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Performance Needs Assessment of Safe Motherhood Regional Resource Teams in Upper East, Upper West and Northern Regions of Ghana

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PRIME II

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A Tribute

This report is dedicated to the memory of
Dr. Alex Muhawenimana, a dear friend and colleague
who worked earnestly to improve the lives
of women and children in his beloved Africa.
He is also one of the authors of this report.

Through his unique style that combined hard work
with splendid humor, Alex taught all
who had the privilege of knowing him
the value of a balanced life.

Table of Contents

Tables and Appendices

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Acronyms

CBA	Community-based Agent
CHN	Community Health Nurse
CHPS	Community-based Health Planning and Services
CYP	Couple Years of Protection
DHMT	District Health Management Team
EmOC	Emergency Obstetric Care
EOC	Essential Obstetric Care
FHD	Family Health Division
FP	Family Planning
HE	Health Education
HEO	Health Education Officers
LSS	Life Saving Skills
MCH	Maternal and Child Health
MOH	Ministry of Health
PAC	Postabortion Care
PIA	Performance Improvement Approach
PNA	Performance Needs Assessment
PNO	Public Nursing Officer
RH	Reproductive Health
RRT	Regional Resource Team
SM	Safe Motherhood
SMO	Safe Motherhood Officer
TBA	Traditional Birth Attendant

Executive Summary

Over the past two years, PRIME has been providing technical assistance to the Ghana Ministry of Health (MOH) to increase the availability of high quality, integrated safe motherhood services in the Ashanti, Brong Ahafo and Eastern regions by strengthening the decentralization of integrated SM training, supervision, and referral capacity. The follow-up evaluation of trained providers and Regional Resource Teams (RRT) indicated that initial training, refresher training, and supportive supervision of providers have contributed to improving the quality of Safe Motherhood (SM) care through the application of acquired skills.

Based on these successful results, the MOH requested PRIME's assistance in scaling up the SM program in three regions in the north of Ghana (Northern, Upper East and Upper West). Their goal is to increase access to quality services by mainly strengthening the capacity of RRTs to conduct quality training and supervision of service providers. To best assist in these efforts, PRIME used the methodology of the Performance Improvement Approach.

After a series of introductory meetings and planning sessions, the MOH and PRIME II reached agreement on this project and the need for conducting a performance needs assessment (PNA). The PNA was carried out in a sample of health facilities within the selected regions to gather data on RRT and SM service providers actual performance and service statistics. MOH stakeholders, with PRIME technical assistance, defined desired RRT and safe motherhood (SM) service providers performance and indicators. Performance gaps resulted from a comparison of the desired performance and actual performance. Performance gaps included deficiencies in carrying out their role for RRT, lack of supervision and feedback, problems with supplies, and lack of training in SM skills and knowledge. MOH decision-makers then determined the root causes for these gaps, and selected the appropriate and most cost-efficient interventions to affect them. Common causes for these gaps are lack of a written job description, motivation system, supervision system for RRTs, transport and supplies, and practice in training, among others. Interventions selected to decrease these gaps are the drafting of job descriptions for RRTs, design of supervisory system, MOH ensures supplies and equipment, and initiation of training needs assessment and refresher training.

Presented in this report are the findings of the PNA, and the identified gaps, causes and interventions.

Introduction

Background

In 1998-1999, PRIME provided assistance to the Ghana Ministry of Health (MOH) to increase the availability of high quality, integrated safe motherhood (SM) services (focusing on life-saving skills and PAC) in the Ashanti, Brong Ahafo and Eastern regions. This was done by strengthening the decentralization of integrated SM training, supervision and referral capacity and capability to the regional level. The follow-up evaluation of trained providers and Regional Resource Teams (RRT) indicated that initial training, refresher training, and supportive supervision of providers have contributed to improving the quality of SM care through the application of acquired skills. Furthermore, PRIME-assisted interventions demonstrated that a model could be used successfully to strengthen the decentralization of clinical training and support to ensure the access to and quality of services at the primary level.

Based on successful results and lessons learned from the interventions carried out in the Ashanti, Brong Ahafo and Eastern regions, PRIME II and the MOH agreed to scale up the safe motherhood program in three regions in the north of Ghana (Northern, Upper East and Upper West). The aim is to increase access to quality services, mainly by strengthening RRT capacity and capability to conduct quality training and supervision of service providers and also by empowering the community to participate in service planning and delivery.

With PRIME II assistance, the MOH will provide RRTs with clinical, training, and supervision skills, as well as create an enabling environment, which allows the RRTs to perform as expected. To this end, the methodology of the Performance Improvement Approach (PIA) was adopted to improve the quality of RRT performance. PRIME II and the MOH have agreed to initiate the process in two selected districts per targeted region. PRIME II will also work with the MOH to scale-up the Community-based Health Planning and Services Project (CHPS) experience in those districts. It is expected that the CHPS project interventions will also contribute to both SM providers and RRTs performance, factor to have in mind upon evaluation of the PI interventions.

After a series of introductory meetings and planning sessions, the MOH and PRIME II reached agreement on this project and the need for conducting a performance needs assessment (PNA). The PNA would provide baseline data on RRT and SM providers performance and the existence of SM services. This information would be used to determine what is needed to establish good RRT performance in terms of clinical training, supportive supervision of providers, and quality, accessible SM services. A team of PRIME II and MOH resource persons conducted this assessment from April to July 2000. Main findings, conclusions and recommendations are described in the following technical report.

Description of Target Regions

The Upper West region consists of five districts with approximately 650,000 inhabitants living mainly in scattered settlements. The majority of the population works in subsistence farming. Agricultural productivity is low so most live below the poverty line. The region has a total of 53 public health centers/clinics and five hospitals with three private hospitals and 10 maternity homes. Additionally, there is an extensive community outreach service. According to the Upper West Region Performance Report for 1998, the region has recorded significant improvement in the coverage of all maternal health services, especially in antenatal and postnatal care. Modern contraceptive prevalence rate was quoted at 23.9%. Seven maternal deaths were recorded at the regional hospital and were mainly due to ruptured uterus from obstructed labor. The region is concentrating on improving the quality of care given to clients and has conducted client satisfaction surveys.

The Upper East Region is comprised of six districts and 39 health sub-districts with a total population of approximately 1,200,000 people or 6% of the country's population. Like the Upper West region, the population is primarily rural. Inhabitants work in agriculture and live in dispersed settlements. The region has a total of 73 health facilities. The public facilities consist of five hospitals, 11 health centers, and 18 clinics. The health status indicators for the Upper East region are comparatively worse than for the other regions of the country. The infant and under-five mortality rates are 80.5 and 155.3 deaths/1,000, respectively. These are significantly higher than national rates at 57 and 108 deaths/1,000, respectively (GDHS, 1998). The 1998 MCH Institutional Annual Report quoted the regional maternal mortality ratio as 430/100,000 live births, which is higher than the country average of 214. Also, research conducted at the Navrongo Research Center illustrates maternal mortality to be as high as 800 maternal deaths/100,000 live births in the Kassena Nankana District. According to the 1999 Annual Report on Reproductive Health for the Upper East Region, there have been improvements in the coverage of antenatal care and supervised deliveries since 1997. Modern contraceptive prevalence rate was 13.6% in the region, a slight improvement over the past three years.

The Northern region consists of 13 districts with a total population of approximately two million people. There are a total of 94 MOH institutions: one regional hospital, five district hospitals, 64 health centers/posts, and 18 MCH centers. According to the MCH/FP Report for 1999, coverage of antenatal and postnatal care has been on an upward trend since 1998, as have supervised deliveries. The region recorded a maternal mortality ratio of 270/100,000 live births, mainly due to eclampsia, hemorrhage, sepsis, and anemia. Modern contraceptive prevalence rate was 12.0%.

Performance Needs Assessment — Purpose and Objectives

The PNA was conducted in Northern, Upper East and Upper West regions during the months of April through July 2000. The purpose of the PNA was to assess the performance needs for scaling up the MOH safe motherhood program, and then

develop interventions to improve the performance of RRTs and service providers in providing quality SM services.

More specifically, the objectives of the PNA were:

1. To define the desired performance of RRTs in providing quality SM training and supportive supervision; define the desired performance of providers in delivering quality SM services;
2. To assess the current performance of RRTs and service providers in SM training, supervision, and service provision;
3. To determine the performance gaps and their root causes for RRTs and service providers;
4. To propose cost effective interventions which address the identified causes and improve performance of the SM program; and
5. To collect baseline data on the availability, quality and use of SM services.

Methodology

Getting Stakeholder Agreement/Pre-planning

In March 2000, the PRIME PI point person and the MOH Reproductive Health (RH) Zonal Coordinator visited Accra and Tamale to conduct work sessions with the MOH Family Health Division (FHD) and the regional health directors of the three northern regions. The purpose was to introduce the PIA, inform them about the PNA, clarify their expectations and their participation in the PNA, and collect preliminary background information on the regions (districts, health facilities, personnel, potential training sites, accommodation facilities, etc.). These sessions provided an opportunity to further describe the PIA and to establish a first contact with PRIME partners in the field.

Definition of RRT and Service Providers Desired Performance

On May 3 – 4, 2000, PRIME worked with the FHD/MOH and the RH Zonal Coordinator to prepare and conduct a two-day workshop in Tamale to get consensus on roles, responsibilities, and needs for selected key players in the safe motherhood program. Participants included the following key representatives from the SM program (see Appendix 1):

- MOH/FHD officials
- Representatives from the three northern regions, including Regional and District Directors of Health Services, Public Nursing Officers (PNO), Safe Motherhood Officers (SMO), Health Education Officers (HEO)
- Navrongo Research Center officials
- Representatives of NGOs and international organizations, including AVSC, Linkages, UNICEF, USAID, and Population Council.

During plenary discussions and group work sessions, participants:

1. Identified key players of the SM program
2. Identified provider needs for accomplishing desired performance (see Appendix 3)
3. Defined desired provider performance for SM service provision (see Appendix 2A)
4. Defined desired RRT performance for supporting SM providers (see Appendix 2)
5. Established indicators for measuring desired performance of RRT's.

Development of Data Collection Instruments

On May 8-12, 2000, PRIME worked with the RH Zonal Coordinator to prepare and conduct a planning workshop in Tamale for developing data collection tools and planning for fieldwork. Workshop participants included the Zonal RH Coordinator, representatives from the three northern regions, and a Population Council consultant (see Appendix 4). Most had participated in the earlier workshop described above.

Using the PI question library[1], participants agreed on key questions to address in the PNA and baseline; finalized the desired performance of RRTs; developed four draft instruments, and pre-tested them with a small sample of RRTs and managers located in and around Tamale. They then agreed on a timetable for fieldwork and data analysis.

Data collection instruments included the following (see Appendix 5):

RRT interview guide: This tool consists of two parts. Part 1 is aimed at collecting data on RRT performance needs across the five performance factors. Part 2 focuses on RRT experience in training and supervision of providers. This instrument was not designed to collect information on RRT's actual performance in safe motherhood[2].

Service provider interview guide: This instrument is aimed at collecting information on provider experience and perception of supervision and feedback received from the RRT and the SM tasks the providers feel they can perform skillfully. This instrument was not designed to collect information on service providers' actual performance in safe motherhood[3].

Manager interview guide: This tool also consists of two parts to collect information about manager awareness and perception of RRT performance needs across the five performance factors and their actual performance.

Facility review checklist: This inventory checklist collects information on availability of SM services, personnel, reference materials, equipment and supplies, and training (for regional hospital only). Data on infection prevention equipment and supplies were also included. Finally, there is a section on service statistics regarding family planning (FP), postabortion (PAC), labor and delivery, emergency obstetric care (EmOC), and health education activities.

Sampling

The PNA was conducted in three selected regions of north Ghana: Northern, Upper East, and Upper West. The PNA targeted all RRT members in these three regions and a random sample of SM service providers and managers at regional, district and sub-district levels (see Appendix 6). Two districts per region were selected according to following criteria:

- Low coverage in selected SM areas
- Existence of a referral hospital
- Presence of RRT member(s)
- Dynamic District Health Management Team (DHMT)
- Exclusive of capital city or presence of other projects

1 PRIME's Reproductive Health Performance Improvement. Source document. Version 2.0. PRIME. 1999.

2 Due to the number of instruments to be managed during this PNA exercise, the assessment team decided that the assessment of the actual performance of RRT and service providers in terms of application of SM knowledge and skills at work site will be limited to a self-assessment for the purpose of estimating their actual performance in a quick and simple way. The observational data on RRT's and providers' skills will be collected separately just before their training.

3 Ibid.

- Geographically accessible

The districts selected for inclusion in this project are presented in Table 1.

Table 1: Districts selected

Region	Districts
Upper East	Bawku West, Builsa
Upper West	Jirapa, Nadawli
Northern	Yendi, Walewale

Data Collection Process

1. Description of Data Collection Teams

A total of 14 MOH representatives from the three regions (Northern, Upper East, and Upper West) comprised the data collection group (see Appendix 7). The data collectors were selected by the MOH during the planning workshop described above. To be selected for the data collection team, they had to be from one of the three regions, serve as a clinical or health education provider, and have experience in data collection. Data collectors were divided into three teams with approximately five members on each team. One team was assigned to the regional hospital, and the other two teams were assigned to a district each. The MOH RH Zonal Coordinator acted as the data collection team leader.

2. Training of Data Collectors

On May 23-27, 2000, PRIME worked with the RH Zonal Coordinator to prepare and conduct a workshop to orient data collectors to the project and to using the PNA/baseline instruments. During the training, data collectors completed the following:

- Discussed the background, purpose, and methodology for the PNA/baseline;
- Reviewed the purpose, principles and techniques of interviewing;
- Applied the principles and techniques of interviewing during role plays and the testing of the instruments;
- Assisted in the finalization of the collection instruments;
- Discussed and agreed on the roles and responsibilities of data collectors, team leader and supervisors in facilitating data collection process; and
- Developed a detailed plan for fieldwork including the teams, dates, sites and target (see Appendix 8).

3. Data Collection Fieldwork

Data on RRT actual performance and needs were collected in the Northern region from May 28 – June 3, 2000; in the Upper West region from June 11 – 17, 2000; and in the Upper East region from June 18 – 24, 2000. In each region, data collectors conducted a planning meeting at the Regional Health Administration to review the sites and targets and finalize the plan for the week. One team conducted interviews

and facility inventories at the regional level while the other two were responsible for visiting one pre-selected district each. At the end of each day, the teams met with their team leader to review the interview questionnaires for completeness and accuracy. At the end of data collection in each region, team leaders met with the data collection supervisor for a wrap-up meeting. Questionnaires were collected during that meeting and sent to Accra's PRIME II Office for data entry. Field notes were prepared and compiled in a separate field reports (see Appendix 9).

In each region, lists of RRT members and health facilities were updated during fieldwork to reflect the situation in the field. In addition, the exact number of managers and SM service providers on site was not previously known. Once in the field, the data collection teams had to interview as many available individuals as they could find.

In the Upper East region, two selected RRTs were not available for the interview. One old RRT and two new RRTs were added to the list and interviewed after discussion with the Regional Health Director. All health facilities in Bawku West and Builsa districts were to be visited. Two MCH centers (Zongoyite and Tanga) in the Bawku West district were deleted from the list because they were yet not open. One MCH center (Pelungu) was added to the list instead.

In the Upper West region, two RRTs were not available for the interview, and one RRT was deleted from the list and replaced by another after discussion with the Regional Health Director. Because of the high number of public and private health facilities in selected districts (Jirapa and Nadwli), only a 50% sample of the health centers was targeted. This resulted in a total of seven health centers in the Jirapa district and five in the Nadawli district selected randomly at the sub-district level. One health center (Nadawli) was assessed as the district hospital. The Fian health center in Nadawli district was deleted from the list because it was not staffed and was replaced by another randomly selected center.

In the Northern region, one RRT was not available for the interview. All health facilities in the Yendi and Walewale districts were selected to be visited. The Yikpabongo health center was deleted from the list because it was closed. The Kpasemkpe health center did not have service providers so only the manager was interviewed.

The results of the data collection process are presented in Table 2.

4. Data Entry, Processing and Analysis

After verification and cleaning, all data were coded and entered using SPSS 9.0. Frequency, mean numbers, and counts were generated. From July 3-7 and October 17 – 21, 2000, PRIME worked with the RH Zonal Coordinator and a small group of data collectors to review and interpret the data collected in the three regions (see Appendix 10). The group set quantitative targets for the desired performance of the RRT; described the current performance of RRTs and service providers; defined the performance gaps; identified and agreed on the root causes of each gap; and proposed interventions to improve or decrease the gap. Main findings/conclusions were

compiled in PI specification documents (see Appendix 11). Participants also agreed on next steps to disseminate the results among key stakeholders.

Table 2: Data collection results by target group and region

Target Group	Target	Done	Level Achieved
	Upper East Region		
RRT	18	16	88.8%
Managers[4]	31	24	77.4%
Service providers[5]	31	31	100%
Facilities	14	13	92.8%
	Upper West Region		
RRT	16	11	87.5%
Managers[4]	27	17	63%
Service providers[5]	27	22	81.5%
Facilities	12	11	91.7%
Target Group	**Target**	**Done**	**Level Achieved**
	Northern Region		
RRT	14	11	78.6%
Managers[4]	37	26	70.2%
Service providers[5]	37	30	81%
Facilities	15	16	106.6%
	Total		
RRT	48	41	85.4%
Managers[4]	95	67	70.5%
Service providers[5]	95	83	87.4%
Facilities	41	40	97.6%

4 At least three managers at regional level, three managers at district level and an average of two managers per sub-district health facility visited.

5 An average of three service providers with at least one trained at regional level, three service providers with at least one trained at district level, and two service providers with at least one trained per sub-district health facility visited.

Findings and Conclusions

The findings presented below are a compilation of all the regions (Upper East, Upper West, and Northern). For more detailed information regarding findings for a specific region, please refer to the corresponding PI Specification Document for that region provided in Appendix 10.

General Characteristics

Regional Resource Teams

A total of 42 RRTs were interviewed in the three regions combined. Of these, almost two-thirds are newly assigned (referred to as "new") and so have never worked as RRTs before. RRTs are separated into two categories: clinical and health education. A clinical RRT is usually a physician or a midwife. A health education RRT can be a public health educator, public health nurse or a disease control officer. The majority (62%) consists of clinical RRTs with a third comprised of health education RRTs. The clinical RRTs are in large part located at the regional and district levels while health education RRTs tend to be based at the sub-district and district levels.

Safe Motherhood Service Providers

A total of 83 midwives providing SM services were interviewed in the three regions combined. Facility review revealed that physicians, midwives and community health nurses are concentrated at regional and district hospitals while health centers tend to be staffed by community health nurses, TBAs, and other community-based agents.

Desired Performance

Regional Resource Teams

Table 3 below describes the desired performance indicators for RRTs as defined by decision makers and stakeholders from the FHD/MOH, Regional and District Directors of Health Services, Public Nursing Officers, SM Officers, Health Education Officers, and CA representatives. The performance is divided into such components as supervision, evaluation and feedback, environmental support, and training.

Safe Motherhood Service Providers

Service providers at each level are expected to provide a full range of safe motherhood services, including safe delivery, antenatal and postnatal care, postabortion care and family planning. Safe motherhood program expectations for each component are provided in Table 4 below.

Table 3: Desired performance indicators for RRTs by job component

Job Component	Desired Performance
Take Part in RRT Role	100% of designated RRTs actually performing RRT role
Supervise Providers	80% of providers receive supervision visits from RRTs. (Goal for program end. Interim goals will be set once all baseline data have been reviewed.) 60% of providers rate themselves "very satisfied" with supervisory visits from RRTs.
Evaluate Provider Performance and Give Feedback	80% of providers receive feedback on their performance from RRTs. 80% of providers are told their job expectations by the RRTs
Ensure Availability of Supplies and Materials	Information about materials availability appears in supervisory report reports 100% of the time.
Train Providers	100% of RRTs have conducted SM training. 80% of RRTs know (i.e., area able to mention) all the components of good training 100% of RRTs know (i.e., are able to mention) all the components of a good lesson plan Clinical RRTs able to train in 3/5 Safe Motherhood components Health Education RRTs able to train in 3/5 Safe Motherhood Health Education components 80% of providers have attended a SM clinical training session 90% of providers have attended a SM Health Education training session Providers can perform 80% of selected safe motherhood tasks. 100% of training and supervisory reports contain all necessary components 100% of Training and supervisory reports contain all necessary components

Table 4: Desired performance indicators for SM service providers by component

SM Component	SM Program outputs (expectations)
Safe delivery	• Proper management of the four stages of labor • Early identification, proper management/treatment and/or referral of complications
Ante natal care	• Promote and maintain the physical, social and mental health of mother and baby by providing education on nutrition, FP, immunization, etc. • Detect and treat high risk conditions • Ensure delivery of a full term healthy mother and baby with minimal stress or injury to mother and baby • Help prepare the mother to breastfeed successfully and experience normal puerperium
Postnatal care	• Maintain physical and psychological well being of mother and baby • Perform comprehensive screening for detection, treatment and/or referral of complications of both mother and baby • Provide health education on nutrition, FP, breastfeeding and immunization of baby • Provide FP services
Postabortion care	• Promote FP to contribute to prevention of unwanted pregnancy • Create awareness of the dangers of unsafe abortion • Manage abortion complications
Family planning	• Provide information to individuals and couples to enable them to decide freely and responsibly the number and spacing of their children • Provide affordable contraceptive services and make available a full range of safe and effective methods • Provide information on child bearing • Assist couples when they decide to have a baby

Actual Performance, Gaps and Factors Associated

Actual performance

Review of findings on actual performance for RRT's and service providers performance in each region showed that there are no major differences in the performance of RRT's and service providers between the regions. Analysis of actual performance and comparison of desired performance and actual performance permitted to define RRTs' and service providers' performance gaps as shown in Table 5 below (see Appendix 11 for a more detailed description by region).

Table 5: Analysis of actual performance vs. desired performance and resulting performance gaps for RRTs and service providers

RRT Performance

Desired Performance	Actual Performance	Performance Gaps
Take Part in RRT Role		
1. 100% of designated RRTs actually performing RRT role	1. 35.7% of designated RRTs actually perform RRT role	64.3%
Supervise Providers		
2. 80% of providers receive supervision visits from RRTs. (Goal for program end. Interim goals will be set once all baseline data have been reviewed)	2. 39.8% of providers ever received supervisory visit from RRTs	60.2%
3. 60% of providers rate themselves "very satisfied" with supervisory visits from RRTs.	3. 7.7% of providers rated themselves "very satisfied" with last RRT supervisory visit	92.3%
Evaluate Provider Performance and Give Feedback		
4. 80% of providers receive feedback on their performance from RRTs	4. 84.6% of providers received feedback on their performance	15.4%
5. 80% of providers are told their job expectations by the RRTs	5. 30.8% of providers were told their job expectations by the RRTs	69.2%
Ensure Availability of Supplies and Materials		
6. Information about materials availability appears in supervisory report reports 100% of time	6. Data currently unavailable	
Train Providers		
7. 100% of RRTs have conducted SM training	7. 69% of RRTs have experience in training (17.2% of them have conducted one SM training, 27.6% have conducted two SM trainings and 34.5% have conducted three SM trainings)	31%
8. 80% of RRTs know (i.e., mention) all the components of good training	8. 0% could mention all the components of good training	100%
9. 100% of RRTs know (i.e., mention) all the components of a good lesson plan	9. 0% could mention all the components of a good lesson plan	100%

Desired Performance	Actual Performance	Performance Gaps
10. Clinical RRTs able to train in 3/5 Safe Motherhood components	10. 42.3% of clinical RRT state they can train 3/4 SM areas	57.7%
11. Health Education RRTs able to train in 3/5 Safe Motherhood Health Education components	11. 50.1% of health education state they can train 3/5 SM areas	49.9%
12. 80% of providers have attended a SM clinical training session	12. 22.9% of providers have attended a SM clinical training session after 1997	77.1%
13. 90% of providers have attended a SM Health Education training session	13. No data available	86.7%
14. Providers can perform 80% of selected safe motherhood tasks	14. 13.3% of providers state they can perform 80% of selected safe motherhood tasks	100%
15. 100% of training and supervisory plans contain all necessary components	15. 16.7% of RRT said they had a training plan and 23.8% said they had a supervisory plan. Only one RRT could show his training plan a four could produce their supervisory plan. None of the plans shown contained all necessary components.	100%
16. 100% of training and supervisory reports contain all necessary components	16. 33.3% of RRTs said they had a training report. Only four RRT could produce a training report. It contained only half of the necessary components. 23.8% of RRTs said they had a supervisory report. Three respondents could produce a supervisory report, which did not contain all necessary components	

Provider Performance

Desired Performance	Actual Performance	Performance Gaps
21. 60% of health facilities provide MVA services	There is no evidence of MVA services recorded. (PAC services are provided in 6.1% of health centers, 60% of district hospitals and 100% of regional hospitals)	60% for MVA services
22. All health facilities should conduct at least 200 (80%) health talks on SM per year	Health facilities visited recorded less than 200 health education activities each (health talks, durbar, demonstration or videoshow) for the last 12 months. On average, health centers conducted 33 health education activities on SM, district hospital conducted 20 health education activities and regional hospitals conducted 11 health education activities. In addition, only 46.3% of all facilities had health education protocols available.	80%
23. All health facilities should provide a full range of FP services (condoms/ spermicides, pills, injectables, IUD, Norplant® Implants, vasectomy, tubal ligation)	53.7% of all health facilities only provide condoms/spermicides, pills and injectables. All regional hospitals and 40% of district hospitals provide only 75% of the range of FP services expected. Health centers provide 64% of the range of FP services6. Regional and district hospitals are not providing vasectomy services. Some regional and district hospitals are not providing IUD, Norplant® Implants and tubal ligation. Only one health center is providing Norplant® Implants and few (39.4%) provide IUD services.	100% for regional hospitals 60% for district hospitals 36% for health centers
24. 80% of SM providers should be able to perform 80% of all SM tasks	Only 34.8% of SM providers said they were able to perform more than 15 (80%) out of the 18 SM tasks addressed. On average, providers said they were able to perform 12 tasks.	65.2%

6 According to Ghana RH Policy and Standards, health centers should provide condoms/spermicides, pills, implants, injectables and IUD. District and regional hospitals should provide the same modern FP methods than the health centers plus voluntary surgical contraception.

Desired Performance	Actual Performance	Performance Gaps
25. 80% of SM providers should be able to manage obstetric complications	80.7% of service providers interviewed said they could perform antenatal risk assessment)	19.3%
	42.2% of service providers said they could remove the placenta manually	57.8%
	19.3% of service providers said they could perform vacuum extraction	80.7%
	72.3% of service providers said they could manage postpartum hemorrhage	27.7%

Factors associated

The analysis of root causes of performance gaps revealed several areas limiting RRT and service providers performance. The areas are summarized below by performance factors (see Appendix 11 for a more detailed description by region).

- **Information**

  Job Expectations

  Findings: As stated above, the majority of RRTs (64.3%) interviewed are new to their position. However, 77.8% of them said they had previously heard about the existence of safe motherhood RRTs with the Upper East being more familiar with them. Additionally, new RRTs (72.7%) tend to know the responsibilities of the RRT job. Most consider their function to be largely training while the Upper East (36.4%) and Upper West (50%) also mentioned supervision as a RRT function. Although the large majority (81.8%) does not know how RRTs are selected, the Upper East tends to be better informed.

  SM Managers in general have heard about RRTs, but only more than half are familiar with their functions. Those in the Northern region tend to be better aware of what RRTs do. Managers also replied that the RRT function is to train while very few mentioned supervision and monitoring as an added responsibility.

  The RRTs do not tend to have written job descriptions. This is confirmed by 80% of the respondents. On the whole, managers either confirm this that is true or state that they do not know. Of those RRTs who have already performed RRT functions (referred to as “old”), approximately all (93.3%) said they know what is expected of them. However, only 46.6% were able to describe their job and tasks. Training was the most often mentioned function, with some in Upper East (40%) also mentioning supervision and monitoring. A majority of managers also believe that RRTs know what is expected of them, although managers are less sure of this in the Northern region. Managers say RRTs are made aware of their functions during their initial training.

  Most of the old RRTs (81.3%) claimed to have an action plan for their job but only one was able to produce it when asked, and it did not contain goals, objectives or expected results. The majority are either not using the action plan (30.4%) or have used it just once (23.1%). The others use the plan to organize training (46.2%). The action plans were developed in conjunction with the RRTs, trainers, regional directors, and other providers. However, since their development, the action plans have either been updated once (30.8%) or not at all (53.8%).

  For the most part, all service providers interviewed said they know what is expected from them in terms of SM service provision. The majority of providers (73%) stated they are made aware of service expectations during their training, either through in-service training or at the midwifery training school. The rest became aware of expectations through reading, daily practice, supervision visit or by the District Public Health Nurse.

Conclusions: In general, RRTs have unclear job expectations: not all know what is expected of them and of those who claim they do, each has a varying opinion. This can be related to their lack of a written job description and an updated action plan. Additionally, over half of the RRTs are new and so have never been trained in what they are expected to do.

On the other hand, service providers generally know what is expected of them as a result of training or simply learning on the job.

Performance Feedback

Findings: On the whole, RRTs do not receive formal supervision as part of the SM program. Only about a quarter of the old RRTs (26.6%) claimed to have been supervised as a RRT member. Supervision occurred only once for 75% of them and was conducted for more than one year ago for 80% of them. Some RRTs stated that their performance had been evaluated (46.7%), for most of them as part of a rapid assessment conducted in late 1999. In general, they state that supervisors and evaluators do not provide feedback on performance, either written or verbal. Since recommendations for improvement are seldom given, RRTs take no action.

Most managers are not aware of how RRTs are performing. Reasons given were that not all managers are part of the SM program, RRTs do not report to them nor provide them copies of their reports. Those who do know how RRTs are performing have found out through outputs, reports or feedback, and supervisory visits. Of those who are aware, about half inform RRTs about their performance. Managers in the Upper West tend to provide feedback to RRTs more often.

Despite this, 66.7% of RRTs think they are performing as expected. Some RRTs learn how they are performing through monthly/annual reports, observed improvements in services or training participant responses. RRTs said they also receive feedback on their performance through direct comments from providers. In general, providers tend to let their supervisor know their level of satisfaction with how the supervisor is performing. For this reason also, RRTs feel that they are performing as expected.

Of the service providers who received a supervision visit, a large majority (82.3%) stated that the supervisor gave them information on how they were performing. The majority of service providers claimed to be satisfied (64.5%) or very satisfied (12.9%) with the feedback received.

Conclusions: The RRTs are largely unsupervised and do not receive feedback on their performance with recommendations for change or praise for good work. Therefore, they cannot know if they are performing well or not. Additionally, RRTs are not supervising providers. RRTs have not received clear expectations that they are to supervise providers, or may not know what supervision means or how to supervise.

Most service providers who were supervised received feedback on their performance with recommendations for change or praise for good work. However, many providers are not receiving supervision in safe motherhood.

- **Environment**

Findings: When asked which tools, materials, and equipment they currently use to conduct training and supervision activities, RRTs from all regions most often mentioned training materials (93.3%) and clinical equipment (60%). The Upper East region has much lower usage of transport, expenses, and report-writing tools as compared to the other regions. All regions expressed very low usage of supervision materials. These necessary materials and equipment come from varied sources. The Regional Health Administration and the regional directors most often provide the RRT with the necessary tools to conduct supervision and training activities. The central level of the MOH also tends to equip RRTs in the Northern and Upper East regions. RRTs from the Upper East region tend to receive their materials and equipment on time as compared to the other regions. When the necessary materials do not arrive on time, RRTs usually send a reminder or contact the head office (40%) while others improvise (33.3%) or wait until they are available (20%).

The assessment at regional hospitals revealed that equipment and supplies available for SM clinical skills training are lacking (see Appendix 13). Only Tamale hospital has some equipment to conduct such training. None of the three regional hospitals have infant or adult manikins, Zoe model, pregnancy calculator, partograph laminated or MVA kits. Wa hospital has no space for classroom near labor ward or on-call sleep room for students and teacher. Only Bolgatanga regional hospital has a complete set of reference materials such as SM protocols and SM health education guidelines, RH policy and standards and LSS manual.

Not all of the managers who know about RRT functions are aware of the materials, tools, and equipment RRTs need to do their jobs. In general, managers in the Upper West are more aware of these needs. Managers cited transport, clinical equipment, report-writing tools, and training materials as being the most necessary to RRT functioning. No manager mentioned supervision materials and supplies. Managers believe that most of the materials come from the Regional and District Health Administration with the Upper East and Northern Regional Directors providing additional supplies.

Managers are not very aware of the constraints RRTs face with regards to acquiring these materials. However, managers in the Northern region seem to be more aware of the constraints. Among the constraints identified by managers were a lack of fuel, transportation, payment of allowance, and logistics.

The assessment of facilities where service providers are providing SM services revealed a lack of equipment and supplies in terms of both quantity and quality, particularly in Northern region (see Appendix 13). For example, there is a lack of

reagents (urine and haemoglobin), FP devices (spermicides, Norplant® Implants and IUD kits), PAC equipment (charts, MVA apparatus), labour ward equipment, supplies and records. Infection prevention equipment and supplies are also lacking. In Northern region, 67,15% of labor and delivery units, 66,19% of FP units, 80,79% of prenatal units and 82,85 of postnatal units visited do not have all equipment and supplies required for performing quality infection prevention. In Upper East and Upper West regions, this equipment is generally shared between units. In addition, reference materials are not available at all health facilities with the Northern region having the least supply. Regional and district hospitals tend to have more reference materials as compared to other health centers. SM protocols and health education protocols are available at approximately half the facilities in the Upper West and Upper East regions. Service providers in the majority of facilities in the Northern region, on the other hand, could not illustrate a copy of the protocols and very few other reference materials. Other reference materials used by service providers to a lesser extent in the three regions include the EPI flip chart, "Essentials of Contraceptive Technology," RH standards and protocols, FP posters, and the TBA training manual, among others.

Conclusions: There are differing tools, materials and equipment needs and uses among the RRTs. The RRTs may not have access to all the resources necessary to do their RRT job. Likewise, central, regional, and district levels are providing varying degrees of materials, transport, and equipment which can lead to a gap if information about materials availability for each RRT is not provided for each level of support.

Likewise, SM service providers do not have access to all the resources needed to perform their functions.

- **Incentives and Motivation**

Findings: According to RRT's, verbal acknowledgement is the only recognition that they receive for work well done. However, one third say they would be motivated to perform RRT functions by such incentives as training, money, and logistics. For the most part, they state there are no consequences for not performing well, although in the Upper West, RRTs may be cautioned by the director.

RRTS are generally unaware of the existence of incentive systems. However, some in the Northern and Upper East regions know of extra training opportunities. In general, managers also do not know of any existing incentive systems, although a few mentioned opportunities for extra training. Most managers do not know how RRTs get recognition for good work, but some mentioned performance feedback. They did make suggestions for RRT incentive systems, such as reorientation, incentives, and promotions.

Likewise for SM service providers, verbal acknowledgement is the only recognition they receive for good performance. This acknowledgement is generally provided by supervisors during supervision visits. Providers

interviewed reported that supervisor feedback included congratulations, polite correction, and expression of satisfaction.

Conclusions: There is no system for motivating RRTs and SM service providers to perform well nor for rewarding or recognizing their efforts. Likewise, there is no system for addressing non-performance.

- **Organizational Support**

Findings: Most old RRTs said they are familiar with the goals of the SM program (93.3%) and express that they understand how their work leads to the achievement of those goals. On the other hand, not all managers feel they are familiar with the goals of the SM program, with managers in the Northern region being the least familiar.

Old RRTs generally have no problem combining their usual work with their RRT activities. If necessary, they either reschedule their daily activities (46.7%) or share them with others (26.7%). When they have problems combining their jobs, they receive help from colleagues at their unit (19.7%) or DHMT members (46.7%). Procedures to leave their regular work vary. Some can inform the regional director and leave while others seek permission from the district director or senior midwife.

In regards to supervision and technical support, not all RRTs (40%) have someone in their region that gives them supervision and technical support. Of those who do, it is mostly provided by the PNO in the Northern and Upper West regions. While in the Upper East, the regional director provides most of the supervision and support. According to the managers, the regional and district directors are responsible for supervising the RRTs.

Most managers believe RRTs get their necessary materials and equipment from the regional level. Many managers express readiness in helping RRTs do their job by cooperating during training and supervision, having the hospital administration provide for their needs, paying their allowance, and providing feedback.

A majority of service providers interviewed (72.3%) stated they have received supervision specifically on SM. In the Upper West and Upper East half of the last supervisory SM visits were made by the District PHN/PNO, while the RRT conducted the majority of SM supervision visits in the Northern region. To a lesser extent, service providers also have received SM visits from supervisors from the central level and GRMA. For the most part, the last supervisory visit received focused on ANC/PNC/FP and health education, with some additional attention to labor and delivery, use of the partograph for managing labor cases, suturing of episiotomy, and infection prevention. The large majority of service providers stated having been satisfied (92.3%)or very satisfied (7.7%) with the last supervisory visit received.

Conclusions: In general, RRTs are familiar with the goals of the SM program and get some support from their organization in conducting their RRT work. On the other hand, managers are less familiar with the SM goals, and as such, may not be providing full support. In terms of supervision, RRTs are not receiving systematic supervision of their RRT work.

Likewise, SM service providers are generally not receiving support in terms of systematic supervision for their SM work.

- **Skills and Knowledge**

Findings: Less than half of RRTs (45.2%) state they have been trained in SM clinical skills, with most training having been conducted in 1996-1997 (58.8%). As stated earlier, many of the RRTs are new and have not yet received their training. More RRTs seem to have been trained in the Upper East (52.6%) than in any other region. RRTs unanimously expressed using their skills and knowledge to enhance their performance in various ways with most using them on the ward, during training and outreach activities, and in their everyday work.

Most RRTs (64.3%) said they have not received training in teaching SM clinical skills or SM Health Education skills either. Those who have were trained mostly in 1996-1997 (80%). A majority of RRTs (69%) have experience in training, although very few (20.7%) have conducted more than two training sessions and few (46.7%) have conducted SM clinical skills training at a clinical training site. RRTs from the Northern region have the most experience in training.

RRTs are expected to have knowledge and skills in 21 areas, both clinical and educational, as part of the SM program. Most RRTs believe they can perform skillfully in a majority of the SM clinical and educational components. However, there are some areas in which RRTs feel they are less skillful. These include:

- Heimlich maneuver (78.6%)
- Managing abortion complications (76.2%)
- Manuel removal of placenta (42.9%)
- Preparing and conducting a lesson plan (40.5%)

RRTs in the Northern region seem to have more difficulty plotting and interpreting partographs, suturing episiotomy, and managing SM information than do the other regions. Likewise, the Upper East region tends to feel less skillful in teaching clinical and health education skills. According to RRTs, the best ways for them to acquire these necessary skills and knowledge are through classroom training and on-the-job training. RRTs in the Northern region also recommend distance learning while those in the Upper West suggest self-study.

Few RRTs (35.7%) have performed SM supervisory functions. RRTs in the Northern region tend to be more active in their supervisory job. Of those who have performed this task, more than half has worked as a supervisor for over four years, and 55.5% have conducted more than three visits during the past six months.

Most managers do not know how the RRTs are performing yet almost all believe the RRTs have the adequate skills and knowledge to do their job. However, managers do feel that RRTs may need improvement in managing abortion complications, reading and interpreting partographs, and in FP counseling. Managers in the Northern region tended to think that RRTs in that region need improvement in most of the clinical skills areas.

SM service providers are expected to be able to skillfully perform approximately 18 tasks related to safe motherhood. Few providers (30.3%) stated they are capable of performing from 10 to 14 of the tasks. 34.8% of providers expressed being able to perform more than 14 tasks. Providers cited being least skillful in the following tasks: management of abortion complications, manual removal of placenta, vacuum extraction, and Heimlich Maneuver. In addition, providers in the Northern region do not feel skillful in using coaching methodology and managing SM information. It should be noted that a small minority of the service providers interviewed (22.9%) have attended a safe motherhood training after 1997.

Conclusions: Many of the RRTs are new and have not received training in SM skills and content areas. Of those who have been trained, all have found the skills and knowledge they acquired to be useful in performing their RRT functions. However, many RRTs have not been able to put their skills in practice since few have conducted training or supervision. As a result, there are some content areas in which RRTs feel less skillful and may need improvements.

Likewise, SM service providers generally feel they do not have all the required skills to perform quality SM services. Specifically, they cite a number of content areas in which they feel less skillful and may need improvements.

Health Facility Baseline Data

As explained in the Methodology section, baseline service statistics data from the health facilities in the Northern, Upper East, and Upper West regions were collected during the PNA period. This provides a basis of information upon which PRIME II can evaluate any effects or outcomes of the prioritized PI interventions. Baseline data includes information on SM services available, number and type of personnel, existence of reference materials, inventory and conditions of equipment, supplies, and medicines, health education activities, in addition to service statistics on FP, PAC, labor and delivery, emergency obstetric care. It is important to note that service data was not available at each of the sites so the data presented will be eschewed for those regions and health centers that have greater availability of service records.

Table 6 presents the number of SM personnel by type of health facility. There are relatively few physicians working in these regions, with the majority naturally present at the regional hospital level. There are no physicians at the health center level in either of the regions. Instead, the bulk of providers consist of midwives with a greater number present in the Northern region. The health centers tend to be staffed

by very primary level providers, such as community health nurses (CHN), traditional birth attendants (TBA), and community-based agents (CBA).

Table 6: Number of SM personnel by type of site

Category of Personnel Facility	Total #	# trained in LSS	# trained in PAC	# trained in FP
Physician				
Regional Hospital	7	2	2	1
District Hospital	8	0	0	0
Health Center	-	-	-	-
Total	**15**	**2**	**2**	**1**
Midwife				
Regional Hospital	98	16	1	8
District Hospital	32	12	5	17
Health Center	39	18	3	30
Total	**169**	**46**	**9**	**55**
Community Health Nurse				
Regional Hospital	8	0	0	0
District Hospital	9	1	1	5
Health Center	46	0	0	16
Total	**63**	**1**	**1**	**21**
Traditional Birth Attendant				
Regional Hospital	0	0	0	0
District Hospital	10	0	0	0
Health Center	129	0	0	5
Total	**139**	**0**	**0**	**5**
Community-Based Agent				
Regional Hospital	0	0	0	0
District Hospital	3	0	0	0
Health Center	58	0	0	0
Total	**61**	**0**	**0**	**0**
Other SM personnel				
Regional Hospital	1	0	0	0
District Hospital	3	0	0	0
Health Center	47	2	2	4
Total	**51**	**2**	**2**	**4**

As Table 6 further illustrates, most of the SM personnel have not received training in SM areas, such as emergency obstetric care using life-saving skills (LSS), PAC, and FP. Midwives tend to have received more training in LSS and FP. Some CHNs at the district hospital and health center levels have also been trained in FP. Surprisingly, very few physicians have received training in these SM components.

According to the data presented in Table 7, regional hospitals offer the whole gamut of SM services. The only service not provided at regional hospitals is vasectomy. District hospitals in each region tend to offer most of the services, but less often offer PAC services. For the most part, health centers can provide for pregnant women by offering antenatal care, delivery, and postnatal care. They, however, are less likely to provide basic or comprehensive EmOC or PAC services. Health centers in the Upper East are an exception to this since most offer all SM services, except PAC.

In regards to specific FP services, no health facility performs vasectomies. District hospitals vary in that not all offer the more clinical FP methods, such as IUD, Norplant® Implants, and tubal ligation. Since health centers are the lowest level of care, understandably fewer provide IUDs with practically none offering the more clinical methods.

Table 7: Percent of facilities offering SM services per region

SM Services	% Regional Hospital (n=3)	% District Hospital (n=5)	% Health Center (n=33)
Antenatal Care	100	100	97
Delivery	100	100	90.9
Basic EmOC	100	80	6.1
Comprehensive EmOC	100	80	3
Postnatal Care	100	100	90.9
PAC	100	60	6.1
Family Planning	100	100	97
−Condoms/Spermicides	100	80	97
−Pills	100	80	97
−Injectables	100	80	100
−IUD	100	60	39.4
−Norplant® Implants	100	60	3
−Vasectomy	0	0	0
−Tubal ligation	100	60	0

All regional hospitals and most district hospitals have reference materials for delivering SM and FP services. The majority of facilities claim to have reference materials while the Northern region reports the fewest materials. When asked to present a copy of the different materials, almost all regional hospitals showed their copies of the SM clinical protocols, SM health education protocols, and the RH policy and standards. Most district hospitals could not present their copies of the RH policy and standards, and not all had their SM health education protocols on hand. For the most part health centers in Upper East and Upper West had copies of the reference materials on hand. The Northern region health centers did not have the materials available. Health centers in Upper East and Upper West, as well as some district hospitals, had additional reference materials on hand, such as the EPI flip chart, FP posters, "Essentials of Contraceptive Technology" book, TBA training manual, and a book on breastfeeding.

Tables 8 illustrates the number of FP users (new and continuing) during a 12-month period between April 1999-March 2000 at selected health facilities. Pills and injectables are by far the most widely requested at all levels. However, the health center level appears to have the most new users of injectables as compared to the other levels. Condoms also tend to be the most widely distributed at the health center level. The more clinical FP methods, such as IUD, Norplant, and tubal ligation, are understandably predominantly present at the regional hospital level. The Upper East

region has the most number of new users of family planning methods, as well as continuous users.

Table 8: Number of FP users (new and continuing) during a 12-month period by type of facility*

Family Planning Services	RH (n=3)	DH (n=5)	HC (n=33)
	N	N	N
Pills	311	135	65
Condoms	27	35	24
IUD	41	21	5
Foaming Tablets	32	7	3
Injectables	982	610	257
Norplant® Implants	39	58	3
Tubal Ligation	12	2	0
Vasectomy	0	0	0
Total	**1,444**	**868**	**357**

* RH: Regional Hospital; DH: District Hospital; HC: Health Center

Postabortion care (PAC) service statistics were also assessed in this baseline evaluation. The data presented in Table 9 demonstrates that the Northern region has the highest incidence of incomplete abortions as compared to the other regions. The majority of incomplete abortions are treated at the regional hospitals, with the exception of Upper East, which treats more cases at the district hospital.

Table 9: Number of PAC clients during a 12-month period by type of facility

Description	RH (n=3)	DH (n=4)	HC (n=2)
	N	N	N
Incomplete abortions	179	40	0
Incomplete abortions referred	–	–	1
Clients receiving MVA	–	–	–
PA clients counseled on FP	46	--	1
PA clients receiving FP method immediately	–	–	–

Table 10 below illustrates the number of complicated obstetric cases presented during a 12-month period at the health facilities in each region. By far, the Northern region receives the most cases of obstetric complications, with the regional hospital attending to the vast majority of them. The main causes for obstetric complications seen in these regions are abortion complications and hemorrhage, followed by prolonged or obstructed labor. The district hospital in the Upper East tends to receive more cases of obstetric complications than does the regional hospital.

Table 10: Number of complicated obstetric cases during a 12-month period, per facility* and region

Description of Obstetric Complications	Northern		Upper East		Upper West		Total	
	RH (n=1)	DH (n=1)	RH (n=1)	DH (n=2)	RH (n=1)	DH (n=1)	RH (n=2)	DH (n=4)
Hemorrhage	144	23	24	75	Data	8	168	106
Prolonged/obstructed labor	17	38	23	44	Not	0	40	82
Postpartum sepsis	33	0	6	16	Avail.	1	39	17
Abortion complications	298	0	0	41		1	298	42
Pre-eclampsia/eclampsia	71	7	12	4		5	83	16
Ectopic pregnancy	46	7	11	2		0	57	9
Ruptured uterus	5	12	0	0		0	5	12
Total	**614**	**87**	**76**	**182**	**N/A**	**15**	**690**	**284**

* RH: Regional Hospital; DH: District Hospital

In relation to this, Table 11 presents the number of institutional maternal deaths reported by their causes over the same 12-month period. It is befitting that the Northern region has the most institutional maternal deaths since it has the highest number of complicated obstetric cases. The majority of maternal deaths are related to complications as a result of hemorrhage, abortion, and postpartum sepsis.

Table 11: Number of institutional maternal deaths and their causes during a 12-month period, per facility* and region

Description of Obstetric Complications	Northern		Upper East		Upper West		Total	
	RH (n=1)	DH (n=1)	RH (n=1)	DH (n=1)	RH (n=1)	DH (n=1)	RH (n=3)	DH (n=3)
Hemorrhage	4	5	5	0	2	0	11	5
Prolonged/obstructed labor	1	1	1	1	2	0	4	2
Postpartum sepsis	4	0	5	0	2	1	11	1
Abortion complications	9	0	2	0	0	1	11	1
Pre-eclampsia/eclampsia	2	2	0	0	0	2	2	4
Ectopic pregnancy	2	0	0	0	0	0	2	0
Ruptured uterus	0	3	0	0	5	1	5	4
Total	**22**	**11**	**13**	**1**	**11**	**5**	**46**	**17**

* RH: Regional Hospital; DH: District Hospital

By taking the corresponding data from Tables 10-11, the case fatality rate for institutional maternal deaths can be calculated. Table 12 illustrates the maternal case fatality rate for two institutions in each region, the regional hospital and a district hospital. Given that the standard case fatality rate is less than 1%, the rates for the three regions are very high. The Bolga Regional Hospital in Upper East and the Yendi District Hospital present with the worst statistics.

Table 12: Maternal case fatality rate during a 12-month period for selected institutions,* per region

Region	Institution	# Complicated obstetric cases	# Institutional maternal deaths	Case Fatality Rate **
Northern	Tamale Regional Hospital	614	22	3.6%
	Yendi District Hospital	87	11	12.6%
Upper East	Bolga Regional Hospital	76	13	17.1%
	Bawku West District Hospital	27	1	3.7%
Upper West	Wa Regional Hospital	0	11	No data available
	Jirapa Lambusie District Hosp.	15	5	3.3%

* Only institutions with information regarding both complicated obstetric cases and maternal deaths were included
** The standard case fatality rate is less than 1%.

Finally, Table 13 presents data on the number of SM health education activities conducted during the same 12-month period. The Upper East and Upper West regions have far surpassed the Northern region in conducting SM health education activities. The majority of these activities are carried out at the health center level. However, the district hospitals in the Upper East region also conduct a considerable number of educational actions.

Table 13: Number of health education activities on safe motherhood during a 12-month period, per facility and region

Description of activity	Northern		Upper East		Upper West		Total		
	RH (n=1)	HC (n=1)	DH (n=2)	HC (n=1)	RH (n=1)	HC (n=2)	RH (n=2)	DH (n=2)	HC (n=4)
Talks	0	27	61	117	19	179	19	61	323
Durbar	0	0	103	100	19	179	19	103	279
Demonstrations	1	0	13	13	0	0	1	13	13
Video shows	0	0	5	4	5	0	5	5	4
Total	**1**	**27**	**182**	**234**	**43**	**358**	**44**	**182**	**619**

Discussion

The PNA provided an excellent tool for gathering rich data on the current performance of RRTs and SM service providers in the Northern, Upper East, and Upper West regions. By considering the five performance factors, the MOH can now determine which specific areas need strengthening in order for performance to improve. After comparing the desired performance, which the MOH itself defined, with current performance, the resulting gaps became more obvious. Determining the root causes for these performance gaps was then up to the MOH since they are most familiar with the environment in which they work. Once having defined the root causes, MOH representatives from these three regions had only to prioritize which interventions would be the most appropriate and cost-efficient to yield the best results. A more detailed presentation of the results of the root cause analysis and intervention selection for each specific region can be found in the PI Specification Documents in Appendix 5. Presented below are a sample of root causes and their corresponding recommendation for interventions. It is important to note that many times, one intervention may affect one or more root causes. This makes an intervention even more efficient since with the same investment, more than one root cause can be diminished.

Regional Resource Teams

Root Cause	Possible Interventions
• No written job description for RRTs • Managers are not aware of the RRT role in supervision of SM providers • Supervision was not part of original functions expected of RRT	⇒ Family Health Division (FHD) with inputs from MOH central and regional levels drafts a job description for RRTs; dissemination of job description to all stakeholders. In this way RRTs will clearly know their responsibilities, as will the SM managers.
• Lack of a formal supervisory system	⇒ FHD designs a supervisory checklist. The supervisory system will include information on how to supervise, who will supervise, how often, use of results, feedback, and report, and logistics. In this way, RRTs will clearly know their responsibilities in supervision. This will also assist the different health levels which provide support materials to anticipate RRT supervisory needs.
• No motivation or incentive system to encourage RRT performance due to inadequate support structure	⇒ Because of the inadequate support structure, RRTs do not know what is expected of them. They do not know how they should perform. By giving them job descriptions, supervisory support, ensuring availability of supplies and materials, and conducting RRT training, RRTs will be motivated to perform as desired.

Root Cause		Possible Interventions
• Inadequate transport, checklist, training materials, funding to conduct training and supervision	⇒	Include preparation, submission, and distribution of Action Plans, supervisory and training reports, and proposals in RRT training. Inform all stakeholders on procedures to access resources. In this way RRTs will be able to access the necessary resources on a timely basis. Also, by having training, supervisory, and action plans, RRTs will have a goal towards which to work. In this way too they can get practice in the skills they are acquiring.
• Training site not fully set up • RRTs do not have enough practice in training and supervision • No update/refresher training provided • RRTs disintegrated	⇒	The Regional Health Director (RHD) and the Hospital Medical Directors will ensure adequate provision of equipment and supplies to fully setup the regional hospital as the official training site. Also, many RRTs have left so the Zonal Coordinator and the RHD will ensure replacement of RRTs when needed. Since many RRTs are new, they will need training in SM skills and the old RRTs need refresher training to update their skills. With their training and action plans, and appropriate logistics, RRTs will have the support to conduct training of providers in SM skills.

Safe Motherhood Service Providers

Root Cause		Possible Interventions
• Inadequate supplies and appropriate equipment and other logistics (management of PAC and obstetric complications • Poor supply and maintenance system for equipment • Lack of reference materials (RH protocols, HE guidelines)	⇒	Provision, maintenance and replacement of standard equipment and supplies at all service delivery points. Provide service providers at all levels with appropriate reference materials and health education tools.
• Inadequate supervision at all levels • Inadequate recording/documentation of MVA and HE activities	⇒	Strengthen supervision at all levels. Strengthen MIS at all levels.
• Lack of training/refresher and updates (FP, SM)	⇒	Train/refresh and regularly update service providers.