



## Improving Maternal Health in the Volta Region of Ghana: Development Action Plan from a Baseline Assessment using 5As Framework

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### Abstract

**Introduction:** KOICA and the Yonsei Global Health Center of Yonsei University finalized a baseline survey for the development of a maternal health program in the Volta Region of Ghana. Community, Health facility and health care provider surveys were conducted in the Region (Keta Municipality, Ketu North and South District) to evaluate the accessibility of essential reproductive health care, especially maternity services. Access to quality maternal health care is essential to reduce maternal mortality.

**Objective:** To assess the strength and weakness of maternal health service and develop an action plan according to the problems to strengthen maternal health and reduce maternal mortality ratio in the Volta Region

**Method:** Access to maternal health service had been categorized into five dimensions: availability, accessibility, affordability, accommodation and acceptability. 5As framework was used to assess the strength and weakness to the improvement of the maternal health.

**Results:** Bested on the result it was found that, many obstacles to achieving every "A", excluding acceptability and problems include; insufficient health personnel, inadequate knowledge in health service provider and inadequate instruments in health facilities.

**Conclusion:** Based on the survey, training of service providers, regular supply of essential medicine and equipment and strengthening basic unit of the health service are recommended to improve access to maternal health care in the Volta Region, Ghana.

**Keywords:** Maternal health; Access to maternal health care; Ghana; KOICA

### Background

The West African country of Ghana has a population of 24,658,823 according to the Population and Housing Census (PHC) report of 2010. The country has ten administrative regions and 170 districts. Ghana has one of the highest gross domestic products (GDP) per capita in West Africa and is ranked as a Lower-Middle Income Economy by the World Bank. The country has a diverse and rich resource base, with foreign trade in gold, cocoa, timber, diamond, bauxite, and manganese.

Globally, maternal death has dropped 45% between 1990 and 2013 [1]. While considerable progress has been achieved in almost all regions, many countries, particularly Sub-Saharan Africa, have fallen short of Millennium Development Goal 5, i.e., improve maternal health. In fact, among all Millennium Development Goals (MDGs), the least progress has been made in maternal health [2,3]. The maternal mortality rate in Ghana was 350 per 100,000 live births in 2012.

The Korea International Cooperation Agency (KOICA) is the governmental organization for Official Development Assistance (ODA) charged with enhancing the effectiveness of the Republic of Korea's grant aid for developing countries by implementing development program and coordinating aid. At the request of the government of Ghana, a Maternal and Child Health (MCH) project was conducted in Ghana in collaboration with KOICA and Yonsei University; Yonsei Global Health Center did a baseline survey of the Volta region [4]. One goal of the baseline survey was to evaluate community health.

The 5As of Access framework was used to identify problems related to maternal health care in the Volta region, using the categories of availability, accessibility, affordability, accommodation and

acceptability [5,6]. Access is the opportunity to identify health care needs, to seek health care service to reach or use the service to fulfil the need of the health service [7]. The more accessible a system is, the more people utilize health service to improve their health [8]. The access can be measured by developing indicator, both objective and subjective indicator. Objective indicators are the observable facts and figure like the availability of the service in the health facilities, a number of health care provider, service cost, etc. and subjective indicators are normally derived from people's perception and satisfaction level [9].

The objective of this study was to assess the strength and weakness of maternal health service and develop an action plan according to the problems to strengthen maternal health and reduce Maternal Mortality Ratio (MMR) in the Volta Region.

### Methodology

This study applied two methodologies. The first one was baseline survey and the baseline survey had 3 line surveys (community, facility

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and provider survey). The second method was 5As (availability, accessibility, affordability, accommodation and acceptability) framework as shown in Table 1.

### Baseline survey

The study design was a cross sectional descriptive survey. The survey was conducted at the level of the community, facility and health care provider in Keta Municipality, Keta North and South District in the Volta Region.

### Community survey

A structured questionnaire was administered to the women of the reproductive age (WRA) 15-49 years who were pregnant or had children under 5 years old in order to ascertain knowledge, attitudes and opinions about maternal, neonatal and child health services in the community. The information on demographic characteristics, economic status, knowledge, attitude and practice (KAP) about nutrition, health and illness, maternal, neonatal and child health service delivery, environmental health conditions and perceived health care needs was gathered.

#### Selection of communities and households

The EPI “30 x 7” cluster sampling was method developed by the World Health Organization (WHO) with the aim of calculating the prevalence of immunized children was used to select communities for the survey. The design was adopted for other purposes such as rapid needs assessment with no modification. This sampling method is thought to be sufficient for most sampling of community health factors. The clusters were selected at the district using enumeration areas (EAs) developed for use by the Ghana Statistical Service in the 2010 Population and Housing Census. An EA is defined as a community cluster in an urban area and a village, and part of a village or a group of

villages in the rural areas; each EA has approximately 200 households.

A sampling of “30 × 7” means that 30 EAs were randomly selected from a list of all the EAs in the district, and 7 households per EA were selected. EAs were selected in stage one through a method known as probability proportional to population size.

The sample size ( $n=30 \times 7$ ) per each district was 210 households. Since three districts were included, the total sample size [ $N=3 (30 \times 7)$ ] was 610 households/respondents.

Enumeration Areas (EAs) for each of the districts were listed by Ghana Statistical Services. The EAs within Ketu North, Ketu South and Keta Municipal were stratified into Rural and Urban EAs. Within each stratum, a Simple Random Sampling based on the Probability Proportional to Size was used to select the required number of both Rural and Urban EAs in the selected districts. Rural EAs made up 0% of the total, with the remaining 40% consisting of urban EAs. The total number of Enumeration Areas for the 2010 Population and Housing Census was used. All EAs were given an equal chance to be selected (Table 2).

The following attributes were used:

$N=N_1+N_2$ =Total number of Urban or Rural EAs within Ketu South, Ketu North and Keta Municipal

$n=n_1+n_2$ =required number of Rural or Urban EAs within the selected district

SI=Sample Interval (i.e.,  $N/n$ )

rn=Random Number Generated

$(SI*rn=k)$ =Random Start (The first EA to be selected),  $(K+SI)$ =the next EA to be selected

| 5 A's of Access category | Definition of the 5 A's of access  | Items for the assessment of the access   |
|--------------------------|--|--|
| Availability             | The relationship of the volume and type of existing services (and resources) to the clients' volume and types of needs. It refers to the adequacy of the supply of physicians, dentists and other providers; of facilities such as clinics and hospitals; and specialized programs and services such as mental health and emergency care.  | The total number of services in which user makes a choice and availability of the service providers and equipment. |
| Accessibility            | The relationship between the location of supply and the location of clients, taking account of client transportation resources and travel time, distance and cost.   | Travel time or distance between location of user and service (nearest health facilities).                          |
| Affordability            | The relationship of prices of services and providers' insurance or deposit requirements to the clients' income, ability to pay and existing health insurance. The clients' perception of worth relative to total cost is a concern here, as is their knowledge of prices, total cost and possible credit arrangements.   | The direct cost (doctor's fee) and indirect cost (travel and medication cost).                                     |
| Accommodation            | The relationship between the manner in which the supply resources are organized to accept clients (including appointment systems, hours of operation, walk-in facilities, telephone services) and the clients' ability to accommodate to these factors and their perception of their appropriateness.  | Quality of service provided and personal treatment by the provider.  |
| Acceptability            | The relationship of clients' attitudes about personal and practice characteristics of providers to the actual characteristics of existing providers, as well as to provider attitudes about acceptable personal characteristics of clients. In the literature, the term appears to be used most often to refer to the specific consumer reaction to such provider attributes as age, sex, ethnicity, type of facility, neighborhood of the facility, or religious affiliation of the facility or provider. In turn, providers have attitudes about the preferred attributes of clients or their financing mechanisms. Providers either may be unwilling to serve certain types of clients (e.g. Welfare patients) or, through accommodation, may make themselves more or less available. | Belief and expectation of different groups of people/ cultural and religious factor.                               |

Source: Penchansky R, Thomas JW, 1981. The concept of access, definition and relationship to consumer satisfaction. Medical Care, 19 (2): 127–140.

Table 1: 5 A's framework.

| Region (Volta) | Total EAs (N) | Urban EAs (N <sub>1</sub> ) | Rural EAs (N <sub>2</sub> ) | Total EAs Sampled (n) | Urban EAs Sampled (n <sub>1</sub> ) | Rural EAs Sampled (n <sub>2</sub> ) |
|----------------|---------------|-----------------------------|-----------------------------|-----------------------|-------------------------------------|-------------------------------------|
| Ketu North     | 175           | 57                          | 118                         | 30                    | 10                                  | 20                                  |
| Ketu South     | 230           | 80                          | 150                         | 30                    | 12                                  | 18                                  |
| Keta Municipal | 219           | 101                         | 118                         | 30                    | 14                                  | 16                                  |
| Volta          | 3,609         | 1,068                       | 2,541                       |                       |                                     |                                     |

Table 2: Total number of enumeration areas for selected districts.

Enumeration Area maps for each of the selected EAs generated by Ghana Statistical Services were used to identify each EA's demarcation. With the selected EAs, a modified random walk method was used to select the households in the study.

To avoid redundancy, improve sample distribution and reduce design defects, the sample was restricted to one eligible respondent per household, in essence making the household the sample unit.

## Data Collection Process

### Data collection instruments

The research team worked in close collaboration with the KOICA team and Ministry of Health (MOH), Policy, planning, monitoring and evaluation to develop the questionnaire to interview community members, as users of Maternal child Health and Nutrition (MCHN) services are interviewed at the community level. The unit of analysis for the study was a client.

### Field work

A total of seven research assistants from the three study districts (Keta Municipality, Ketu North and South districts) was selected, orientated to the project and trained to use the baseline data collection tools. Facilitated by staff from Research and Development Division (RDD) of Ghana Health Service in Keta over five days, the training enabled the trainees to: a) Understand and describe the background, purpose and basic methodological approach of the study; b) Discuss the role of the interviewers in the data collection process; c) Review the purpose, principles and techniques of interviewing; d) Apply interview techniques in pre-testing the questionnaire in the classroom situation through role plays; e) Conduct field pre-tests and assist in finalizing the instruments in preparation for data collection; and f) Develop a detailed plan of data collection.

Three field work teams were formed, one per each district. The teams were made of non-health workers. A supervisor was appointed to each of the three districts. The data collectors met with their supervisors to review the tools for completeness and accuracy in the field. The coordinator closely monitored the initial fieldwork and assist in harmonizing the data collection. At the end of data collection, the coordinator met with the supervisors for a wrap up meeting. Field notes were prepared and compiled in separated field reports. The data collection was done from the 8th to the 17th of April 2013.

### Facility and provider survey

The study design was a cross sectional descriptive survey. Two main data collection techniques were used: in-depth interviews with health providers and a facility inventory using a checklist.

### Facility inventory

Twenty selected health facilities in the three study districts were visited. The facilities included 3 District Hospitals (DH), 9 Health Centers (HC) and 8 Community-based Health Planning (CHPs) zones that were selected in consultation with the regional research coordinator to reflect the diversity of public health facilities in the three districts. The facility inventory retrospectively examined facility health records to collect information on the utilization of maternal, neonatal and child health services.

### Health providers

Respondents were purposefully selected based on the ability

to provide the necessary information. Health providers who were providing maternal and child health care during the time of the visit to the facility and were available to participate were interviewed.

### Data collection process:

Data collection instruments: The research team worked in close collaboration with the KOICA team and MOH PPME to develop three study data collection instruments: 1) Inventory of facilities available and services provided at the service delivery point; 2) Health provider assessment guide; and 3) Community survey questionnaire. The units of analysis for the study were service delivery facilities and providers.

These tools were designed to be used as follows: a) Take an inventory of services, equipment and supplies at selected service delivery sites; b) Obtain service statistics, where available, recorded for the past 12 months; c) Interview MCHN service providers to self-assess their capabilities of providing maternal, newborn and child health services.

### Field work

One research assistant (practicing midwife) from each of the three study districts (Keta Municipality, Ketu North and South districts) was selected, provided orientation of the project and trained to use the data collection tools. The training, facilitated by staff from Research and Development Division (RDD) of Ghana Health Service for over five days, enabled the interviewers to: a) Understand and describe the background, purpose and the basic methodological approach of the study; b) Discuss the role of the interviewers in the data collection process; c) Review the purpose, principles and techniques of interviewing; d) Apply interview techniques in pre-testing the questionnaire in the classroom situation through role plays; e) Conduct field pre-tests and assist in finalizing the instruments in preparation for data collection; and f) Develop a detailed plan of data collection.

A supervisor was appointed to monitor the research assistants. The data collectors met with their supervisor to review the tools for completeness and accuracy in the field. The coordinator closely monitored the initial fieldwork and assisted in harmonizing the data collection. Data collection was done in 25<sup>th</sup> to 30<sup>th</sup> of March, 2013.

### Data processing and analysis

The completed questionnaires were processed at the Resilient Distributed Datasets (RDD) data processing unit using Epi data and analyzed using Stata software.

### Measuring the dimensions of access

Depending on the nature of the developed indicators, each dimension of access to health service was measured and compared using descriptive statistics. Access is defined as the opportunity to reach and obtain appropriate health care service in situations when the need for care is identified [10-13]. Access can be measured subjectively and objectively; measurement of access in terms of the client's satisfaction level is a subjective measure and that concerned with various utilization rates falls under objective measure [14]. In the health system there is a supplier or provider side, demand or receiver side and a process which link the supply and demand. The factor which contains in the process to link the supply and demand side, access can be identified. In this process; the ability to perceive health literacy, health beliefs, trust and expectation, ability to seek, ability to reach, ability to pay and ability to engage are included.

## Results

### Descriptive statistics for availability of service

To reduce maternal mortality, the United Nations (UN) recommends that 100% of women with obstetric complications be treated in Comprehensive Emergency Obstetric Care (EmOC) facilities. However, EmOC was available in 66.67% of hospitals and 22.22% of health centers (HCs). Comprehensive emergency obstetric care can be provided only through hospital level. In the study area, 66.67% hospitals were providing Basic Emergency Obstetric Care (BEmOC). Remaining all services; Ante Natal Care (ANC), delivery service, postnatal care, family planning (FP) and post abortion service were continually provided from the hospitals. All 9 health centers were providing ANC and FP services, 7 centres were providing delivery and postnatal care services, 3 centers were providing post abortion care and 2 centers were providing BEmOC services. CHPs zones are the basic structure of the health service in Ghana. Among the 8 CHPs zones, 4, 2 and all 8 zones were providing ANC, postnatal care and FP services, respectively (Table 3 and 4).

The availability of FP services is an important factor in reducing maternal mortality. Only 66.6% of surveyed hospitals provided FP, and none offered vasectomy service. All (100%) of the health centers provided contraception in the form of condoms, pills and injections. Only 44% of HCs provided long term FP methods. Of the CHPs, 87.5% provided condoms and 100% provided pills and injectable contraceptives. Only 12.5% provided Norplant, a long term FP method.

As expected, the hospitals were better equipped than the HCs and CHPs zones. All twenty facilities had Sphygmomanometers and stethoscopes in the ANC departments. However, on average, only one of each was in good condition and almost two needed replacements. Only two out of the eight CHPs zones had an emergency vaginal examination tray at the antenatal clinic. Equipment for infant resuscitation was lacking, particularly at the HCs and CHPs levels. No CHPs zones had oxygen or suction machines. Even though two CHPs zones had infant weighing scales, all needed to be replaced. Items such as clocks, examination tables, cupboards for storing medications and beds were largely available, but most of them needed replacement. Availability refers to the physical existence of health resources with sufficient capacity to provide service [15]. The survey results suggested that the equipment that is necessary to reduce MMR is insufficient in the Volta region. Overall, inadequate services, insufficient staffs, inadequate equipment and medicines in the surveyed facilities were found.

### Descriptive statistics for Accessibility

Accessibility was measured in terms of travel time or distance between the location of the user and the service (distance from the household to the nearest health facilities). Distance was classified into 4 categories: very far, far, close and very close. Among respondents, 7.1 % ranked their nearest facility is very far away, 33.3% said they are far, 51.6% said they are close and 8% said that they are very close to the nearest facility (Table 5). Accessibility refers to the fact of people facing the problem health need due to geography [16]. Identified problem is the nearest facilities are far from the client location.

| Maternal health services availability  | Hospital<br>n (%) | Health Center<br>n (%) | CHPs<br>n (%) | Total<br>n (%) |
|--|-------------------|------------------------|---------------|----------------|
|  | N=3               | N=9                    | N=8           | N=20           |
| ANC                                    | 3 (100.0)         | 9 (100.0)              | 4 (50.0)      | 16 (80.0)      |
| Delivery                               | 3 (100.0)         | 7 (77.77)              | 0             | 10 (50.0)      |
| Basic emergency obstetric care         | 2 (66.67)         | 2 (22.22)              | 0             | 4 (20.0)       |
| Comprehensive emergency obstetric care | 2 (66.67)         | 0                      | 0             | 2 (10.0)       |
| Post natal care                        | 3 (100.0)         | 7 (77.77)              | 2 (25.0)      | 12 (60.0)      |
| Family planning                        | 3 (100.0)         | 9 (100.0)              | 8 (100.0)     | 20 (100.0)     |
| Post abortion care                     | 3 (100.0)         | 3 (33.34)              | 0             | 6 (30.0)       |

Table 3: Availability of maternal health service by facility.

| Area          | Essential MCH services  | Very well | Well | Moderate | Little | None | Total |
|---------------|---|-----------|------|----------|--------|------|-------|
| Pre-pregnancy | Family planning   | 17        | 6    | 5        | 3      | -    | 31    |
| Pregnancy     | Antenatal care  | 15        | 12   | 2        | 2      | -    | 31    |
|               | Prevention of mother to child transmission of HIV               | 10        | 11   | 8        | 2      | -    | 31    |
|               | Intermittent preventive treatment of malaria for pregnant women | 18        | 11   | -        | 1      | 1    | 31    |
| Birth         | Neonatal care   | 21        | 5    | 5        | -      | -    | 31    |
|               | Skilled attendant at birth                                      | 15        | 2    | 5        | 8      | 1    | 31    |
| Postnatal     | Postpartum care   | 15        | 6    | 3        | 3      | 4    | 31    |
|               | Early initiation of breastfeeding                               | 25        | 5    | 1        | -      | -    | 31    |

Table 4: Provider's self-assessment of knowledge of maternal health services.

| Indicator  | Keta Municipal n (%) | Ketu North n (%) | Ketu South n (%) | Total n (%) |
|--|----------------------|------------------|------------------|-------------|
| Distance from household to the nearest health facility |                      |                  |                  |             |
| Very far   | 20 (9.5)             | 6 (2.8)          | 19 (9.0)         | 45 (7.1)    |
| Far  | 92 (43.8)            | 55 (26.2)        | 63 (30.0)        | 210 (33.3)  |
| Close  | 93 (44.3)            | 127 (60.5)       | 105 (50.0)       | 325 (51.6)  |
| Very close   | 5 (2.4)              | 22 (10.5)        | 23 (11.0)        | 50 (8.0)    |
| Total  | 210 (100.0)          | 210 (100.0)      | 210 (100.0)      | 630 (100)   |

Table 5: Self-reported distance from household to the nearest health facility.

### Descriptive statistics for affordability

Affordability was measured by both the direct costs (doctor's fee) and indirect costs (travel and medications) of care. Our study indicated that 90.3% of surveyed people had utilized treatment services of health facilities. Social demographics indicated that 43.2% held income-generating jobs, leaving the remaining 56.8% with a job status of unemployed including housewife, farmer and student. Emergencies and unexpected complications may be especially difficult for low socioeconomic status individuals. In addition, 40.4 % live far from the nearest health facility. Affordability reflects the economic capacity of the people to spend for the health service utilization. A low socioeconomic status of the people was found in the region.

### Descriptive statistics for accommodation

Accommodation/adequacy was measured by the quality of service provided and personal treatment by the provider. Respondents reported that 39% of deliveries occurred at home and of them, 39.2% were conducted by an untrained person. Adequate knowledge is essential for providers to be able to provide quality service. Accommodation is related with quality care, the clients' ability to accommodate to these factors and their perception of their appropriateness. There is a lack of service provider and lack of sufficient room in the health institution. So, difficulty in providing timely treatment and maintaining privacy were identified problems.

### Descriptive statistics for acceptability

For the acceptability check, number of individuals who received antenatal, delivery and postnatal services were evaluated. A 94.8%, 60.1% and 76.1% of respondents, respectively, replied that they received antenatal, delivery and the postnatal service. Factors like preference towards the gender of medical personnel, physical appearance of the facility, hours of operation, and trust in medical ability were not observed in the study area. Of total, 91.4% respondents were satisfied with the available service in the study area. Acceptability related to cultural and social factors determining the possibility for people to accept the service and to seek service were not found in the Volta region, indicating no any problem on the acceptability.

### Action Plan

KOICA and Yonsei Global Health Center developed an action plan through baseline survey, utilizing 5As framework. Seven problems related to availability, accessibility and accommodation was identified and the enhancement activities are being implemented in the study area as shown in Figure 1.

To overcome the current maternal health care problems of the Volta region, various health interventions were recommended. For the accessibility, inadequate service, inadequate service providers' knowledge, insufficient staffs, inadequate equipment and medicine in the facility were identified. Training programs are conducted to enhance knowledge. In order to solve the problem of the scarcity of the service provider, midwifery school is constructed in that region and essential medicine and equipment is provided. Previous study shows that strengthening midwife training and improving availability, training to health care providers can improve the maternal health [17,18]. For the accessibility, the nearest facilities are found far from the client location.

Previous study provided strong evidence of improved physical access to health care services for women who live within one hour of the health facility [19]. Therefore, it was felt necessary to improve awareness of maternal and child health service among local residents, enhance the capabilities of CHPs, community level workers play a important role to enhance maternal health [20,21], enhance the skills of maternal and child health service providers, upgrade the quality of public maternal and child health service. Also, the improvement of public transport facilities/access, establishment of a midwifery training school and opening of a post basic midwifery training course were recommended in the region. For the accommodation, training course for midwife and capacity enhancement was conducted. Due to poor quality service such as lack of service provider and lack of sufficient rooms in the health institution, providing timely treatment and maintaining privacy was difficult. One study suggests that staff attitude, provision of respectful and supportive care have a considerable impact on the choice of health facilities [22].

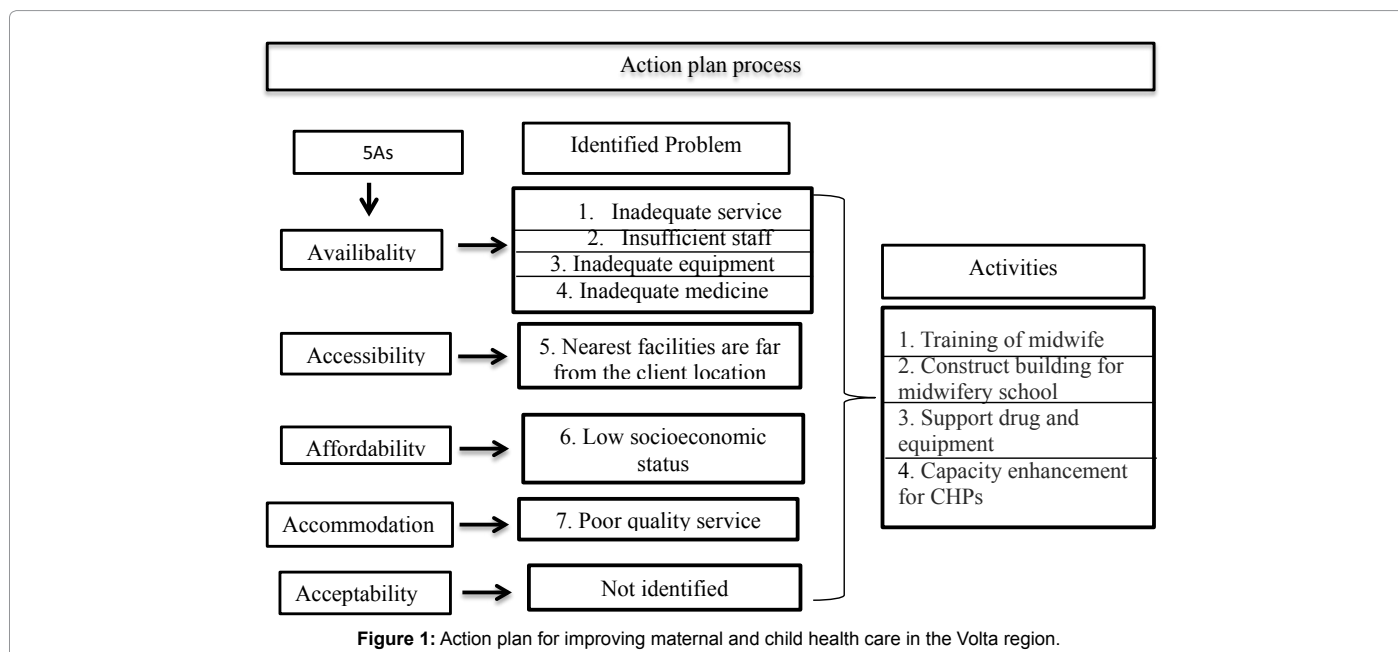


Figure 1: Action plan for improving maternal and child health care in the Volta region.

## Discussion

An estimated 28,900 women died due to complications in pregnancy and childbirth globally in 2013. Nearly all of these deaths could be prevented. Among them only 2,300 occurred in a developed region and the remaining 28,600 occurred in the developing region [23]. At least 12 million women suffered severe maternal complications in 2012 [24]. The rate of death is higher in poor countries [25]. Developing countries have been challenged by the overall capacity of weak health systems. The health care system of the developing countries is suffering from a lack of leadership and management skills, improper staffing, inadequate or improper supplies of essential medications and tools, inadequate financing and budget allocations, inadequate water and sanitation, poor health care-related infrastructures, poor or unmanaged information systems, and poor data management systems or a lack of data for policy formulation and implementation. Considerable progress towards MDG 5 has been made as various health survey results indicate a decline in regional average MMR from 740 per 100,000 live births in 1990 to 380 per 100,000 live births in 2014. However, improvements are not on track to achieve MDG 5 in 2015 [24].

Providing proper access to health care could be a major achievement for a community. Even developed countries find it difficult to achieve the goal of providing universal and equitable quality care [26]. Obviously, the challenge for developing countries is a lack of access to health care [27]. Improving access to health service providers would concentrate on a key factor influencing access to health care, which is commonly defined as utilization [4,7,28,29].

The distance to the nearest medical facilities influence postpartum checkup. More PNC is utilized if the respondent lives nearby medical facility than far distance. Because of the distance, respondents usually underutilized PNC service. It is necessary to expand the medical facility in the community level to increase the postpartum checkup [30].

KOICA and the Yonsei Global Health Center conducted a baseline survey, identified problems and developed an action plan in collaboration with the Government of Ghana. A 5As framework was used to identify barriers to health care utilization. Inadequate service, inadequate service providers, insufficient equipment and medicine, poor geographic access to health facilities, and insufficient knowledge in service provider were the most commonly identified barriers. Maternal health condition in the study area can be improved by addressing above identified weakness of maternal health service. It is recommended that an Overseas Development Aid Project of KOICA in cooperation with the Ghana Ministry of Health will follow the findings to strengthen maternal health in the study area.

## Conclusion

A collaboration program between KOICA and Ghana Government was developed to improve maternal and child health care services and reduce maternal mortality rate in the Volta Region. An action plan was developed from the baseline survey and they were gradually implemented for improvement of maternity care services in the region. This study was primarily concerned with the evaluation of access to maternal health care in the Volta region, Ghana (Keta municipality, Keta North and South District) and considered various physical, financial, institutional and social factors contributing to maternal healthcare in the Volta Region through a baseline study. We used a 5As framework of availability, accessibility, affordability, accommodation/adequacy and acceptability. We found insufficient midwife, inadequate equipment and medicine, health facilities that were far away from their client, poor and low socioeconomic status and lack of knowledge in

health service providers and midwife. To overcome these problems KOICA and Yonsei Global Health Center suggests implementation of the action plan, including training for midwife and service providers, construction of a Midwifery school, supplying essential medicine and equipment, capacity enhancement, and strengthening the basic unit of the health service (i.e., CHPs) in the Volta Region of Ghana.

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