor for hypertension) (Amoah, 2003a, 2003b; Biritwum et al, 2005). Other major causes of maternal death include bleeding, infections, anaemia and unsafe abortion.

[2] This is not a recent phenomenon. Between the mid 1980s and 1990s hypertension was the primary cause of maternal deaths at Accra's Korle-Bu Teaching Hospital (Lassey and Wilson, 1998).

Figure 2 Causes of Maternal Mortality in Ghana



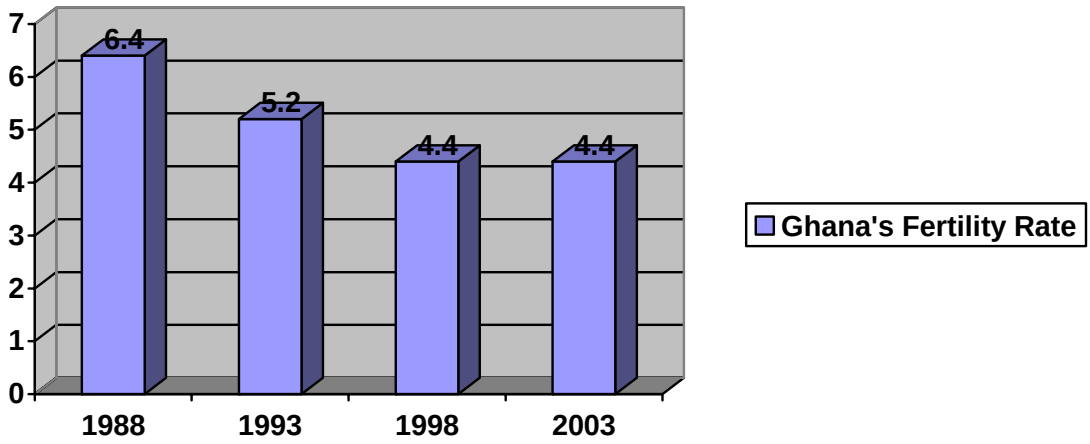
(Adapted from Aboagye, 2008)

Local evidence suggests there are problems for the three core areas identified as essential to improving maternal health: family planning, skilled care at delivery and emergency obstetric care.

3.1.1 Family Planning

Ghana's fertility rate has declined over the last ten years, from 6.4 in 1988 to 4.4 2003 (see Figure 3). Population experts attribute this decline to a reduction in the ideal number of children for the average Ghanaian particularly in urban settings. It is important to note that there are regional variations. Fertility rates in the three Northern regions, and some southern regions such as the Central regions, for example, continue to be significantly higher than the national average (Agyei-Mensah, Casterline, and Agyeman, 2005).

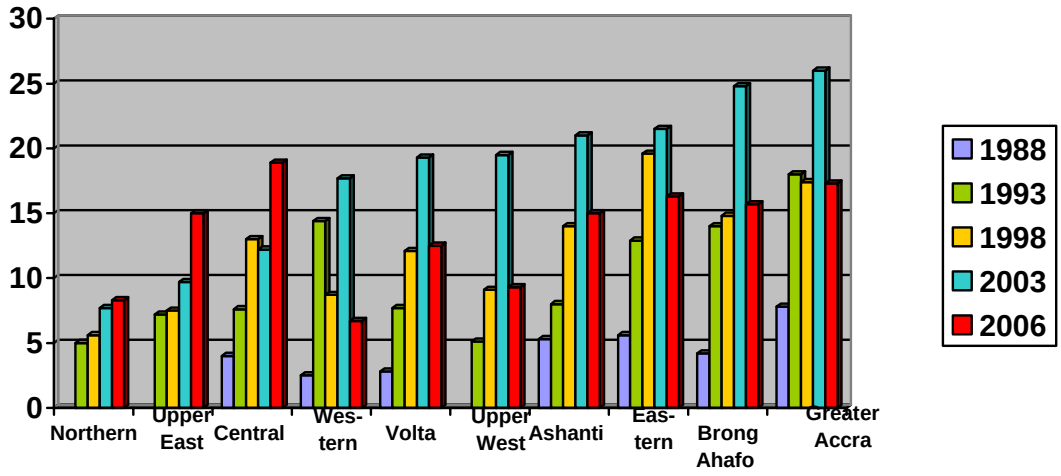
Figure 3 Ghana's Fertility Rate, 1988, 1993, 1998, 2003



The Ghana Demographic and Health Survey suggest that while public knowledge of contraceptives is high contraceptive use is low (Ghana Statistical Service (GSS) et al, 2004). There are both rural-urban and regional differences. Between 1998 and 2003 urban areas have recorded higher rates of

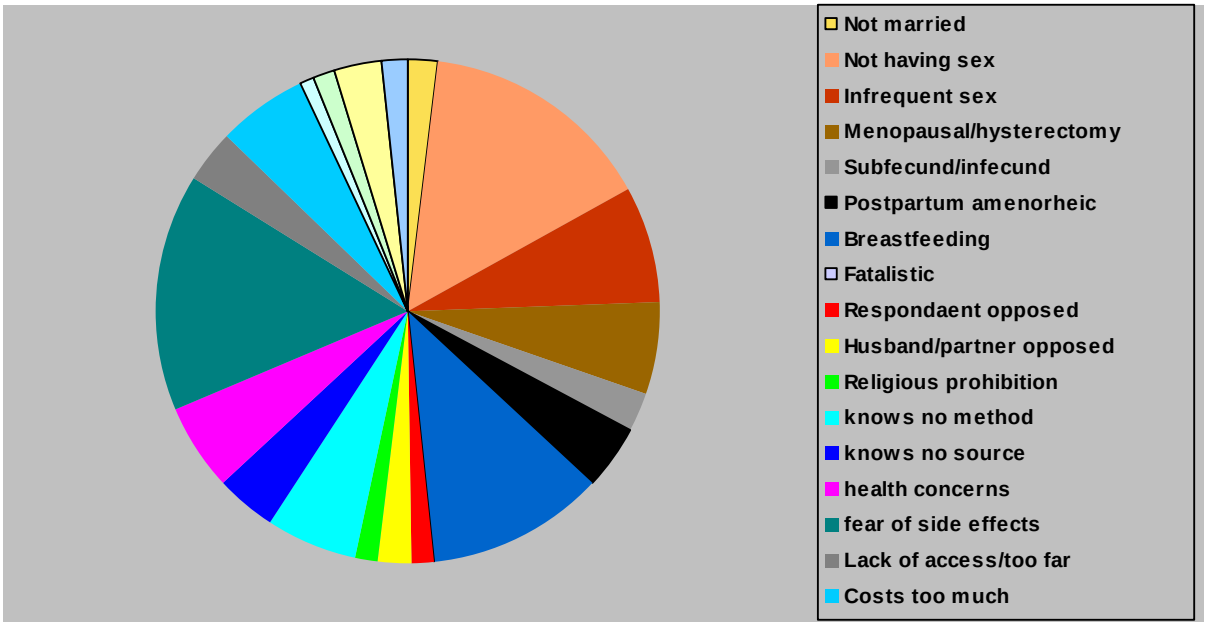
contraceptive use compared to rural areas. Over the same period, rates of contraceptive use across regions have not been uniform: the most recent figures gathered in 2006 show that contraceptive use ranges from 8.3% (in the Northern Region) to 18.9% in the Central Region). Despite a general trend of low contraceptive use, the percentage of women using contraceptives increased between 1988 and 2003 (see Figure 4). Between 2003 and 2006 contraceptive use showed a decline in all regions except the Northern, Upper East and Central Regions (see Figure 4). Reasons for this disparity need examination.

Figure 4 Contraceptive Use across the 10 regions, 1988, 1993, 1998, 2003, 2006



Ghanaian women give a broad range of reasons for not using contraceptives including lack of sexual activity, unmarried status, sub-fecundity or in-fecundity, breastfeeding, partner opposition, high cost, lack of access to supply centres, and fear of side effects (see Figure 5).

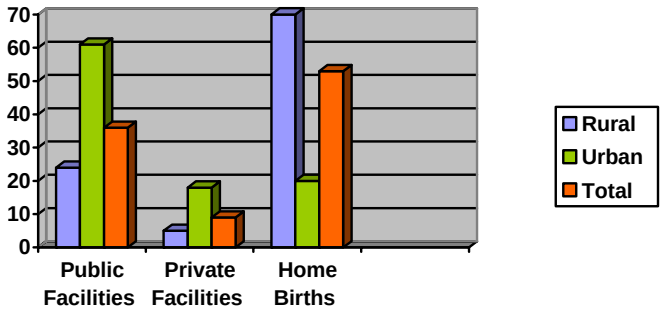
Figure 5 Reasons for not using family planning (total population)



3.1.2. Skilled Care at Delivery

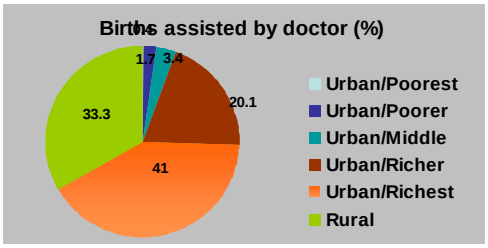
There is inequality of access to skilled care at delivery sites. In terms of facility access, 36% of women have access to public facilities, 9% to private facilities; 53% of women give birth at home (see Figure 6). In terms of access to skilled birth attendants, current data suggests that 10% of women have access to a doctor, 41% have access to nurses and midwives, 41% to traditional birth attendants and 17% use relations and other informal acquaintances. Rural-urban and regional differences exist in terms of access to facilities and to skilled birth attendants. Urban women in the richest and richer categories have best access to highly skilled attendants such as doctors (>61% of women) and nurses/midwives (>41%). In terms of regional access, the three northern regions have worst access to skilled birth attendants (0-30%) and Greater Accra Region has the best access (71% - 80%) (see Figures 7 and 8).

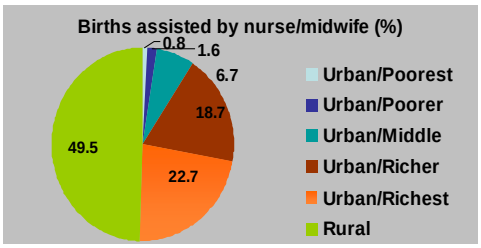
Figure 6 Women's access to public and private facilities: Rural-Urban differences

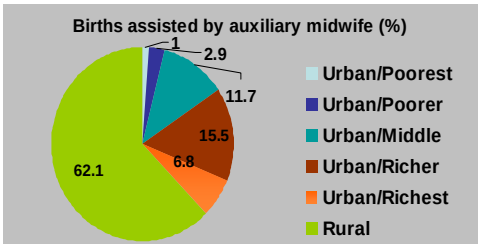


Adapted from Kuma-Aboagye, 2008)

Figure 7 Skilled Birth Attendant inequity in Ghana DHS 2003







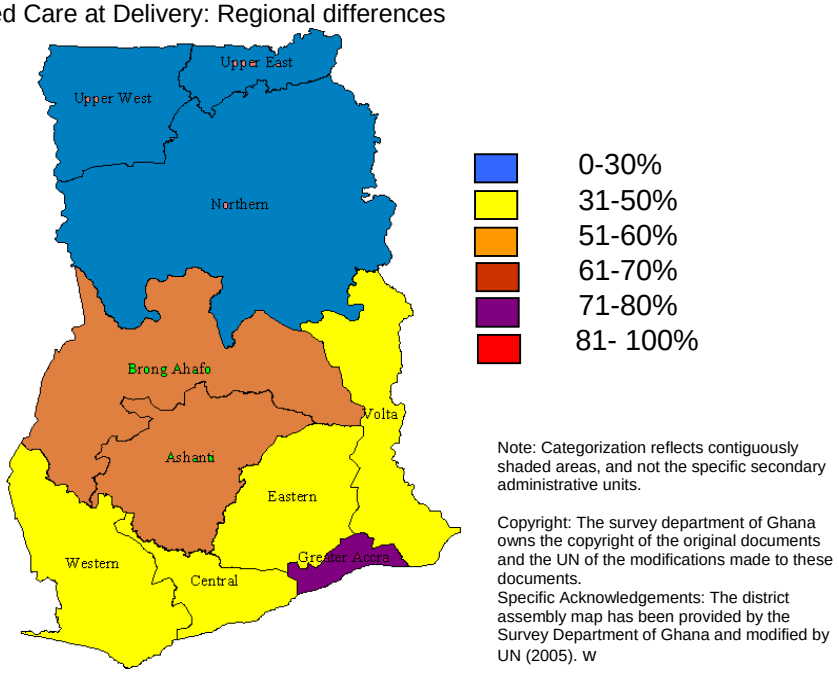
Women who had access to doctor ->61% Urban richest & richer

Women who had access to nurse/midwife -> 41% urban richest & richer

Women who had access to auxiliary midwife ->62% rural women

(Monir Islam and Sachiyo Yoshida, 2008**)**

Figure 8 Access to Skilled Care at Delivery: Regional differences



(Monir Islam and Sachiyo Yoshida, 2008**)**

3.1.3. Emergency Obstetric Care (EMOC)

Aboagye discusses a baseline study on Emergency Obstetric Care conducted in the three northern regions in 2005 that revealed the following:

- Most district hospitals had no theatres or blood transfusion services (fridges)
- The majority of the health centers did not provide basic EMOC/ENC services.
- A scattered settlement pattern affected geographical access to maternal health services
- Referral services were poor
- There was a lack of facility-based accommodation for essential staff
- There were no 24 hour services
- Many health facilities lacked adequate water and power supply.

Aboagye notes that other studies show that similar conditions exist in other parts of the country[3].

3.2. Challenges to achieving MDG5

A broad range of challenges to meeting the MDG5 goal in Ghana has been identified by different agencies. The challenges can be grouped under three categories:

1. Funding and policy
2. Health systems
3. Socio-economic and socio-cultural factors

[3] The presenter did not provide specific information on similar case studies outside the three northern regions.

3.2.1. Financial architecture

The presentation by the director of MOH's Policy Planning Monitoring and Evaluation (PPME) Division Dr Edward Addai (hereafter Addai, MMCM, 2008) provided important information regarding funding and policy challenges for addressing MDG5 in Ghana. Addai (MMCM, 2008) first outlined the service delivery mode for maternal health, as presented in Figure 9. The delivery mode encompassed a range of strategies targeting three areas: (1) family oriented community based services; (2) population oriented services; and (3) individual oriented clinical services. Ideally, a set of five factors mediated effective quality of care at these three levels:

1. Availability (physical access)
2. Availability (essential commodities)
3. Accessibility (human resources)
4. Initial utilization
5. Timely continuous utilization

Identified bottlenecks suggested that these factors were not fully operational (see Figure 10). Evidence provided by other presenters supported Addai's argument, as the following section on health systems will demonstrate.

Figure 9 Service Delivery Mode and Interventions for MDG5

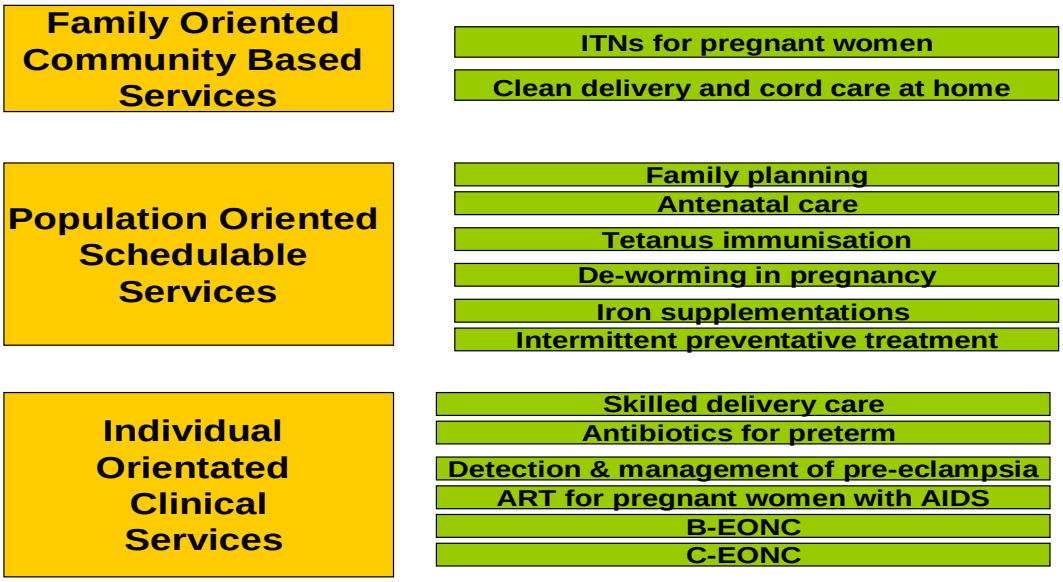
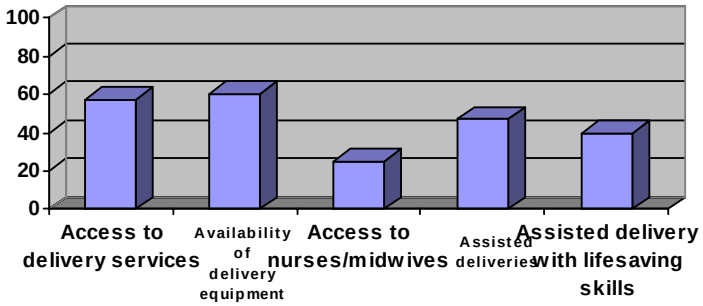


Figure 10 Effective Coverage Bottlenecks for Clinical Primary Level Skilled Maternal Care



Addai argued that improving maternal health services would require extra financial investment in the health sector. This posed a significant challenge. He presented two alternative scenarios for health systems investment. The first (termed scenario I) required 15% additional expenditure on the health budget for 2008, rising to 24% for 2012. The second scenario (scenario II) additional expenditure would rise to 28% in 2012

Additional Costs required for five years 2008 - 2012, US$000s: Scenarios I and II

	Sc.1	**Per capita US$**	**Sc II**	**Per Capita US $**
2008	109,897	4	109,940	4
2009	147,292	6	163,852	7
2010	185,730	7	217,223	9
2011	223,628	9	268,214	11
2012	266,357	10	322,995	13
Total	932,905	7	1,082,224	9

Additional expenditure for both scenarios would target the following aspects of healthcare
Health facilities and equipment

- Human resources
- Insecticide treated nets
- Other drugs and supplies
- Pre-service training
- Transportation
- Promotion
- Monitoring and evaluation
- Subsidies and financial access

Breakdown of Costs (five years) US$000s

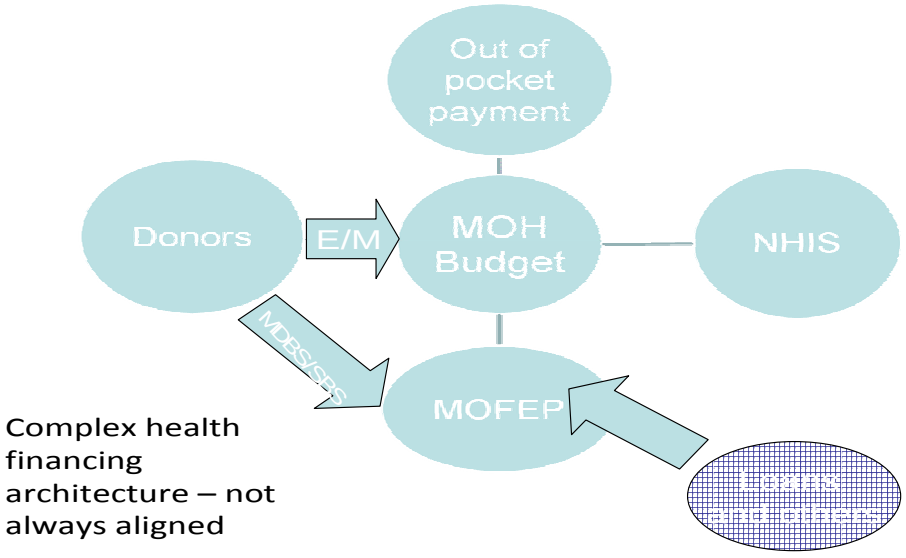
	ScI	ScII
Health facilities & equipment	315,741	310,946
Human resources	386,514	492,214
Insecticide treated nets	19,959	22,288
Other drugs and supplies	95,256	118,775
Pre-service training	25,821	35,877
Transportation	185	6,673
Promotion	9,334	11,932
M&E	96	3,518
Subsidies / Financial Access	80,000	80,000
Grand Total	**932,905**	**1,082,224**

Currently the health sector is financed through a complex system that is not always aligned. Money comes from the following sources[4]:

- Donors
- Out of pocket payment
- National health insurance scheme
- Loans and other sources

See Figure 11 for the complex picture of 'health financing architecture' (Addai, MMCM, 2008).

Figure 11 Health Financing Architecture



[4] Note: in Dr Angela Ofori-Atta's notes on the report she states that "the first and largest is the government budget, a consolidated fund from CAGD". This wasn't made clear in Addai's presentation. Should we add this observation by Ofori-Atta?

Addai argued that to overcome identified bottlenecks in order to improve quality of maternal health services three responses were required:

1. Investment in the health sector. He noted for example that investing in overcoming bottlenecks could increase supervised delivery rates significantly. However he observed that investment would 'cost a lot'. It was therefore important to develop a combined approach that moved beyond investment.
2. Being innovative with what already exists through reallocation of staff and resources, efficiency gains and development of new and creative service delivery methods
3. Commitment to sustained resource mobilization.

3.2.2. Public-public partnership

In his presentation on 'Public Private Partnership' (PPP) Dr. K. A. Kwarko Jnr. of the Society of Private Medical and Dental Practitioners, presented ideas that supported and extended Addai's second recommendation for innovative use of existing resources. Kwarko presentation hinged on three key arguments:

1. the public sector cannot provide nationwide healthcare all by itself;
2. the private sector provides part of the nation's healthcare needs but not to internationally required standards; and
3. through public private partnership the public sector can help increase the breadth, distribution, sophistication, and quality of private sector provision of healthcare.

Kwarko noted that PPPs "are found across the country and across disciplines in the health sector". Examples included the NHIS (the 'biggest PPP'), the retail of MOH products and supplies such as drugs, cars and equipment to private sector, public sector nurses running well baby clinics in private clinics, the use of private sector stakeholders on formulating health policies and strategies and the collaborative development of educational programmes and courses by public and private sector experts. What was required was a better understanding of how these PPPs work and the development of deeper and more sustainable approaches to new PPPs. Fundamentally PPPs could be profitable.

Within the context of MDG5, Kwarko envisaged PPP working best if public and private sector institutions pooled resources to target universal coverage of skilled care deliveries. While the private sector could push the PPP agenda forward, the MOH (and its partners) needed to take a stronger lead in this process for example by making it "part of policy and strategy at highest levels of government, private organizations, and in all MDAs to negotiate PPPs".

3.3 Health Systems Challenges

Several major challenges were discussed in relation to health systems challenges.

3.3.1Workforce numbers and distribution

The number of health service personnel in the major categories has increased in recent years. This increase is attributable to increased number of enrollments and trained individuals and a decrease in staff international migration (see Tabled 4 and 5).

Enrolment (E) into and Output (O) from Training Institutions, 2003-2007

	2003		2004		2005		2006		2007	
	E	**O**	E	**O**	E	**O**	E	**O**	E	**O**
Medicine	228	**158**	276	**216**	280	**220**	420	**214**	480	**252**
Pharmacy	103	**109***	148	**120**	113	**111**	211	**148**	198	**n/a**
Nursing	1182	**784**	1220	**903**	2420	**1045**	2279	**1180**	2260	**1665**
Midwifery	135	**115**	140	**120**	280	**124**	447	**132**	625	**132**
Radiology	24	**33***	25	**33***	23	**34***	24	**34***	20	**n/a**
Medical Lab	34	**10**	40	**9**	56	**10**	54	**18**	20	**n/a**
Total		**1143**		**1202**		**1401**		**1544**		**?**

*While this is not explicitly stated in the source tables for Enrolment and Output. It is likely that the disparity between enrolment and output figures may be due to deferrals. **(** Appiah-Denkyira, MMCM, 2008)

International Migration of Health Sector Staff

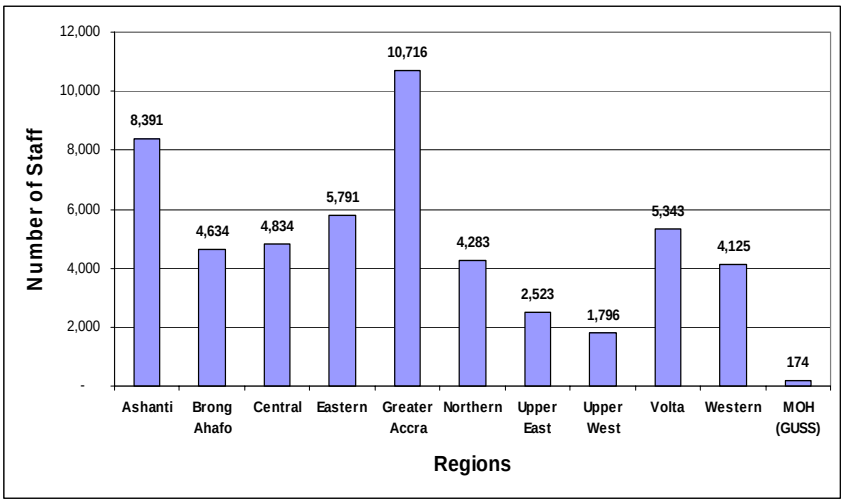
	2002	2003	2004	2005	2006
Doctor	92	105	114	89	60
Pharmacist	75	70	64	52	41
Nurse	148	160	171	113	93
Midwife	108	102	121	96	64
Medical Lab Technologist	56	61	67	49	42
Radiologic Technician	35	37	44	32	24
Total					

(Appiah-Denkyira, MMCM, 2008)

Despite these gains there is a general consensus that Ghana's health sector has serious manpower constraints. Aboagye (MMCM, 2008) provided some current figures for doctors and nurses/midwives. The country has 1,190 registered and practicing doctors at present. This sets the doctor population ratio at 1: 17,733; 839. There are significant disparities in population access to doctors with 70% of doctors based in Ashanti and Greater Accra regions. There is a significantly larger number of registered and practicing nurses and midwives compared to doctors: 11, 511 and 2400 respectively. The Nurse-Population ratio is 1: 1,510. However there are similar issues in relation to access, with the majority of nurses and midwives based in southern Ghana and urban centres. Generally, the health workforce – doctors, nurses, pharmacists, technical staff, etc - is disproportionately distributed across the country with a significant proportion based in Greater Accra and Ashanti Regions (see Figure 12). (Annex 2 shows the regional distribution of different categories of healthcare professionals in Ghana in 2003).

It is clear from previous sections that a strong workforce – in terms of numbers and relevant skills – is crucial to improving maternal health services and to attaining MDG5. For example Ghana will need 5,000 newly trained midwives if it is to attain MDG5. Addai (MMCM, 2008) suggested that the cost of addressing the broader human resource challenge would range between US$ 386,514,000 (with scenario I) and US$492,214,000 (with scenario II). The likelihood of facilitating this goal will require the three-pronged approach Addai suggests (see Section 3.2.1).

Figure 12 Distribution of Staff per region



(Dec 2007 payroll figures: Aboagye, MMCM, 2008)

3.3.2 Workforce skills

A review of quality of care in the maternal health services in the Central and Volta Regions presented important insights with respect to the national problem of an unskilled workforce (Deganus, MMCM, 2008). The review conducted by the IMMPACT project surveyed 49 facilities (22 in the Central Region; 27 in the Volta Region) and 1148 deliveries out of a total of 14,232 in the two regions (10610 in the Central Region; 3622 in the Volta Region). The review revealed the following problems:

- TRACE in hospitals showed that quality of clinical medical care was substandard and this problem was widespread.
- Doctors lacked competence and ability to deal with obstetric emergencies. Doctors seem ill-prepared to deal with the obstetric conditions commonly seen in district hospitals.
- At level B health facilities the key objective of increasing utilization of delivery services was being met in the Central Region while the reverse was found in the Volta Region.
- Quality of delivery care was low in both regions. Quality of Care (QOC) scores were lower in the Volta Region compared to the Central Region.
- Poor quality labour and delivery care influenced the utilization patterns of Level B facilities in the two regions.
- Poor quality labour and delivery care undermined the objectives of the fee free delivery policy.

3.3.3 Challenges in infrastructure

The evidence from Central and Volta Regions appeared to be common in other regions. Kuma-Aboagye (MMCM, 2008) listed a number of challenges identified across the country that included:

- Poor access to quality maternal health services especially at community level
- Poor access to emergency obstetric care (as discussed previously)
- Low utilization of available health services (due to misconceptions about biomedical services and poor quality of care at service points
- Poor access to Essential Newborn care
- Weak referral systems and services (compounded by poor roads, lack of transport, inadequate communications)
- Poor infrastructure includes roads, communication systems logistics equipment
- Blood transfusion services

3.3.4 District health system

The district as a system to ensure a continuum of care from the household was discussed (Bannermann, 2008) The challenges with ensuring that there are no delays at home, within communities at the facilities and referral between facilities were discussed. It was also noted the referral system was problematic with some facilities refusing to receive referred patients.
Management support system for the districts as a whole including planning, budgeting and financing of programme was seen as critical in reducing maternal mortality, since this affects the delivery of care.
Linkages and collaboration with the district assembly were particularly seen as essential in obtaining support and funding for infrastructure development, community participating and provision of information to the households.

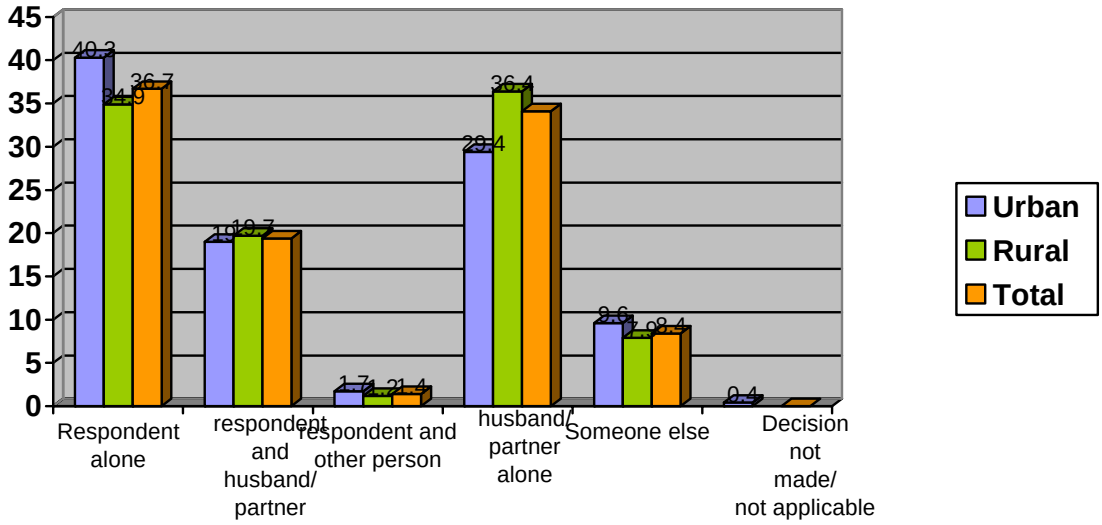
3.4 Socio-economic and socio-cultural challenges

Four issues were outlined with respect to socio-economic and socio-cultural challenges by some presenters (e.g. Aboagye, MMCM, 2008; Graham, MMCM, 2008) as well as during the Question and Answer sessions. These were: (1) low female literacy rate; (2) low level of women's empowerment; (3) high levels of poverty; and (4) problematic traditional practices.

3.4.1 Low literacy rate and empowerment

Ghana's adult literacy rate is 64%: females have a lower literacy rate (55%) compared to males (73%) (GSS et al, 2004). Research suggests that low literacy has an impact on access and use of maternal health information, especially family planning and use of services (Agyei-Mensah et al, 2005). This finding is borne out in the three Northern regions which have the lowest female literacy rates and which have significant problems with access and use of maternal health information.
Research in Ghana and much of sub-Saharan Africa suggests that disempowered women are unable to negotiate safe sex and to understand and protect their reproductive rights generally. Recent evidence from the Ghana Demographic and Health Survey suggests that in some parts of the country men make decisions about household healthcare choices and practices. This often includes decisions about the healthcare practices of their wives or female partners (GSS et al, 2004; Tawiah, 2007) (See Figure 13). This national level information is corroborated by some community examples provided by Deganus (MMCM, 2008)

Figure 13 Percentage of Ghanaian women who have a final say on own healthcare



Adapted from Tawiah, 2007

3.4.2 Poverty and poor access to care

The IMMPACT review of maternal health service in Ghana recorded pre-fee free exemption (in 2005) rates of US$43 for normal delivery and US$229 for caesarean section (Graham, MMCM, 2008). In 2005 about 44.8% of the Ghanaian population survived on less than US$1 a day (World Bank, 2006). While the fee-free exemption policy may have reduced the burden of financial access to service delivery there are other hidden costs to maternal health services that affect service access to poor rural and urban women. Transport costs to facilities are often highlighted as a major hidden cost for healthcare access. This is true also for access to maternal health services. For example in Amansie West District - the subject of a Best Practice case study in Section 5 - transport costs to health centres, especially for critical cases, often exceed the average daily wage of community members (see Figure 15). Amansie West has extremely poor intra-district road and transport systems and typifies the transport problems that many remote rural communities face with respect to health as well as to wider developmental resources.

Transport costs to district and regional health facilities in a poor rural district, 2008

	District Health Facility		Regional Facility (KATH)	
	Normal Fare (GHC)	**Chartered fare (GHC)**	**Normal Fare (GHC)**	**Chartered Fare (GHC)**
Community 1: Bonsaaso	3 – 5	10	30	n/a
Community 2: Akyekeyerekrom	10	150	20	250 – 300
Community 3: Keniago	5	45 - 50	n/a	100 – 150

Average daily wage Bonsaaso cluster inhabitants: ranges between US$0.7 (for three quarters of the community) and US $4.5. $1 = GHC 0.98

(Adjei and de-Graft Aikins, 2008)

3.4.3 Problematic traditional practices

Two specific problems were outlined under this category: (1) poor health-seeking behaviours (for example late presentation of (reproductive) health problems; and (2) low risk perception of maternal morbidity and mortality. There was a general view that 'traditional practices' were poor. With the exception of Deganus' presentation on cultural mediators of health facility use in the Bongo District (see section 5) specific examples of poor practices were not provided.

4. RESPONSES TO GHANA'S MATERNAL MORTALITY BURDEN

4.1. Current Interventions

Current interventions are tailored along lines of global recommendations (see section 3). Key areas addressed are

- The Safe Motherhood program, which aims to improve access to Emergency Obstetric Care
- Family Planning Program
- High Impact Rapid Delivery (HIRD): The HIRD approach combines partnership, vision and data-driven methods to develop a plan for rapid scale up to attain universal (at least 80%) coverage of key priority interventions
- Data gathering using three key methods: (1) Maternal Mortality Survey; (2) Maternal Death Notification; and (3) Maternal Death Audits
- Development and implementation of the Regenerative Health Strategic Plan and the Road Map for achieving MDG 5

4.2. Best Practices in three health facilities FANC

A range of Best Practice case studies were presented that offer templates for innovative interventions in maternal health services in Ghana. While the case studies focused on both health facility and communities, all, but one, of the initiatives were developed by healthcare providers and other formal (local and international) experts. One case study (in the Bongo District) was developed through community participatory activities.

4.2.1 Tema: Tema General Hospital

Tema General Hospital (TGH) is a 337 bed district hospital in the Greater Accra Region. TGH serves a population of about 1,005,396. The recent GDHS recorded a population growth rate in Tema of 4.4% per anum (GSS et al, 2004). Eighty percent of the population is concentrated largely in urban and peri-urban areas. A profile **of maternal services provided by TGH** is presented in the table below.

Capacity	**Service Delivery**
Staff OB/GYN – 2 Medical Officers – 4 Practicing Midwives at ANC - 5 **No of Beds** 74 Maternity Beds • ANC/PNC=63, • Lab/Del= 14).	Total ANC Attendance: 35,181 Total Deliveries: 6437

4.2.2 The old system of maternal health care: ANC

Prior to the introduction of FANC at TGH, maternal health services were operated along the lines of a 'factory assembly line' (Deganus, MMCM, 2008) with six stations manned by 6 midwives. These stations provided the following services:

- Registration/history
- Urine/Hemoglobin
- Blood pressure
- Weight/Height
- Palpation
- Treatment

Women were required to utilize the services in 12 visits. Space was limited therefore a number of services were provided publicly – for instance, there was only one room for palpation and other care components were provided in the open. In addition to these six services other services were provided on a less structured basis. For example, mass health education was provided. A risk detection approach was applied to care.

This old system had a range of limitations. Quality of Care was reported to be poor: women accessing services were not treated in privacy or with confidentiality, partner support was not encouraged, there was poor interaction and rapport between health providers and their clients due to long waiting times (average 6 hours) and short consultation times with health providers (5 minutes or less); there was a lack of continuity in care and referrals were cumbersome and often faced delays. From the opposite end health providers had a considerable workload; each provider saw more than 150 clients a day. Most reported poor job satisfaction. There was reported misuse of staff skill.

4.2.3 The new system of maternal healthcare: FANC

The initiative – FANC – responded to identified problems at TGH and focused on the following areas:

- Individualized care
- Comprehensive and focused care
- Private and confidential care
- Promotion of a minimum of four visits
- Continuous care provided by same provider
- Emphasis on birth preparedness and complication readiness
- Promoting partner/ support person involvement
- Adhering to national protocols
- Facilitation of referrals
- Linking ANC, PNC and Family Planning Services and housing them within the same location

The initiative had a positive impact (see Figures 14, 15, and 16). Key positive outcomes included:

- Increased ANC attendance
- Increased use of hospital delivery facilities
- Decreased still birth rates
- Enhanced use of postnatal services
- A reduction in client waiting time by 1hour 40 minutes
- Improved client provider interaction

Figure 14 Antenatal booking and skilled attendance at delivery, TGH: 1997-2007

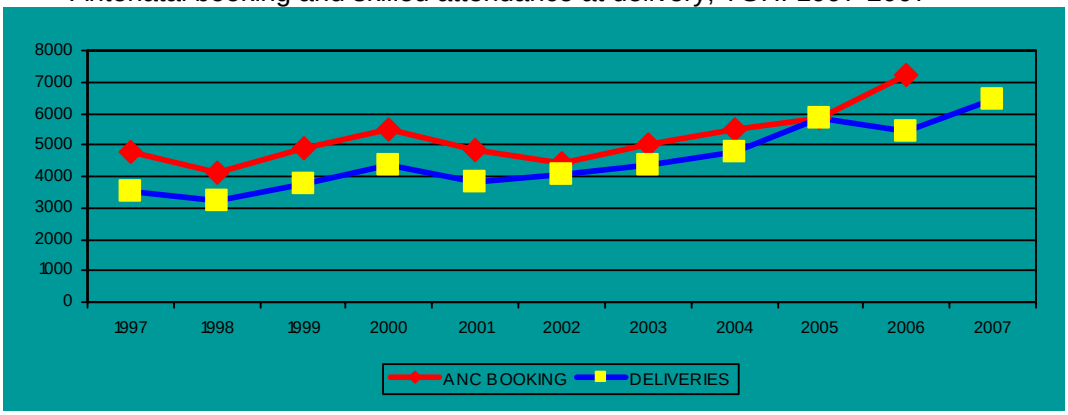


Figure 15 Stillbirths and MMR, TGH: 1997-2007

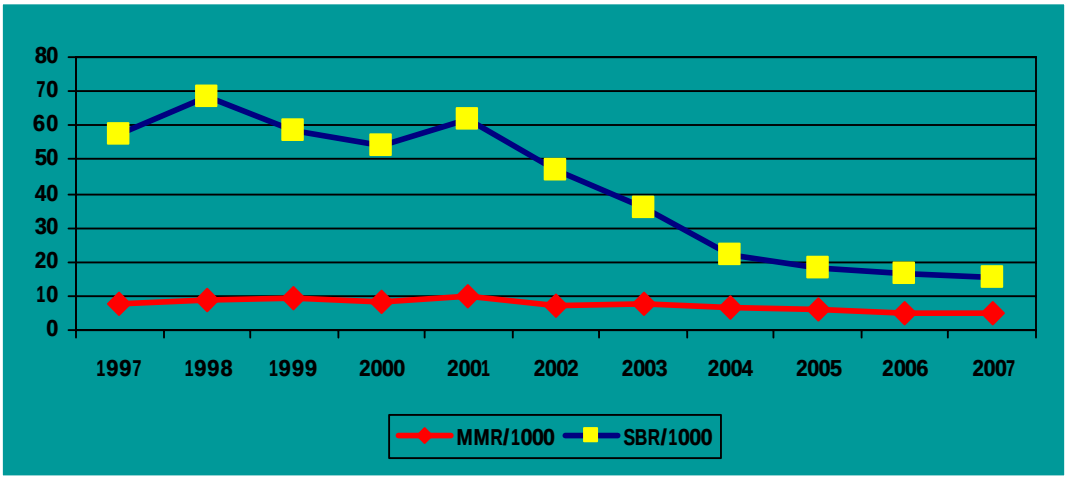
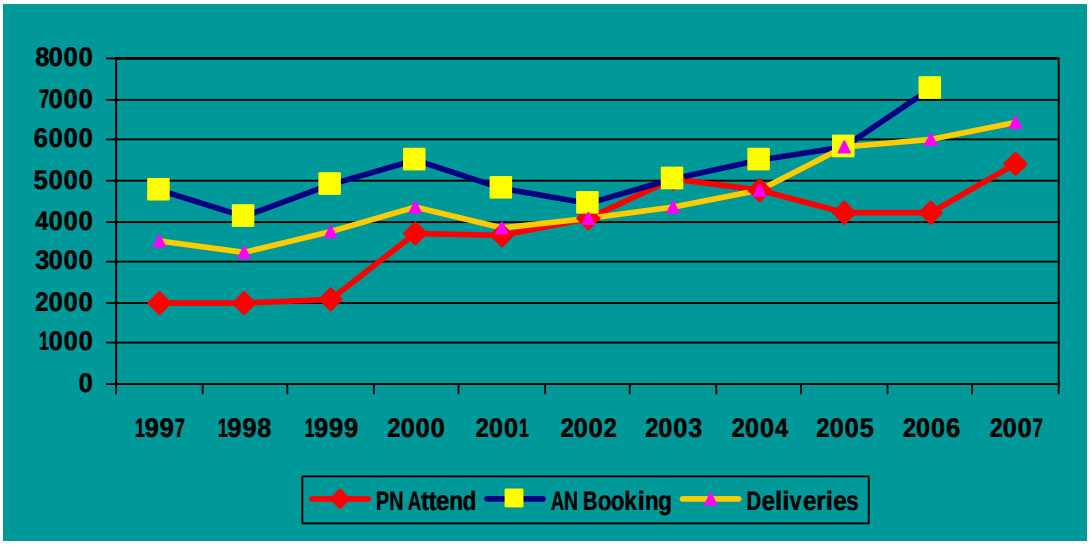


Figure 16 Antenatal care bookings and six week postnatal care attendance : 1997-2007



Other qualitative impacts included:

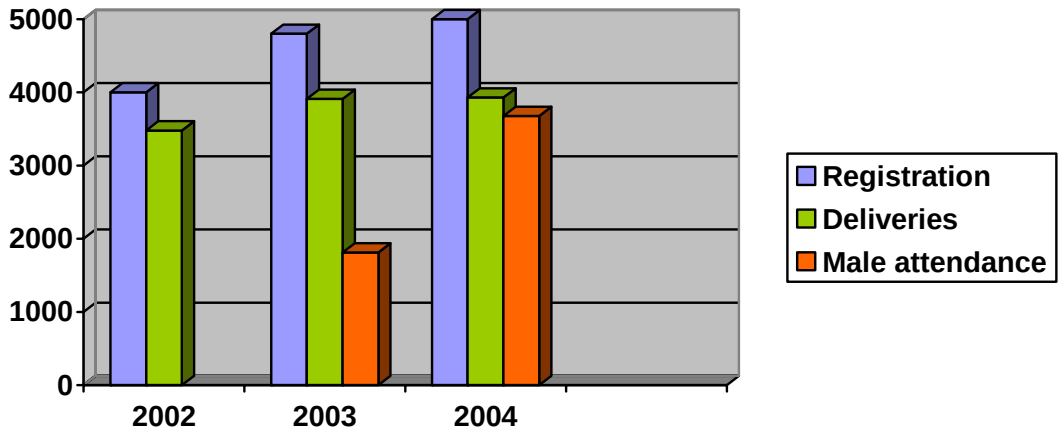
- Improved staff morale
- Improved provider skill levels and better use of these skills
- More client friendly facilities
- Increase in male attendance
- Commitment by care providers to continued quality improvement

Through this initiative TGH has been granted the status of a center of excellence (and Best Practice). TGH Staff have become agents of change and contribute to changing the country's ANC policies and protocols (for example the New ANC Card, Focused ANC into policy/protocols). The center serves as a site for introducing many new ANC country programs (eg. IPT/SP, PMTCT).

4.2.4 Koforidua: New Juaben Hospital

Quality of care at the New Juaben Hospital in Koforidua had a similar transformation to TGH with the introduction of FANC. Post-initiative ANC registration increased, as well as deliveries at the hospital and male attendance (see Figure 17). The new initiative also improved the counseling skills of staff and increased the uptake of counseling services on PMTCT/VCT. Malaria and Anemia cases due to administration of IPT (Intermittent Preventive Treatment) were reduced.

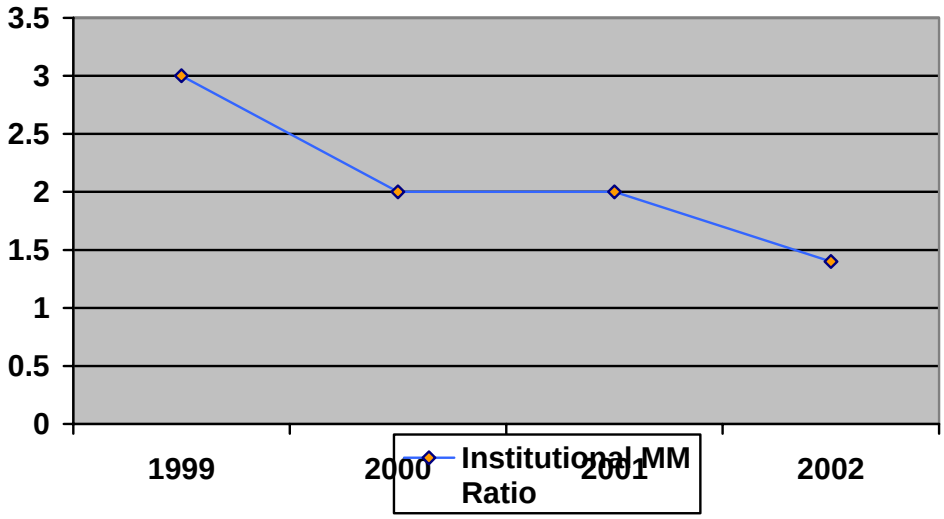
Figure 17 Impact of FANC on registration,



4.2.5 Tamale: Tamale General Hospital

After the introduction of FANC at the Tamale Teaching Hospital institutional deliveries increased by 54% in two years (from about 2500 in 2000 to 3850 in 2002). The increase occurred despite the absence of an exemption policy at the facility. Crucially the introduction of FANC coincided with a steep reduction in MMR in the northern region.

Figure 18 TGH MM ratios pre and post FANC interventions



4.2.6 The Amansie West Experience

Amansie West District, located in the south-west of the Ashanti Region, in Ghana's forest belt, was selected in 2006 as the Ghanaian site for the Millennium Villages Project's experiment in integrated rural development. The district has an estimated population of 142,068, in 160 communities and 182 settlements. The district is classified as very rural: 80% of the communities have a population of less than 1000. Despite large deposits of gold in the area and despite the fact that it is the second largest cocoa-producer in the region, the district is poorly developed. It has only 10km of tarred road and a very poor intra-district transport system. Communication is equally poor with very limited telephone service.

Prior to the introduction of MVP in the district the profile of maternal healthcare was poor. The following problems were identified:

- Late ANC registration (at 2nd and 3rd trimesters (68%))
- Low average ANC attendance and a maximum of 2 visits per woman
- Declining antenatal coverage since 2004
- High drop out rate IPT1-IPT3 (60%)
- Inadequate and irregular release of funds
- Withdrawal of rural incentive allowance leading to high staff attrition (The doctor-population ratio in the District is 1: 114,197 and the nurse-population ratio is 1: 5,452. Other groups of health staff include 3 disease control officers and 1 medical assistant.)
- High teenage pregnancy (16.3% of antenatal registrants)
- Late detection of pregnancy related complications: Anemia, malaria, eclampsia
- High rate of abortions (Still births (5%); Fresh (50%))
- Unacceptably high maternal mortality rate

The MVP initiative introduced in 2006 a broad range of interventions targeting human resources and service delivery. The interventions are presented in Box 3. The interventions led to concrete improvements in maternal health services in the district: family planning acceptor rates increased,

ante-natal registration increased, IPT2 coverage increased and most importantly maternal mortality rates dropped to zero in 2007.

Health Interventions at Amansie West District, 2006-2008

Human resource interventions	Service interventions
• Addition of Community Health Extension officers (CHEWs) (drawn from a pool of NYEP trained health care assistants) • Further training in: Community facilitation/mobilization for Public health activities-FP, ANC, PNC, EPI; CBGP; Disease surveillance; • CHEW providing outreach ANC and PNC services	• Re-organization of CHPS system by introducing Community Health Extension Workers (CHEWs) • Posting midwives to CHPS Zones • Provision of outreach ANC • Strengthening referral system (between community and district level facilities) • Provision of community ambulances • Strengthening level B facilities and district hospital • Providing Equipment • Improving infrastructure (providing 5 new health centres within intervention period)

Figure 19 Impact of Interventions on facility and home-based deliveries, 2007 - 2008

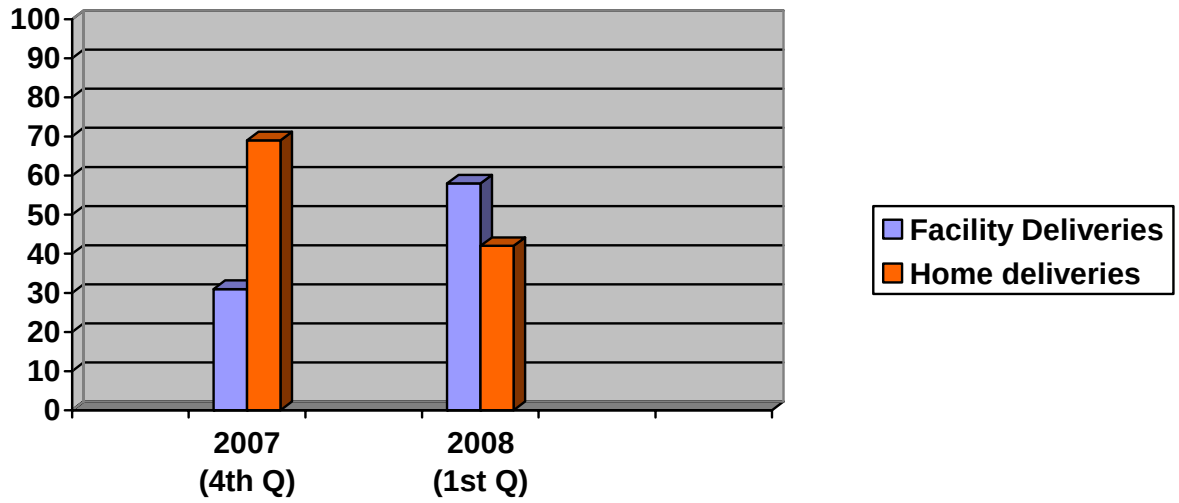
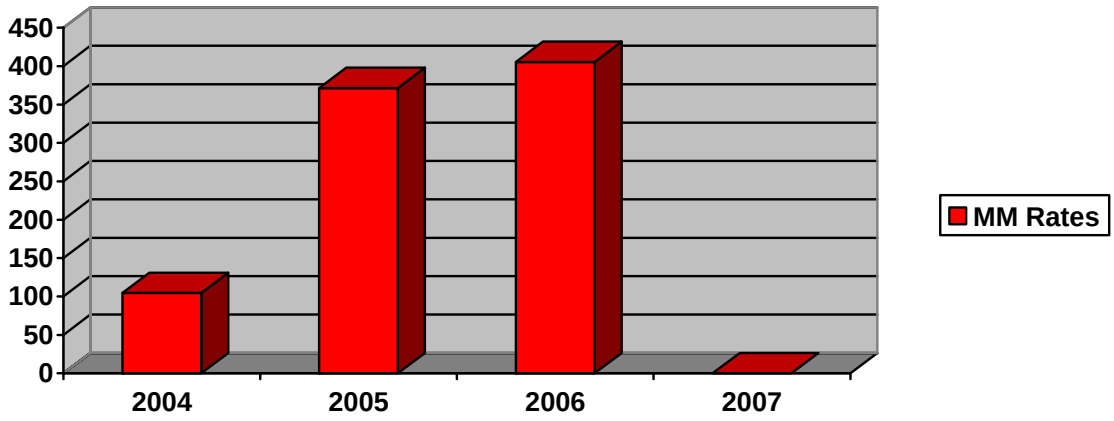


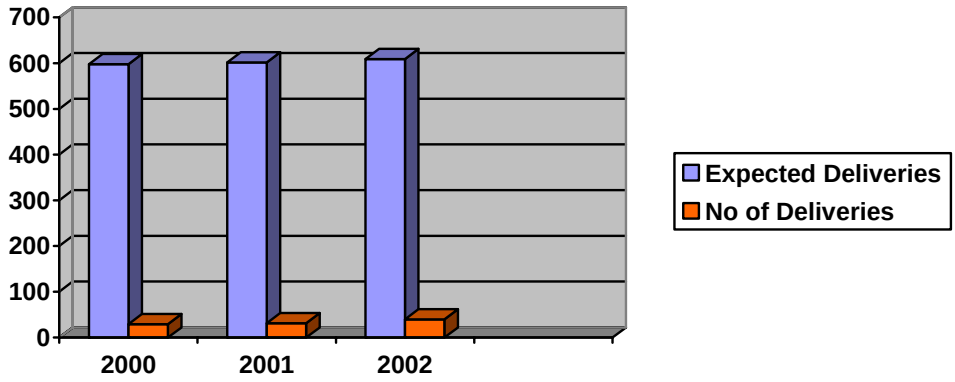
Figure 20 Maternal Mortality Rates Amansie West, 2004, 2005, 2006, 2007



4.2.7. A Community Participation Approach in Bongo District and the Zorko Initiative

Between 2000 and 2002 the Bongo District and sub-districts e.g. Zorkor recorded persistently low institutional deliveries (see Figure 21). All midwives were charged to improve on the supervised delivery indicator.

Figure 21 Institutional Deliveries in Bongo District, 2000 – 2002



Seven Community Durbars were held to examine the reasons for poor utilization of delivery services. Community members gave the following reasons:

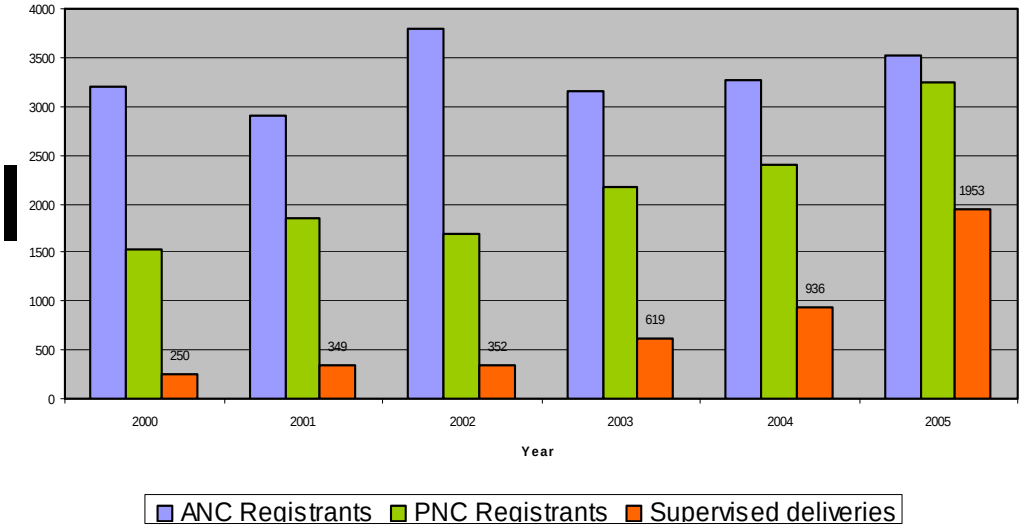
- Poor access to facility (particularly for women travelling long distances)
- High delivery fees
- Women disempowered in terms of delivery choices
- Staff unavailability and Poor staff attitudes
- Post delivery problems (e.g no hot water to bath within the facility after delivery, no millet water (*zomkoom*) to drink (believed to help produce breast milk))
- Home delivery seen as a mark of bravery and faithfulness to husband
- Death in labour seen as a woman's destiny

A range of commitments was made to the communities addressing the identified problems. This included:

- Transportation promised for women travelling long distances
- Consistent implementation of the exemption policy
- Providing 24 hour services
- Improvement of staff attitudes
- Improving post delivery care (by providing hot water for bathing and *zomkoom*)
- Addressing misconceptions about facility deliveries
- Holding meetings with opinion leaders to decide on place of delivery prior to delivery

The interventions led to concrete improvements in maternal health indicators (see Figure 22). ANC and PNC registrations and the number of supervised deliveries increased.

Figure 22 Safe motherhood indicators, Bongo District, 2000 – 2005



4.2.8 A note on indigenous community best practices

The role of indigenous community practices that foster and sustain good maternal health did not feature at the meeting. With the exception of Deganus's presentation there was a general tendency either to ignore community ownership and participation in maternal health or to view traditional cultural practices as problematic. However, limited evidence suggests that there are communities with indigenous practices that nurture and support healthy maternal practices.

In 2007 a review was conducted on MOH's pilot Regenerative Health and Nutrition Programme in ten districts (de-Graft Aikins, 2008). The review presented findings on the maternal health profile of a Pediatukope, a village in the Ada District that is relevant to this discussion. An interview with the midwife based in the village revealed that since the midwife assumed duties there, about two years prior to the interview, the village had recorded 0% maternal mortality. She suggested that this excellent record could be linked to general lifestyles of the villagers: there was a strong culture of eating fruits and seeds; the women were physically active and attended antenatal care regularly.

Similar examples need to be documented to map out what communities do to maintain maternal health and reduce maternal mortality in the absence of external interventions. This is particularly important as institutionally driven best practices are often resource intensive both in material and symbolic terms.

5. Recommendations

Recommendations given mirror the global level recommendations.

Global recommendations for reducing global maternal mortality burden

1. Renew focus on family planning, skilled care at delivery & emergency obstetric care
2. Recruit and train more health professionals
3. Increase financial investment in maternal health services
4. Robust tracking of progress & accountability. This should include measuring maternal mortality indicators at population and health services levels as a means of understanding and addressing the global maternal mortality burden (see Box 2).
5. Secure and sustain political commitment
6. Facilitate productive alliances between key international and local stakeholders. These should include: Funders; Research institutions; advocates, civil society, NGOs, parliamentarians; Think Tanks; Media; and Government bodies.

A thematic summary of the set of recommendations is made under the three identified problematic arenas of: (1) policy and financing; (2) health systems; and (3) socio-economic and socio-cultural systems.

Recommendations for improving maternal healthcare in Ghana

Financing and Policy	Health Systems	Socio-economic, Socio-cultural Challenges
Secure funding including corporate bodies. Establish Public/ Private Partnerships (targeting health facility infrastructure and role of midwives) Commit to decentralization and support districts in providing healthcare services. Strengthen intersectoral relationship with MDAs and assign roles and responsibilities Ensure equity of coverage of maternal healthcare with a focus on the 3 pillars for maternal mortality reduction Document and replicate best practices	Address Manpower constraints Train more skilled attendants. Make effective use of NYEP as CHEWS. Reintroduce rural and deprived areas incentives. Attract and retain staff in rural and deprived areas and make national staff distribution equitable Improve the skills of the workforce Improve Practitioners' skills in customer care practices and management of obstetric complications. Address district and facility-level challenges Invest in infrastructure and equipment for maternity care Improve management of maternity care services Reward facilities which maintain high levels of Quality Maternity Care services as incentives to others. Redesign CHPS to make it maternity focus and to promote community-centred and outreach ANC and PNC services	Involve communities and particularly pregnant women in the governance and management of maternity services Empower women: (a) with knowledge and information on maternal health and (b) to claim their reproductive rights Provide culturally appropriate IEC Develop innovative approaches of exchanging knowledge and information from communities Involve men in maternal health activities

6. THE WAY FORWARD

6.1 Developing a combined approach intervention model

From the health policymaker perspective Addai (MMCM, 2008) recommended a combined approach intervention model that simultaneously focused on:

1. Investment in overcoming identified bottlenecks
2. Being innovative with what already exists through reallocation of staff and resources, efficiency gains and development of new and creative service delivery methods
3. Commitment to sustained resource mobilization

This constituted a useful and coherent model to structure future policy oriented activities aimed at attaining MDG5.

6.1.1 The importance of documenting and learning from Best Practices

Healthcare providers presented a range of best practices that offered the innovative insights emphasised by Addai. Deganus, for instance argued that 'simple and low cost interventions such as reorganization of services, respect for and inclusion of some maternal health enhancing socio-cultural practices in pregnancy care services can lead to improved QOC and ultimately to improved utilization of services with resulting gains towards achieving the MDG 5'.

A key neglected theme during the meeting was the role of communities in strengthening maternal health. With the exception of Deganus and Adomako who presented community-level data, there appeared to be a blanket dismissal of community resources (the poor traditional practices theory was emphasised by presenters and during the Q&A sessions). However the best practices examples suggested great scope for drawing on community resources to address some of the key challenges. Indeed Both Deganus and Adomako emphasised the importance of (maternal) health enhancing community traditions and of broader community resources. Secondly limited literature suggested that indigenous community practices existed that enhanced maternal health and reduced maternal morbidity and mortality.

Two key challenges lie in drawing on existing best practices. The first challenge will be to cost the existing institution-based and health expert driven best practices to facilitate replication and adaption in other regions and districts. The second challenge will be to document indigenous best practices as the least resource intensive mode of improving maternal healthcare.

7. AGENDA FOR ACTION

We recommend the following Stages of Action, beginning with the least resource-intensive actions:

- Document and cost best practices
- Replicate best practices as appropriate;
- Invest in CHPS/CHEW systems;
- Forge partnerships (PPP, but also between Health Systems and Communities);
- Train skilled birth attendants (especially nurses/midwives);
- Secure funding to strengthen broader health systems.

7.1 Coordinating mechanism

The overall coordination of activities will be carried out by the Ministerial Task Team, which was inaugurated by the Honourable Minister Courage Quarshigah. The GHS which is responsible for and has oversight of regional activities already has a "Safe Motherhood Task Force". The Safe Motherhood Task Force will link up with the Task Team as a technical team as well as have oversight responsibilities at the regional and district level.

The terms of reference of the task team are:

1. Advocate for continuing national commitment to reduction of maternal mortality
2. Mobilize additional resources for maternity care
3. Identify areas of technical support to strengthen implementation
4. Define milestones for implementers

5. Monitor Progress being made and provide advice on policy, strategy, program and investments for the reduction of maternal mortality
6. Report on progress being made every 6 months

The Ministry of Health will be responsible for the following actions:

- Policy review on service reorganisation
    - CHPS as maternity centres
- Policy review on HR
    - Incentive System
    - Use of extension workers
- Planning, budgeting guidelines to incorporate MDG5 Activities
- Resource mobilization and guidelines for efficiency gains
- Monitor and tracking systems
- National level IEC

At the regional level, activities will include

- Support regional problem solution
- Lead in regional solutions
- Support service reorganisation and quality
- Support redistribution of staff
- Support in service training
- Support operational research
- Support monitoring and lead in supervision
- Regional level IEC

Each region will use the existing HIRD team to review their plans especially the National Reproductive Health Strategic Plan and their existing regional plans (HIRD and other) to prioritize needs and develop strategic plans for addressing MDG5 issues as outlined in their POW in the context of their own MTEF plans. These plans should be realistic and feasible, addressing changes that are achievable within current or moderately increased resource levels.

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8. ANNEXES

Annex 8.1. List of Speakers, Institutional Affiliation and Title of Presentations

	Presenter	Institutional Affiliation	Title of Presentation	Reference in main Text *MMCM: Maternal Mortality Consultative Metting
1	Prof Wendy Graham	Immpact, University of Aberdeen, UK	Achieving MDG 5: A Global Perspective	Graham, MMCM*, 2008
2	Dr. Patrick Kuma-Aboagye	National Reproductive Health Coordinator Ghana Health Service	Status of MDG 5 - evidence from the field	Kuma-Aboagye. MMCM, 2008
3	Monir Islam and Sachiyo Yoshida	Department of Making Pregnancy Safer, WHO, Geneva	Secondary analysis of Ghana Demographic and Health Survey: 1988, 1994, 1999, 2003.	Islam and Yoshida, MMCM, 2008
4	Dr Cynthia Bannerman	GHS, Institutional Care Division and Quality Assurance Department	Continuum of care from household to health facility	Bannerman, MMCM, 2008
5	Mr Joe Adomako	DDHS, Amansie West District	Continuum of care of pregnant women: from home to health facility.The Amansie West Experience	Adomako, MMCM, 2008
6	Dr. K. A. Kwarko Jnr	Society of Private Medical and Dental Practitioners	Public Private Partnership	Kwarko, MMCM, 2008
7	Dr Sylvia Deganus	Tema General Hospital.	Achieving MDG 5: improving quality of maternity care	Deganus, MMCM, 2008
8	Dr E. Appiah-Denkyira	Director for Human Resources, MOH	Enabling environment for achieving MDG5: Capacity building	Appiah-Denkyira, MMCM
9	Dr Edward Addai	Director PPME, MOH	Maternal Health: Can we Afford It?	Addai, MMCM, 2008

Annex 8.2. Distribution of GHS health professionals, 2003

PROFESSION	TOTAL	HQ	GAR	VR	ER	CR*	WR	AR	BAR	NR*	UER*	UWR*
Anaesthetist Assistant	**73**		**5**	**15**	**14**	**4**	**3**	**8**	**8**	**8**	**4**	**4**
%	100%		6.9	20.5	19	5.5	4	11	11	11	5.5	5.5
Auxillary nurses	**4924**	**4**	**1073**	**517**	**969**	**443**	**419**	**357**	**398**	**394**	**210**	**140**
%	100	1.0	21.8	10.5	19.7	8.9	8.5	7.25	8.1	8.0	4.3	2.8
Dentist	**29**	**2**	**8**		**5**	**3**	**4**	**3**	**3**			**1**
%	100	6.9	27.6		17.2	10.3	13.8	10.3	10.3			3.4
Doctor	**664**	**35**	**179**	**55**	**85**	**41**	**58**	**79**	**64**	**28**	**30**	**10**
%	100	5.3	27	8.3	12.8	6.2	8.7	11.9	9.6	4.2	4.5	1.5
Medical Assistant	**442**	**2**	**86**	**34**	**43**	**38**	**42**	**71**	**38**	**42**	**28**	**18**
%	100	0.5	19.5	7.7	9.7	8.6	9.5	16.1	8.6	9.5	6.3	4.1
Pharmacist	**162**	**10**	**26**	**21**	**18**	**10**	**15**	**30**	**12**	**9**	**6**	**5**
%	100	6.2	16	12.9	11.1	10.6	9.3	18.5	7.4	5.6	3.7	3.1
Professional Nurse	**4320**	**28**	**1333**	**305**	**647**	**345**	**353**	**410**	**221**	**287**	**202**	**189**
%	100	0.6	30.9	7.1	14.9	8.0	8.2	9.5	5.1	6.6	4.6	4.4
Regional Populations	**18.4m**		**2.9m**	**1.6m**	**2.1m**	**1.6m**	**1.8m**	**3.2m**	**1.8m**	**1.85m**	**.92m**	**.58m**
%	100		15.8	8.7	11.4	8.7	9.8	17.4	9.8	10.1	5	3.2
Total staff (ALL STAFF)	**26,193**	**544**	**4,835**	**2,999**	**4,130**	**2,382**	**2,322**	**2,832**	**2,199**	**1,851**	**869**	**1,230**
%	100	2	18.5	11.4	15.7	9.1	8.9	10.8	8.4	7.0	3.3	4.7

Nyonator & Dovlo, 2005, p. 230, Table 3.

Notes in source: Teaching Hospital staff not included based in GAR & AR. CHAG staff (total 5969) not included. Data not available for CHAG & KBTH, Private Sector. *Deprived Regions. Source: from GHS-HRD, HRIS 2003

Annex 8.3 ABSTRACT OF PRESENTATIONS

Details can be found on: www.moh-ghana.org

Annex 8.3.1 Achieving MDG 5: A Global Perspective

Professor Wendy J. Graham
Immpact, University of Aberdeen, UK

The presentation gave trends in the efforts to improve maternal health and reduce maternal mortality since the launch of the Safe motherhood program in 1987.Five key messages was presented;

1. It is possible achieve MDG 5 given the examples from countries such as Malaysia, Thailand and Sri Lanka.
2. Interventions to achieve this are well known:
    - **Family Planning,**
    - prevention of complications through **Skilled Care at Delivery**
    - prevention of death by timely management of life-threatening complications by providing **Emergency Obstetric Care**
3. Addressing equity of coverage to quality maternity services both from supply and demand side was emphasized.
4. Measuring maternal mortality is an agent for change. *"A Millennium Development Goal which cannot be monitored cannot be met or missed*."
5. Reducing maternal mortality is a global collective responsibility

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Annex 8.3.2 Status of the MDG 5: Evidence from Ghana

Dr. Patrick Kuma-Aboagye,
National Reproductive Health Coordinator

The paper highlighted the lack of uniform data on the problem in Ghana. I Institutional MM ratio have been used; it increased from 187 to 224 per 100,000 live best with adolescents accounting for 15.5% of the deaths.

ANC coverage has been increasing at the national level though regional variations exist. Supervised delivery has been increasing gradually but still below 50% and low in rural areas. Caesarean section rate has been increasing but limited access to rural women. It was further indicated that PNC coverage is low while the acceptor rate for family planning has been dropping over the last few years. On abortion care, it was said that management of cases has been rising but still not enough.

Challenges facing implementation were stated. Interventions currently going on in the sector were presented.

Annex 8. 3.3 Analysis of DHS data

Monir Islam and Sachiyo Yoshida
Department of Making Pregnancy Safer, WHO, Geneva

This paper discussed the gap between the current projection for 2015 and the target for the MDGs attributable to inequalities within countries. A secondary analysis of DHS data in Ghana made it possible to identify all such inequalities in access and utilization of services. The indicators presented were ANC visits, skilled birth attendants, caesarean section coverage, perinatal mortality, neonatal and post neonatal mortality rates, anaemia in pregnancy, contraceptive use etc, Disparities exit between rural and urban dwellers, poor and rich women, illiterate and educated women and urban poor and urban rich women. The paper concluded with a call for skilled care at every birth, the need for functional health system, the right policy, equipment, supplies, drugs, transport system and effective management and supervision.

Annex 8.3.4 Continuum of Care from Household to Health facility

Dr Cynthia Bannerman

This presentation addressed the nature of care of the pregnant women in a continuum from the home, the community, the health facility and referral between health facilities. At the household and community Level, issues discussed included the decisions and practices that positively or negatively affect maternal and newborn health, the type community based care givers available and the level of participation of stakeholders at the community level. From the household to health facility issues which need important consideration should include distance, transport, and cost of service, time of day and season of the year. Issues at the facility highlighted include, availability of key quality health delivery services including improved skilled care at delivery and surgical services at district hospitals and l investment in equipment, infrastructure, blood banks, logistics, etc (BEOC,EMOC)

The expected linkages between facilities were presented the availability of transport and communication equipment for an efficient referral system, the modalities of referrals from public to public and public to private and the nature of networking among facilities operating in an area.

In conclusion, the following concerns were put forward for consideration to improve on service delivery:

- Community – innovative ways of partnership and providing information and social marketing of skilled birth attendance
- Placing midwives in deprived communities and provision of deprived areas incentives
- Partnership for District Response to MDG 5
- Role of the private sector in midwifery service delivery
- Technical supervision of health workers
- Investment in infrastructure and equipment for maternity care
- Increasing the numbers of midwives, doctors and fair distribution in the meantime short term posting to deprived areas

Annex 8.3.5 Continuum of care of pregnant women:

From home to health facility;

Amansie West District Experience by Joseph Adomako; DDHS-Amansie West District

The purpose of this presentation was to provide evidence of how the adoption of effective but low cost interventions in the district has improved pregnancy care in rural poor communities. The district is rural and has poor infrastructural and communication facilities.

Situational analysis of service indicators prior showed late ANC registration, low average attendance, high drop out rate IPT1-IPT3 (60%), declining antenatal coverage, high staff attrition, high teenage pregnancy (16.3%), late detection of pregnancy related complications, high rate of abortions and still births (5%) high maternal mortality rate and declining contraceptive use.

Interventions put in place included re-organization of the CHPS zones by posting midwives to CHPS Zones, provision of outreach ANC and strengthening of the referral system through the acquisition of community ambulances, strengthening of level B facilities and district hospital through the supply of equipment and improvement in infrastructure. This was aimed at improving on quality of care. Human resource interventions included training of the NYEP's health care assistants to become Community Health Extension Workers '(CHEWs)' with defined job role, further training in community facilitation/mobilization for public health activities -FP, ANC, PNC, EPI. Recommendations put forward included redesigning CHPS to have a maternity focus, making effective use of NYEP as CHEWS, reintroducing of rural incentive allowance with better targeting and more money, equitable distribution of staff, mobilization of resources from non-traditional sources and a commitment to decentralization.

Annex 8.3.6 Public-Private Partnership (PPP)

Dr. K. A. Kwarko Jnr.
Society of Private Medical and Dental Practitioners

This presentation highlighted the need to forge partnership for action, emphasizing the theme for the meeting. Even though the public sector cannot provide nationwide healthcare all by itself, it can help increase the breadth, distribution, sophistication, and quality of private sector providers through public –private partnership(PPP).

The MOH should take the lead and actively promote and monitor it as a part of the ministry's own stated strategy.

The process to forge this partnership were outlined including building a positive attitude to PPP in both sectors through organizational training and including PPP into our health training schools curriculum, making it part of policy and strategy at highest levels of government, private organizations, and in all MDAs, building PPP into performance management, evaluation and reward mechanisms in both public and private organizations, involving the widest section of the private sector and encouraging both public and private organizations to do joint projects together especially some initiated in the private sector.

Recommendations made for achieving MDG 5 through PPP included joint planning of deliveries by skilled care, need to understand what makes each other "tick" and where our motivations & strengths are in improving quality of care and reducing maternal deaths, need to negotiate public-private contracts and perhaps selling some public facilities, or selling shares in some public facilities!!!

Annex 8.3.7 Achieving MDG 5: Improving Quality of Maternity Care

Dr. Sylvia Deganus,
Gynecologist at the Tema General Hospital

Experiences on quality of ANC from Tema, Koforidua and Tamale were presented. Other innovations from Bongo in the Upper West region, Central and Volta regions were presented.

Quality of ANC was improved through the adoption of the Focused Antenatal Care (FANC). in this new system, care is comprehensive and individualized. Continuous care is provided by same provider with emphasis placed on birth preparedness and complication readiness. to the outcome of the innovations include increased ANC coverage, increased use of hospital delivery facilities, decreased still birth rates and enhanced use of postnatal care services. The presentation concluded that

- Poor quality maternity care services is contributing significantly to the slow pace of progress towards achieving the MDG 5
- Working with communities to identify the QOC factors mitigating against use of ANC, delivery and PNC services can help in development of innovative and effective intervention measures
- Changing ANC service delivery style to improve quality of care is possible even with limited resources.
- Improved antenatal care quality can lead to Improved Delivery and Postnatal care.
- Improved quality of delivery care leads to improved utilization of delivery and postnatal care services.
- Winning the commitment of key stakeholders (particularly communities and service providers) is essential for change

Annex 8.3.8 Enabling Environment for Achieving MDG5 by Capacity Building

Dr E. APPIAH-DENKYIRA,
MOH Director of Human Resources

The paper was a presentation on the situational analysis of human resources transport and communication, equipment, and suggestions to address the identified problems. The presenter indicated that the pregnant woman is central in addressing the human resource constraint because when she is adequately informed, she will make the right decisions about her health and therefore take the necessary actions when they become necessary.

On health care providers, it was noted that CHN, midwives, doctors, obstetricians and gynaecologists are woefully inadequate while the distribution of the available numbers is skewed in favour of the urban areas and the teaching hospitals. The situation on midwives was described as serious. Apart from the inadequate numbers, the majority are aged while the midwifery training institutions lack adequate tutors. Several specific recommendations were made to address issues affecting each cadre of health staff. The key conclusions and recommendations made were that:

- Training must be a continuous process and broad base
- Private involvement must be encouraged
- Supervision must be improved
- Staff productivity must be enhanced
- Signing of performance agreement with managers must be instituted.
- Research for action e.g. operational research to improve on performance
- Motivation – centrally and locally managed to attract and retained staff
- Brain Gain- outreach services from Ghanaians overseas, establish equivalence in qualifications, Exchange programme, etc
- Social capital mobilization/shared vision with stakeholders – Politicians, district assembly, traditional rulers, religious leaders, media, other opinion leaders, etc
- Encourage ownership of programs

Annex 8.3.9 Financing Maternal Health:

Can we afford it?
Dr Eddie Addai, Director PPME, MOH

This presentation focused on the financial requirement for the achievement of MDG 5. In the face of financial constraints, it was made clear that there are major systemic bottlenecks which tend to hamper the achievement of MDG 5. Identification of these bottlenecks at all levels of the system and dealing with them effectively is expected to accelerate progress. The Marginal Budgeting for Bottlenecks (MBB) models were used to create scenarios to highlight the additional cost requirement for the achievement of the MDG 5. Unfortunately, an assessment of budget trends in the health sector established a financing gap for the implementation of the proposed interventions. The presentation called for the Identification of bottlenecks in service delivery and their elimination from the system to result in efficiency gains. There is also the urgent need to adopt innovations to address the worsening maternal mortality. It also called for a concerted effort in resource mobilization to fill the widening resource gap if the MDG 5 is to be achieved.

Recommendations were made on creation of fiscal or "funding" space needed to fund MDG 5, Efficiency Gains through reducing waste, innovations in service delivery configuration, good governance and accountability, health industry approach and health in the education curriculum.