QUALITY OF REPRODUCTIVE HEALTH SERVICES WITH EMPHASIS ON STRUCTURAL ASPECTS IN SOUTH CENTRAL ETHIOPIA

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Quality of reproductive health services, with emphasis on Structural aspects, in south central Ethiopia

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Dedicated to:

My late grand father Ato EBBA AUGUME who selflessly reared up all his children and grand children(including my self) and always with his tender care, love and wisdom through out his time.

ADDAN, my daughter who was born while I was collecting the data of this paper and she suffered the love and care she derseved.

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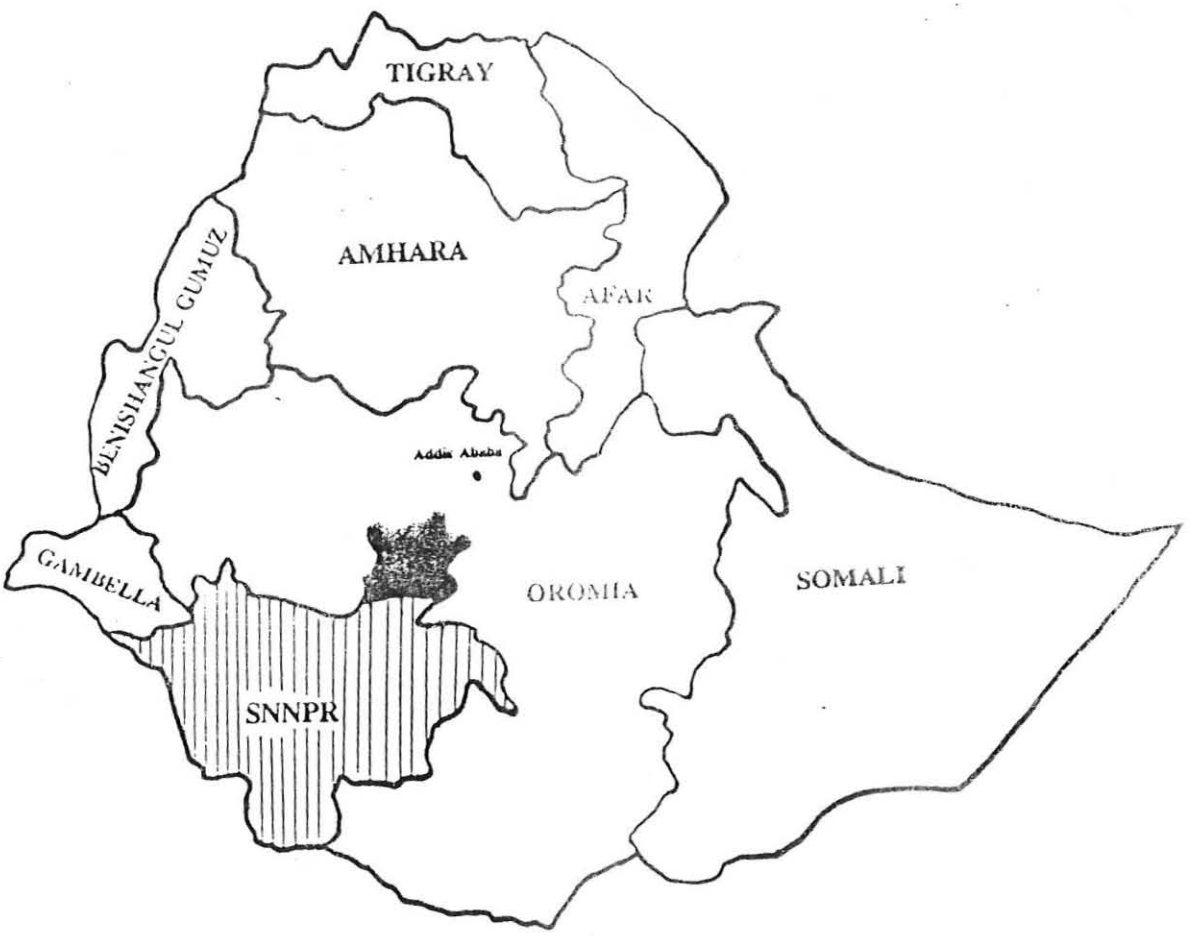

Figure 1: The study area is the darkened.

Abbreviations

FP	Family Planning
ANC	Antenatal care
MCH	Maternal and Child Health care
EPI	Expanded Programme on Immunization
STD	Sexually Transmitted Disease
HIV	Human Immuno deficiency Virus
AIDS	Acquired Immuno Deficiency Syndrome
TT	Tetanus Toxoid
BCG	Bacillus Calmette Gurein
DPT	Diphtheria Pertussis Tetanus
Hgb	Hemoglobin
Hct	Hematocrit
CBC	Complete Blood cell count
WBC	White Blood Cell
IEC	Information Education Communication
IUD	Intra Uterine Device
SPNNRS	Southern Ethiopia Peoples' Nations and Nationalities, and Regional State
MOH	Ministry of Health
WHO	World Health Organization
ICDP	International Conference on Development and Population

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ABSTRACT

Health care services in developing countries are reported to suffer from low quality. A descriptive cross-sectional study was conducted to assess the quality of reproductive health care, with emphasis on the structural as aspects in two administrative zones in south central Ethiopia. Of the 79 health institutions in the study area, 74 were visited for a response rate of 94%. Data were collected using a questionnaire adopted from the WHO Safe Motherhood Need Assessment and the WHO training modules for EPI and STDs. Multiple structural deficiencies were identified in all components of reproductive health care. Absolute minimum equipment for maternity and neonatal care were found to be complete and adequate in 20(27%) and 3(4.1%) of the institutions, respectively. Consumable supplies were available adequately in 13(17.6%), sterilizer in 13(17.6%), essential drugs in 16 (21.6%), ergometrine injection in 49 (66.2%), and alcohol in 22 (29.7%) of the institutions. In the EPI section, steam sterilizer was available in 45(60.8%), and adequate vaccines in 57 (77.0%) of the institutions. Only 1(1.4%) health institution had a complete mix of contraceptives. Important laboratory tests(syphilis test, hemoglobinometer, urine analysis) were available fully in only one (1.4%) health institution. Only 9(12.1%) health institutions had adequate IEC materials on all reproductive health components. More than half [44(59.4%)] of the health institutions had no water source in their compound. Only 8(10.8%) were found to have a telephone or two-way radio. A third, 25(33.8%), of the health institutions had no means of transport. It is concluded that the structural setting for reproductive health services is very poor in the majority of the health institutions. Recommendations include that besides constructing new health institutions, strong emphasis should be given on revitalizing the existing health institutions by correcting structural deficiencies without delay.

1.INTRODUCTION

Reproductive health care, as defined in the 1994 Cairo International Conference on Development and Population(ICDP), in the context of Primary Health Care includes: family planning services; prenatal care; safe delivery and postnatal care, infants and women's health care; prevention and appropriate treatment of infertility; prevention and management of the consequences of abortion; treatment of reproductive tract infections and other reproductive health conditions; information, education and counselling on human sexuality, reproductive health and responsible parenthood; effective referral system; and active discouragement of harmful practices such as female genital mutilation(1).

The global concern for reproductive health arose, especially in developing countries, from the following problems: unregulated fertility; very high maternal, infant and child mortality; contraceptive safety; the epidemic of STDs including AIDS; declining breastfeeding; gynaecological and breast cancer; and adolescent sexuality and pregnancy(2).

There are many determinants for the state of reproductive health, Genetic endowment of a person, the socioeconomic status in which the individual is born and lives, personal behaviour, and the health care services available for each individual at the time of his/her need are the major ones. The availability, use, and efficiency of reproductive health services are also important determinants of reproductive health(2).

The most significant problems with regard to health services in most developing countries, particularly in rural areas, are the lack of access to medical care services, poor medical treatment, inadequate numbers of properly trained personnel, and inadequate supplies and equipment(3.).

In Ethiopia, reproductive health has been identified as a national concern and priority for the following reasons: women of reproductive age make up 21% of the population; the maternal mortality rate is among the highest in the world, estimated between 700 to 1000 per 100,000 live births; high infant mortality rate which is estimated at 105 per 1,000 live births; disease burden is

high because of poor nutrition and sanitation among women(4); traditional practice such as female genital mutilation(FGM) and early marriage are still highly prevalent; fertility regulation practices are not fully developed and the population is growing rapidly with an annual national population growth rate of 3% and contraceptive prevalence rate of 7%; inadequate access to health and other social services(4); the adolescent age group constitutes a large proportion of the country's population; STDs including HIV/AIDS have already reached epidemic proportions with no sign of decline; and Ethiopia is one of the poorest countries in the world and cannot afford to spend adequate resources for health(5). Abortion is still leading causes of hospital death for women. The general health service coverage is 48.5%, while the family planning coverage 9.8%, the antenatal coverage 30.4%, the institutional delivery 10.2%, the post natal service 3.5%, and the EPI(DPT3) coverage is 67%.(6).

Ethiopia has recently committed to expanding MCH/FP services and, more recently, to providing comprehensive reproductive health services. These services, however, have poor and fluctuating performance.

As in other least developed countries, the structural aspect of health institutions giving services are believed to be deficient(7). Correcting the structural defects could be the basis for improving the quality of services they offer. This study attempts to assess the reproductive health services with emphasis on structural aspects in South Central Ethiopia. Though a few studies have tried to assess the reasons for the poor performance of specific components of the reproductive health services, to date, no attempt has been made to assess the reproductive health programmes as a package. This study is an attempt to close this gap.

2. LITERATURE REVIEW

2.1 BACKGROUND ON REPRODUCTIVE HEALTH

Attempts to improve the health of mother and children have been ongoing since the beginning of nineteen century(8). However, it took several years before maternal and child health was taken as a public responsibility.

The provision of family planning for women came after a hard struggle in North America as well as Europe. The famous American nurse Margaret Sanger started the first birth control movement and established the first birth control advice center in New York in 1912(8). Similarly, Mary Stopes , a physician, began the birth control movement in England and established the first birth control clinic in 1921 ; she started advocating wise parenthood in England. Advanced maternal health services such as assisted deliveries with vacuum aspirator, forceps delivery, Cesarean section and family planning were made available recently. Most mothers living in least developed nations still rely on primitive care and continue to die of complications of pregnancy and labor(8,9,10).

Maternal and child health (MCH) along with STDs, tuberculosis and malaria have been the priority of the World Health Organization(WHO) from its establishment in 1948. Since then, MCH has become an important part of international public health. In 1978, the international conference on primary health care at Alma Ata identified MCH with family planning as one of the eight essential components of primary health care (9). However, the maternal component in MCH was largely ignored until the safe motherhood conference was held in 1987 in Nairobi. The safe motherhood initiative was launched to correct the inequality of maternal care with the aim of reducing maternal morbidity and mortality worldwide(9).

Over the past two decades, important socio-demographic changes have taken place that have rendered the MCH approach too narrow to meet all the current concerns of this aspect of health. Women are claiming their right to have their health needs addressed as women and not merely as

mothers(1,2)

Sexually transmitted infections have assumed epidemic proportions; the rapidly growing adolescent population has distinctive reproductive health needs which require special attention; the reproductive health needs of men are being recognised as an important component. In response to the changed and changing global situation, a new, broader concept of " reproductive health" has emerged which offers a more comprehensive and integrated approach to the current heath needs of all in human reproduction(2).

The definition of reproductive health varies. The concept was coined during the late 1980s ; various attempts have been made to clarify what it covers and what it does not cover. It is obvious that it focuses on prevention and treatment of diseases that impair reproduction; the concept has both male and female dimensions (11). The full meaning and contents of reproductive health was made clear at the International Conference on Population and Development(ICPD) held in Cairo in 1994.

Reproductive health care, defined in the Cairo ICDP, in the context of Primary Health Care includes (1):

1. Family planning counselling, information, education and service
2. Education and service for prenatal care
3. Safe delivery and post natal care especially breast feeding and infants' and women's health care
4. Prevention and appropriate treatment of infertility
5. Abortion including prevention of abortion and the management of the consequence of abortion.
6. Treatment of reproductive tract infections, sexually transmitted diseases and other reproductive health conditions.
7. Information, education and counselling, as appropriate on human sexuality and reproductive health and responsible parenthood.

8. Referral for family planning services and further diagnosis and treatment of complications of pregnancy, delivery ,abortion, infertility, reproductive tract infections, breast cancer and cancer of the reproductive system, and sexually transmitted diseases including HIV/AIDS

9. Active discouragement of harmful practices such as female genital mutilation. The general health service coverage is 48.5%. The national coverage for antenatal coverage is 30.4%, post natal care 3.5%, institutional delivery is 10.2%, immunization coverage for DPT3 is 67%.

2.2 The Global reproductive health facts

Many women and children die and suffer because they do not have access to the basic minimum of health care that is their right; 1370 women die every day in the course of their physiological and social duty of pregnancy and childbirth(2,3,12.)

For every woman who dies annually during childbirth, at least 100 more women suffer from acute obstetrical complication, approximately 200 women acquire a new case of sexually transmitted diseases, and nearly 1000 women suffer some form of under nutrition, such as anemia(12). For every woman who dies yearly in childbirth, 15 infants die in utero or within the first week of life and nearly 50 are born with low birth weight making them more vulnerable to death, disease and low development. In addition to the half million maternal deaths due to pregnancy, the yearly total acute pregnancy-related morbidity is estimate to be over 54 million women in developing countries, of whom over 20 million are so serious as to warrant referral care (12.). It is reported that one in 20 teenagers contracts a sexually transmitted disease each year; this includes HIV/AIDS, gonorrhoea, syphilis, Chlamydial infection, and herpes(2,10).

The prevalence of maternal syphilis ranges from 3 to 22% in Africa and Latin American countries, with estimates that up to 50% of pregnant women with untreated early syphilis experiencing a fetal or neonatal loss while another 40% of pregnancies will result in infants with congenital syphilis (12). The prevalence of gonorrhoea in pregnant women in Africa range from 0.5 to 22%(12).

In developed countries, 99% of deliveries are performed by personnel who are usually very highly trained and who have access to equipment much of which is more sophisticated than that required for the majority of cases. In contrast, in some developing countries less than 20% of deliveries are attended by trained personnel; even among those trained personnel, the majority are trained not as physicians or nurses but as birth attendants to handle the most common needs(2,3).

Family planning not only prevent births, it also saves the lives of woman and children. It is estimated that 300 million couples around the world do not have access to family planning services(2).

Although there has been great success in child immunization with over 80% world coverage, there were still 2 million deaths from EPI preventable diseases in 1997(10).

2.3 Reproductive health in Ethiopia.

The first systematic effort to carry out MCH activities in Ethiopia was initiated when the health sector's ten years plan (1985-1994) was prepared. The national programme provided detailed policies and objectives to reduce maternal, infant and child mortality and morbidity through a comprehensive curative and preventive care to all mothers and children; the programme includes vaccination service, antenatal care, delivery service and family planning. The program had the goal of reducing infant mortality(IMR) from 144/1000 (in 1985) to 86/1000 by (1994) and maternal mortality rate from 20/1000 (in 1985) to 10/1000 by (1994); adequate health service should be available to 80% of the mothers and children by 1994(13). However, the health sector plan did not materialize because the resources for establishing the necessary infrastructure were not adequately allocated (13,30).

In Ethiopia, reproductive health has been taken as a national concern and priority for the following reasons (5):

1. Women of reproductive age make up 21% of the population

2. Maternal mortality rate is among the highest in the world, estimated at between 700 and 1000 per 100,000 live births .

3. High infant mortality rate which is estimated at 105 per 1000 live births.

4. Disease burden is high because of poor nutrition and sanitation among women

5. Traditional practices , such as female genital mutilation and early marriage, are still highly prevalent.

6. Fertility regulation practices are not fully developed and the population is growing at a fast rate, the annual national population growth rate is 3% and the contraceptive prevalence rate is 7%.

7. Inadequate access to health and other social services.

8. The adolescent age group constitutes a large proportion of the country's population.

9. STDs including HIV/AIDS, have already reached epidemic proportion with no sign of decline.

10. Ethiopia is one of the poorest countries in the world and cannot afford to spend adequate resources for health care.

2.4 Quality of health service delivery

The concept of quality in health care, its assessment and its assurance originated mainly in clinical medicine disciplines. Thus, most of the studies on quality of health care are carried out in hospitals and the vast majority have been in the industrialized countries(14). In the developing countries, quantitative deficiencies have been the main concern and quality of care has been a low priority; the quality assessment is a relatively new challenge(15).

The quality of health services has been a subject of research and controversy for many years. It has been considered by some to be intangible and indefinable while others consider it measurable in certain aspects and elusive in others. Very little has been done on the evaluation of quality of public

health programs in general and primary health care in particular(16).

Quality in health care is defined as "the degree to which the resources for health care or the services included in health care meet specified standards"(14). Given a certain fixed level of resources for health care, the quality of care received by the average person depends on good management of these resources; proper geographical distribution of facilities, staff and essential drugs, communication and transport which increase the accessibility; and timeliness of care.(14,17)

In order to assess quality it is necessary to make a determination of exactly what to measure and how to measure it (7.,17). Donabedian identified the widely used three dimensions of health care quality measures namely, structure, process, and outcome, as defined below (15)

First, structural measures assess whether facilities, equipment, staff, material budget, etc meet established standards. The underlying assumption in structural assessment is that if the structural characteristics and the setting are good, the process of care that occurs within it and the resulting outcomes will also be good(14,15,16,17). Two widely used methods in the structural approach are accreditation and Licensure(16). Structural assessments of health care quality are attractive to administrators, managers and researchers because they are relatively easy and inexpensive to conduct, and most of the information needed is either readily available from existing documents or from a quick inspection of the facility. It should be emphasized that good structure is necessary but not a sufficient criterion for quality of health care(15,16).

Secondly, the process approach starts from the assumption that a good process is more likely to lead to good health than a bad process. If the right things have been done in the right sequence for the patient ,then quality health has been provided. Process measures of health care focus on what is done to patients. The most typical measures involve the use of checklists or treatment protocol of what should be done for a particular condition. The actual care delivered is compared to the checklists and any discrepancies are noted as deviations from acceptable standards. The most common form of process quality assessment is the medical audit(15,16)

The main advantage of medical audits is that they are not patient or time dependent : their disadvantage is too much reliance on the medical records for information about whether the procedures contained on the checklist were performed(16).

Finally, the outcome approach focuses on the effects or results of the health care delivery. Outcomes could be complete recovery, residual disability or death. Outcome measures generally come in two forms. The first involves the use of general measures which include mortality, morbidity, and health status indices . General outcome measures usually require complex data collection and statistical treatment; they take a long time and a great number of patients to get meaningful figures; and there is difficulty to use them to solve a specific health problems. The second form of outcome measures involves disease-specific measures. Among the most well known of the disease-specific measures is the use of mortality (survival) rate for particular illness, e.g., five year survival rates are typically calculated for each of the various types of cancers. The outcome approach has certain limitations. First, the outcome of a particular illness episode is affected by other factors in addition to the treatment regimens, one of the most important one being patient noncompliance; second, the data they require are not always readily available from medical records; and third, outcome measures are overly time-dependent(15,16).

Assessment of the quality of service delivery in health facilities is receiving growing recognition as a strategy for monitoring and evaluating primary health care programme in developing countries(14). The ultimate purpose of quality assessment in health care is to improve the effectiveness of service programs. Quality assessment will show not only the outcomes or accomplishments of services and programs in relation to standards but it may also suggest the points or points of difficulty; efforts can then be focused on the weak links in the chain (7,15,16,,17). Many evaluations have focused on measuring changes in mortality and morbidity or measuring coverage rate while few have emphasized the quality of services or the process of service

delivery(7,16). Furthermore, systematic efforts to improve quality based on findings about the delivery process have been extremely rare. In recent years, several studies which have focused on service quality revealed widespread deficiencies in health care services and management systems in least developed countries(7.). For example, Primary Health Care Operational Research (PRICOR) conducted more than 6000 observations of health worker-client encounters and discovered highly prevalent and serious program deficiencies in areas such as diagnosis, treatment, patient education and supervision(7). At first glance, high quality health services may appear to be a luxury beyond the budgetary limits of most least developed countries health system(7). However, improving quality often does not cost much and attention should be paid to quality since quality is essential to the success of primary health program. The most important fact is that even the health manager with restricted budgets should not to ignore it(7). Building health institutions close to the community is the beginning of effective health coverage but facilities that is nearest to people homes will have little value if it lacks basic equipment. In many African countries shortage of basic equipment has arisen partly because plan were made to construct new facilities before determining whether adequate running budget was available to operate them(18).

2.5 Reproductive health services in Ethiopia

In Ethiopia, the safe motherhood needs assessment conducted by the Ministry of Health (MOH) in 1996 revealed serious deficiencies in the availability of essential equipment, drugs and supplies for the wide range of reproductive health services that are supposed to be provided by the various levels of health care(19). The survey also revealed shortages in health personnel and training deficiency . Out of the 192 health institutions surveyed, only a handful had telephone or radio transmitter, and IEC educational material other than posters was scarce(19). Similar observations were made in a study of family planning clinics in Addis Ababa(20). Study of EPI service in West Gojam zone also revealed deficiencies including refrigerators, syringes and needles vaccines and timer in the surveyed health institutions(24).

Although the currently accepted method of quality assessment considers the three part approach i.e., the structure, the process and the outcome, this study focuses only on the structural approach. This is because in least developed countries, the structural aspects of the health institutions are believed to be the core problem for the poor quality of health care(7); correcting the structural defects is considered to be the basis for future quality improvement. Therefore, this study will seek to identify the structural gaps in reproductive health services in health institutions in two zones of South central Ethiopia.

3. GENERAL AND SPECIFIC OBJECTIVES

General objective:

To assess the status of reproductive health services in South Central Ethiopia.

Specific objectives:

1. To describe the reproductive health services available in rural areas.
2. To assess the quality of the reproductive health services with emphasis on the structural aspects.

4.METHODS

4.1 Study design

This was descriptive cross sectional study conducted in all health institutions of the Gurage and Hadiya administrative zones of the Southern Ethiopia Peoples' Nations, and Nationalities Regional State (SPNNRS).

4.2 Study Area

The two zones are located in south central part of Ethiopia. They contain 15 districts of which 11 are in the Gurage zone and 4 are in the Hadiya zone. According to the 1994 census, there were 2,607,117 people living in the two zones: 1,556,964 in the Gurage zone and 1,050,115 in the Hadiya Zone. In both zones more than 93% of the population lives in rural areas.

The health care in the two zones is provided at primary and secondary health levels: health stations and health centers provides primary health care while, hospitals provide secondary health care.

4.3 Study units

All health institutions in the Gurage and Hadiya Zones were the target of this study. There were 79 health institutions reported to give reproductive health care in the 15 districts of the Gurage and Hadiya administrative Zones during the time of data collection; these included 2 hospitals, 15 health centers, and 62 health stations(clinics).

4.4 Data collection

Data collection was made using a structured questionnaire which was adapted from the WHO Safe Motherhood Need Assessment Manual and from the WHO Training Modules for EPI and STD Control Programmes. The questionnaire was written in English to avoid misinterpretation of technical terms. A pretest was conducted in health institutions in Addis Abeba. The pretest allowed for making appropriate modifications to the draft questionnaire and a more realistic estimate of the time needed to complete the questionnaire per health institution.

The questionnaire was designed to assesses the availability and adequacy of basic and minimum requirements in terms of equipment, drugs, and materials as recommended by WHO for health institutions which are to carry out antenatal care, delivery service, family planning, EPI, STDs diagnosis and treatment (Annex 4).

The research team consisted of five persons, including the principal investigator. Data collectors were senior nurses who had more than five years of experience. They had received training on FP, EPI and MCH programmes. They also had experience in managerial positions in health centers and zonal health departments. Data collectors were recruited from health units outside the study area. A five-day training on how to complete the questionnaire and on the procedures to be followed was given. Data were collected by interviewing and direct observation. The data collector filled " 1" if the given item was adequately available and "2" if not available and " 3" if it was found to be inadequate on the visit day.

Permission to conduct the study was obtained from both zonal health departments. Each data collector showed the letters from the Zonal and district health offices to the health institutions head (or delegate in the absence the head). Interviewees were informed about the purpose of the study and the confidentiality of response and that their name would not be registered on the questionnaire; interviews proceeded after obtaining full consent. All health institutions visited were very much cooperative on the interview. To ensure data quality data collectors were instructed to recheck the completeness of the responses. The principal investigator and field supervisor checked completeness upon submission of the questionnaire, immediately after the interview. At the end of the visit , the questionnaire had to be stamped by the health institution or the district health office if the health institution had no stamp. The study was conducted between May 21 to July 12 1998.

4.5 Data analysis

Data were entered and processed using EPI-INFO version 6 statistical software. Frequencies and proportions were used to characterise the health units with regard to the reproductive services they offered.

4.6 Operational definitions

Adequacy:	The presence of supplies(equipment, drugs and materials) that are suitable to carrying out the programme effectively as reported by service providers.
Availability:	The presence of essential structural setting at the time of data collection.
Maternity care:	All care given to mothers including antenatal care, delivery service, post natal care and family planning.
Delivery room	A room in a health institution in which mothers deliver and in which no other activities are carried out other than the delivery process.
Stock out of contraceptives	The absence of any contraceptive method in a health institution at a given time.
Under stock	Any stock level of contraceptives reserve stock below three months.

5.RESULTS

Of the 79 health institutions in the study areas, the survey covered 74 health institution(93.7%). Five health stations(two in Hadiya zone and three in Gurage zone) were not covered mainly due to physical inaccessabilities(i.e., no roads and one way walking distance more than 3 hours).Of the total 74 health institutions in the two zones, 16 (21.6%) are run by non governmental organizations(NGOs) while the majority 58 (78.4%)are owned by the Ministry of Health.

There are only two hospitals in the two zones: the Hosaina hospital, owned by Ministry of Health, serves as the only zonal referral hospital in Hadiya; Attat hospital, owned by the catholic church, is a zonal referral hospital for Gurage zone.

Facilities for delivery care were not available in a considerable proportion of the health institutions: a separate delivery room was available in 54(73%), delivery couch in 56(75.7%), functional-water sink in delivery room in 26 (35.1%), sufficient beds for mothers and neonates in 22 (29.7%). Only 12 (16.2%) of the health institutions were found to have all these facilities in adequate numbers(Table 1).

Scissors ,needle holders and suturing materials which are the absolute minimum equipment required for maternity care were adequately available in 62.2% ,28.7% and 58% of the health institutions, respectively. These items were most deficient at institutions of primary health care. Only 20(27.%) of all institutions had all three items in adequate amount(Table 1).

The availability of materials for neonatal care was: cloth or towel to dry a babies 21.9%, blankets to wrap babies(17.5%), mucous extractor(35.1%) and bag/mask for neonatal resuscitation (14.9%). Equipment for neonatal care was highly deficient in almost all health institution since only 3(4.1%) of the institutions (one health station, one health center and one hospital) were found to have all the equipment in adequate amounts(Table 1).

Consumable supplies were available in adequate amount in a small number of institutions: gloves were available in adequate amount in 51(68.9%), disposable syringes and needles in 32(43.2%), intravenous fluids giving sets in 26(35.1%), and cord-tie in 22(29.7%) institutions. Only 13(17.6%) of health institutions were found to have all these consumable supplies in adequate amount (Table 1).

Basic equipment for maternity care was not available in adequate amount in a considerable proportion of the health institutions: sterilizer was available in 13(17.6%), the availability of sterilizer and other equipment was even lower in Hadiya zone health institutions compared to Gurage zone refer to annex 12,table 12.2 ; annex 11,table 11.2 ; annex 10,table 10.2 . Blood pressure apparatus was available in 56 (75.7%), stethoscope in 56 (75.7%), fetostethoscope in 62 (83.8%), infant weighing scale in 43 (58.1%), vacuum extractor in 24 (32.4%),thermometer in 60 (81.1%),speculum in 47 (63.5%), screen in 27 (36.5%), adult weight scale in 47 (63.5%), couch in 52 (70.3%), and tapemeter in 18 (24.3%). No institution was found to have all this basic equipment in adequate amount.(Table 2)

A large number of primary health care institutions in both zones did not have adequate equipment for uterine evacuations: vaginal speculum was available in 44 (59.5%),sponge forceps in 27 (36.5%), toothed tenaculum in 14 (18.9%), long dressing forceps in 25 (33.8%), uterine dilator in 10 (13.5%), uterine curettes in 9 (12.2) and uterine sound in 8 (10.8%). Only 8 (10.8%) health institutions zones had this equipment in adequate amount(Table 2).

Table 1. The availability of facilities for delivery care in health institutions of south central Ethiopia, 1998

Facilities:	HS(n=57)	HC(n=15)	Hosp.(n=2)	Total(n=74)
For delivery care:				
Delivery room	37(64,9%)	15(100%)	2(100%)	54(72.9%)
Delivery couch	42(73.6%)	12(80%)	2(100%)	56(75.5%)
Water sink in delivery room	15(26.3%)	9(60%)	2(100%)	26(35.1%)
Sufficient beds for mothers and neonates	14(24.6%)	6(42.8%)	2(100%)	22(29.7%)
All available	6(10.2%)	4(26.7%)	2(100%)	12(16.2%)
Equip.for delivery Care:				
Scissors	32(56.1%)	12(80%)	2(100%)	46(62.2%)
Suture materials*	16(28%)	3(20%)	2(100%)	21(28.7%)
Needle holder	30(52.6%)	11(73.3%)	2(100%)	43(58.1%)
All available	15(26.3%)	3(20%)	2(100%)	20(27.0%)
For Neonatal Care:				
Cloths	10(17.5%)	5(33.3%)	1(50%)	16(21.6%)
Blanket to wrap baby	8(14%)	4(26.7%)	1(50%)	13(17.6%)
Mucus extractor	19(33.3%)	5(33.3%)	2(100%)	26(35.1%)
Bag and mask	5(8.8%)	4(26.7%)	2(100%)	11(14.9%)
All available	1(1.7%)	1(6.7%)	1(50%)	3(4.1%)
Consumable supplies:				
Gloves	40(70%)	9(60%)	2(100%)	51(68.9%)
Disposa. syringes & needles	26(45%)	5(33.3%)	1(50%)	32(43%)
IV kit	16(28.1%)	9(60%)	1(50%)	26(35.1%)
Cord tie	17(29.8%)	4(26.7%)	1(50%)	22(29.7%)
All available	11(19.3%)	1(6.7%)	1(50%)	13(17.6%)

* Suture material include suturing needles and suturing cat gut or silk or similar materials.

Table 2. Availability of basic equipment for maternity care in health Institutions of south central Ethiopia, 1998.

Facilities:	HS(n=57)	HC(n=15)	Hosp(n=2)	Total(n=74)
Basic equipment :				
Sterilizer	4(7%)	7(46.7%)	2(100)	13(17.6%)
B.Papparat	39(68.4%)	15(100%)	2(100%)	,56(75.7%)
Stethoscope	41(71%)	13(86.7%)	2(100%)	56(75.7%)
F.stethosco	45(78.9%)	15(100%)	2(100%)	62(83.8%)
wei. scale[I]	31(54.4%)	10(66.7%)	2(100%)	43(57.3%)
V.extractor	11(19.3%)	11(73.3%)	2(100%)	24(32,4%)
Thermometer	45(78.9%)	13(86.7%)	2(100%)	60(81.1%)
Speculum	31(54.4%)	14(93.3%)	2(100%)	47(63.5%)
Screen	19(33.3%)	6(40%)	2(100%)	27(36.5%)
Wei.scale[A]	35(61.4%)	10(66.7%)	2(100%)	47(63.5%)
Couch	39(68.4%)	11(73.3%)	2(100%)	52(81.5%)
Tape-meter	13(22%)	3(20%)	2(100%)	18(24.3%)
All avail	0%	0%	0%	0%
Equipment for uterine evacuation:				
Speculum	27(47.3%)	15(100%)	2(100%)	44(59.5%)
Forceps	13(22.8%)	12(80%)	2(100%)	27(33.8%)
Tenaculum	6(10.5%)	6(40%)	2(100%)	14(18.9%)
Long forcep	14(24.5%)	9(60%)	2(100%)	25(33.8%)
Dilator	3(5.2%)	5(33.3%)	2(100%)	10(13.5%)
Curettes	3(5.2%)	4(26.7%)	2(100%)	9(12.2%)
Ut. sound	2(3.5%)	4(26.7%)	2(100%)	8(10.8%)
All availab	2(3.5%)	4(26.7%)	2(100%)	8(10.8%)

I=Infant weighing Scale

A=Adult weighing scale

Essential drugs supply for maternity care were found to be deficient: ferrous tablets were found in adequate amount in 16 (21.6%), tt vaccine in 55 (74.3%), lidocaine(2%) in 49 (66.2%), and pethidine in 2 (2.7%). None of the health institutions had all these drugs at the time of the survey (Table 3).

Drugs to be used for care of complications were markedly deficient in a large number of health institutions: ergometrine injection was found available in 49 (66.2%), intravenous fluids in 23 (31.1%), oxytocin in 7 (9.5%), hydralazine in 2 (2.7%), methyl dopa in 10(13.3%), diazepam in 5(6.8%), and magnesium sulfate in 1(1.4%). No health institutions was found to have all these drugs during this survey(Table 3).

Essential drugs for routine care were also not available in adequate amount in a considerable proportion of health institutions: Chloroquine tablets were found in 38 (51.1%), chloroquine injection in 18 (24.3%, quinine injection in 6 (8.1%), ergometrine tablets in 8 (10.8%), mebendazole in 40 (54.1%), metronidazole in 36 (48.6%), savlon solutions in 56 (75.7%), alcohol in 22 (29.7%), iodine in 1 (1.4%) and soap in 51 (68.9%) of the health institutions. No health institutions had all these drugs in adequate amount during the survey (Table 3).

Table 3. Availability of supply of drugs for maternity care in health institutions of south central Ethiopia, 1998

Facilities:	H.S(n=57)	H.C(n=15)	Hos(n=2)	Total(n=74)
Basic drugs for maternity care:				
Ferrous salt	11(19.3%)	3(20%)	2(100%)	16(21.6%)
TT injection	39(68.4%)	14(93.3%)	2(100%)	55(74.3%)
Lidocaine(2%)	37(64.9%)	11(73.3%)	1(50%)	49(66.2%)
Pethidine	0%	1(6.7%)	1(50%)	2(2.7%)
All available	0%	0%	1(50%)	1(1.3%)
Drugs for care of complication:				
Ergometrine injection	39(68.4%)	9(60%)	1(50%)	49(66.2%)
IV fluids	17(29.8%)	5(33.3%)	1(50%)	23(31.1%)
Oxytocin	3(5.26%)	3(20%)	1(50%)	7(9.4%)
Hydralazine	1(1.8%)	0%	1(50%)	2(2.7%)
Methyl dopa	3(5.2%)	5(33.3%)	2(100%)	10(13.5%)
Magnesium sulfate	0%	1(6.6%)	0%	1(1.4%)
Diazepam	1(1.8%)	2(13.3%)	2(100%)	5(6.8%)
All available	0%	0%	0%	0%
Drugs for routine treatment:				
Chloloquine tablets	28(49.1%)	8(53.3%)	2(100%)	38(51%)
injection	14(24.6%)	2(13.3%)	2(100%)	18(24.3%)
Quinine injection	2(3.5%)	3(20%)	1(50%)	6(8.1%)
Ergometrine tablet	5(8.8%)	2(13.3%)	1(50%)	8(10.8%)
Mebendazole	31(54.4%)	7(46.6%)	2(100%)	40(54%)
Metronidazole	28(49.1%)	7(46.7%)	1(50%)	36(48.6%)
Savlon sol	42(73.6%)	12(80%)	2(100%)	56(75.6%)
Alcohol Sol	16(28%)	4(26.7%)	2(100%)	22(29.7%)
Iodine Sol	1(1.7%)	0%	0%	1(1.4%)
Soap	40(70%)	9(60%)	2(100%)	51(68.9%)
All available	0%	0%	0%	0%

Anti-infective drugs were found to be deficient in a major proportion of health institutions: Procaine penicillin was available in 40 (54.1%), benzathine penicillin in 38 (51.4%), ampicillin in 27 (36.5%), tetracycline eye ointment in 43(58.1%), bactrim(trimethoprim sulfamethoxazole) in 21 (28.4%) and erythromycin in 2 (2.7%) of the health institutions. Only 13 (17.6%) of the health institutions were found to have all these anti-infectives in adequate amount at the time of this survey (Table 4). This study found that there is no organised structural facilities for STDs and HIV control activities. Important drugs for the treatment of STDs were rarely available in the health institutions. For example spectinomycin was found in 1 (1.4%), ceftriaxone is none and nystatin in 5 (6.8%) (Table 4).

Antenatal care was provided by health assistants in 43(58.1%) of the health institutions and by nurses 16(21.6%) and health assistants and nurses in 7(9.4%) of institutions. For delivery, only 3(20%) health centers had midwives at the time of the survey. Overall, midwives were available in only 4(5.4%) of all health institutions; in the majority of health institutions, delivery was attended by health assistants.

Facilities for family planning were also deficient in a considerable proportion of the health institutions in the two zones. A separate room for family planning room was available in 23 (31.1%), gynaecological couch in 12 (16.2%), functional water sink in FP room in 19 (25.7%), trained health workers in 58 (78.4%), trained in counsellors in 52 (70.3%), separate counselling room in 12 (16.2%), service available in from Monday to Friday in 64 (86.5%), screen in 25 (33.8%) ,blood pressure apparatus in 55 (74.3%),stethoscope in 54 (73.0%), weight scale in 47 (63.5%). No health institution was found to have all these facilities during this survey (Table 5).

Contraceptives were in short supply in a significant proportion of the health institutions; oral contraceptives were available in 50 (67.6%), injectable hormonal contraceptives in 41(55.4%),condoms in 51 (68.9%), diaphragms in 6(8.1%), and intrauterine devices in 5(6.8%). Only 1(1.4%) health institution had all contraceptives, i.e. oral contraceptives, injectable

contraceptives, condoms, diaphragms, and intrauterine contraceptive devices at the time of data collection. (Table 5). The deficiencies found in this study was more pronounced in Hadiya zone health institutions as compared to Gurage zone refer to annex 12,table 12.5 ; annex 11,table 11.5 ; annex 10,table 10.5 .

Twenty -two percent of health institutions reported stock-out of contraceptives ranging from once to three times in a year, whereas 27% reported under stock of contraceptives at the time of this survey. Even though family planning services were available from Monday to Friday in 86% of institutions, this still meant that it was not available on daily basis in 14% of institutions.

In the majority 45(61%) of health institutions family planning services were provided by health assistants and nurses, midwives did so in 19(26%) of the institutions, whereas in 22(29.7%) of health institutions, there were no trained health workers on counselling for family planning.

Table 4. Availability of anti-infective drugs for reproductive health care in health institutions of south central Ethiopia, 1998.

Anti-infective:	H.S(n=57)	H.C(n=15)	Hosp(n=2)	Total(n=74)
Antibacterials:				
Pro penicillin	30(52.6%)	8(53.3%)	2(100%)	40(54.1%)
Ben penicillin	28(49.1%)	8(53.3%)	2(100%)	38(51.4%)
Ampicillin	20(49.1%)	6(40%)	1(50%)	27(36.5%)
TTC eye ointment	32(56.1%)	10(66.7%)	1(50%)	43(58%)
Erythromycin	0%	1(6.7%)	1(50%)	2(2.7%)
Bactrim	15(26.3%)	4(26.7%)	2(100%)	21(28.4%)
All available	10(17.5%)	2(13.3%)	1(50%)	13(17.5%)
STDs Drugs:				
Nystatin	4(7%)	0%	1(50%)	5(6.7%)
Spectinomycin	0%	0%	1(50%)	1(1.4%)
Ceftriaxone	0%	0%	0%	0%
All available	0%	0%	0%	0%

Table 5. Availability of facilities for family planning service in health institutions of south central Ethiopia, 1998

Facilities:	H.S(n=57)	H.C(n=15)	Hos(n=2)	Total(n=74)
For family planning:				
FP room	13(22.8%)	9(60)	1(50%)	23(31%)
Couch	8(14%)	5(33.3%)	2(100%)	12(16.2%)
water	11(19.2%)	6(40%)	2(100%)	19(25.7)
Trained worker	46(82.1%)	10(66.7%)	2(100%)	58(78.3%)
Trained to counsel	40(70%)	10(66.7%)	2(100%)	52(70.2%)
Room for counsel	7(12.3%)	4(26.7%)	1(50%)	12(16.2%)
Service Monday to Friday	48(84.2%)	14(93.3%)	2(100%)	64(86.5%)
Screen	17(29.8%)	6(40%)	2(100%)	25(33.8%)
BP appara	39(68.4%)	14(93.3%)	2(100%)	55(74.3%)
Stethosco	39(68.4%)	13(86.7%)	2(100%)	54(72.9%)
Wei Scale	35(61.4%)	10(66.7%)	2(100%)	47(63.5%)
Meet need	34(62.9%)	10(66.7%)	1(50%)	45(64.3%)
All avail	0%	0%	0%	0%
contraceptives:				
Any oral	37(64.9%)	12(80)	1(50%)	50(67.6%)
Any inje	29(50.9%)	11(73.3%)	1(50%)	41(55.4%)
Condom	39(68.4%)	11(73.3%)	1(50%)	51(68.9%)
Diaphrag	4(7%)	2(13.3%)	0%	6(8.1%)
IUDs	0%	4(26.7%)	1(50%)	5(6.8%)
All avail	0%	1(6.7%)	0%	1(1.4%)

Facilities for EPI were deficient in a considerable proportion of health institutions: tables and chairs were available in 45 (60.8%), functional water sink in EPI room in 20 (27.0%), trained health worker in EPI in 51 (68.9%),vaccine card in 21(21.4%), vaccine stock card in 24(32.4%), adult weigh scale in 47(63.5%), pick up forceps for needles and syringes in 53(71.6%) , refrigerator in 59(79.7%), steam sterilizer in 45(60.8%), syringes in 40(54.1%), needles in 42(56.8%), functional timer in 42(56.8%), vaccine carrier in 52(70.3%), cold box in 27(36.5%), ice packs in 60(83.3%), and plastic cups for ice to stand vaccine in 32(43.2%). With regard to vaccines, BCG was in 57 (77.0%), measles in 57 (77.2%) and tt vaccine in 55(74.3%) of health institutions in both zones. Not one health institution was found to have all these facilities during the time of the study (Table 6). The availability of EPI facilities in general was found to be lower in Hadiya zone compared to that of the Gurage zone refer to annex 12, table 12.6 ; annex 11, table 11.6 ; annex 10,table 10.6 .

In most of the health institutions, EPI services were provided by the health assistants 53(71.6%) while in 12(16.4%) it was by nurse and health assistant; 22(30%) of health institutions did not have trained health workers in EPI services.

Table 6. Availability of facilities for EPI services in health institutions of south central Ethiopia, 1998

Facilities:	H.S(n=57)	H.C(n=15)	Hosp(n=2)	Total(n=74)
Tables and chairs	31(54.3%)	12(80%)	2(100%)	45(60%)
Water sink	12(21.1%)	6(40%)	2(100%)	20(27.2%)
Trained on EPI	39(69.6%)	10(66.7%)	2(100%)	51(68.9%)
Vaccin card	14(24.5%)	5(33.3%)	2(100%)	21(21.4%)
Vacc Stock card	16(28%)	6(40%)	2(100%)	24(32.4%)
Weighing scale	35(61.4%)	10(66.7%)	2(100%)	47(63.5%)
Forceps	39(68.4%)	4(26.6%)	2(100%)	42(56.8%)
Refrigerator	43(75.4%)	14(93.3%)	2(100%)	59(79.7%)
Sterilizer	37(64.9%)	6(40%)	2(100%)	45(60.8%)
Syringes	34(59.6%)	4(26.6%)	2(100%)	42(56.8%)
Needles	36(63.2%)	4(26.6%)	2(100%)	42(56.8%)
Functional timer	30(56.6%)	10(66.7%)	2(100%)	42(56.8%)
Vaccine carrier	38(66.7%)	13(86.7%)	1(50%)	52(70.3%)
Cold Box	16(28%)	10(66.7%	1(50%)	27(36.5%)
Ice packs	46(83.6%)	12(80%)	2(100%)	60(83.3%)
Plastic cup	25(43.8%)	5(33.3%)	2(100%)	32(43.2%)
Vaccines	41(71.9%)	14(93.3%)	2(100%)	57(77.2%)
TT vaccine	39(68.4%)	14(93.3%)	2(100%)	55(74.3%)
All available	0%	0%	0%	0%

Important laboratory tests were seldom available in the health institutions surveyed: Syphilis test was available in 2(2.7%), hemoglobinometer in 8(10.8%), and urine analysis in 12(16.2%) in the health institutions. Only one (1.4%) health institution had all these laboratory facilities at the time of the survey (Table 7). There was only one HIV testing facility which was in one hospital (Table 7). Other important laboratory facilities for routine care were also scarce: gram stain in 6(8.1%), wet mount test in 6(8.1%), pregnancy test in 6(8.1%), and WBC and differential count in 10(13.5%) of the health institutions in the two zones at the time of the survey (Table 7).

Table 7. Availability of essential laboratory test, at the health institutions of south central Ethiopia, 1998

Laboratory tests	H.S(n=57)	H.C(n=15)	Hosp(n=2)	Total(n=74)
Essential tests:				
Syphilis test	1(1.8%)	0%	1(50%)	2(2.7%)
Hgb/Hct test	4(7%)	2(13.3%)	2(100%)	8(10.8%)
Urine analysis	6(10.5%)	4(26.6%)	2(100%)	12(16.2%)
All available	0%	0%	0%	0%
Other tests:				
Gram stain	2(3.6%)	2(13.3%)	2(100%)	6(8.1%)
WBC,differen.	6(10.5%)	2(13.3%)	2(100%)	10(13.5%)
Pregnancy test	2(3.5%)	2(13.3%)	2(100%)	6(8.1%)
Wet mount test	1(1.7%)	3(20%)	2(100%)	6(8.1%)
All available				

IEC materials for reproductive health were highly deficient in the institutions. Posters, flip charts, pamphlets and brochures on family planning, antenatal care, pregnancy, complication of pregnancy, breast feeding, EPI, STDs and HIV/AIDS were highly deficient in a large proportion of health institutions in the two zones: only 9(12.1%) of health institutions had adequate IEC materials at the time of this survey(Table 8). Posters were the main tool available in 38(51.3%) of the health institutions; flip charts in 19(25.7%),brochures in 16(21.6%), and pamphlets in 18(24.3%) of the institutions respectively(Table 8).The availability of health education materials in general was also found to be low in Hadiya zone (annex 12, table 12.8)

Table 8. Availability of Health Education Materials in the Health Institutions of South central Ethiopia, 1998.

IEC materials:	H.S(n=57)	H.C(n=15)	Hosp(n=2)	Total(n=74)
Poster	30(52.6%)	7(46.6%)	1(50%)	38(51.3%)
Flip chart	12(21%)	6(40%)	1(50%)	19(25.7%)
Brochure	11(19.3%)	4(26.7%)	1(50%)	16(21.6%)
Pamphlet	11(19.3%)	6(40%)	1(50%)	18(24.3%)
All available	5(8.8%)	3(20%)	1(50%)	9(12.2%)

As for availability of water in the health institutions, only 30(40.5%) health institutions had piped water or well in their compound, while in 35(47.2%) had water sources outside the compound(from water pipe,well or spring). A socking 9(12.2%) of the health institutions had no water source at all. Therefore, a total of 44(59.4%) of the health of both zones had no water source at all. in Gurage zone water source was available in the compound in 17(43.6%) of the health institution while it was 13(37.1%) in Hadiya zone.

Regarding communication only 49 (66.2%) health institution in both zone had some means of transport facilities (car,motorcycle,bicycle,mule and horse) and 8(10.8%) of institutions in the two zone had a telephone or two way radio.

5.DISCUSSION

Though health care in developing countries is reported to suffer from structural deficiencies(3,28,29), few studies with emphasis on the structural aspects have been conducted. Therefore, this study tried to assess the structural aspects of reproductive health care in Gurage and Hadiya Zones.

The adequacy of the existing health infrastructure with sufficient equipment, supplies, materials and manpower is a major determinant of the proper functioning of health institutions. This survey has shown marked structural deficiencies in quality of reproductive health care in Gurage and Hadiya zones health institutions.

Proper care for mothers and newborns is a crucial component of safe motherhood. However, in this survey, the delivery care was found to be appallingly deficient in most institutions for example, delivery rooms were not available in a significant proportion of health institutions. In these health institutions, delivery was conducted in rooms where other routine activities were conducted on a daily basis. Such an area can not be clean or safe and it deprives mothers in labor or in the delivering process from privacy as well as subjecting them to embarrassment.

Poor facilities for attending labour and neonates indicates that most of the health institutions cannot provide clean and safe delivery which are needed to prevent maternal morbidity and mortality. The availability of basic equipment for maternity care is comparable with what has been reported from the 1996 national survey: the majority of health institutions lack the absolute minimum equipment needed for neonatal care, i.e., cloth or towel to dry the baby, blanket to wrap the baby, mucous extractor and bag and mask for neonatal resuscitation. The absence of these equipment for delivery and neonatal care may prevent service providers from providing safe delivery, even for minimal maternal and neonatal care let alone for complicated cases. Though the extent is higher in this study, shortage of consumable supplies was reported earlier(19).When all consumable supplies are considered together, they were available in adequate amount in only 18% of the health institutions.

Failure to treat appropriately clients due to a lack of supplies is a major obstacle to timely referral. The implication of this result is that there is no structural setting for clean and safe delivery at most institutions.

Basic equipment for maternity care were not available in a significant number of institutions. For example, a sterilizer was available in only 18% of institutions. This is far less than the 77% availability in Addis Ababa family planning clinics(20), the 35% from the Ethiopian Safe Motherhood Need Assessment(19); it is comparable to 22% found in Burkina Faso Family Planning Clinics(21). The absence of sterilizers in the majority of health institutions is a serious limitation to the side of service providers. In the era of HIV/AIDS ,lack of proper sterilization is unacceptable and could be an addition fuel to an over escalating problems.

Essential drugs for maternity care were not available in a majority of the health institutions surveyed. For example, Ferrous tablet was available in only 22% of health institution, which is much lower than the 46% availability in the national study(19) but was reported to be rarely available in health institutions in rural Nigeria(22).This finding implies that one of the important activities of ANC is not being performed since anemic pregnant women who attend ANC clinics can not get iron supply. This implies that the quality of antenatal care is poor.

Drugs for care of complications of pregnancy and delivery were in markedly short supply compared to the national figures(19). Our study findings reveal that most of the institutions are grossly deficient in holding essential drugs which jeopardizes their ability to handle emergency obstetric care and to manage complicated cases before referral. The finding reveal that facilities necessary for managing complicated pregnancies and deliveries were nearly non existent in the two zones. To add to the seriousness of the problem, even simple wound cleansing solutions like alcohol and iodine were not available in the majority of health institutions surveyed.

Though sepsis is one of the important causes of maternal deaths in Ethiopia(6). The availability of antibiotics is low with only 18% of the institution having adequate supply. Ordinary

antibiotics like procaine penicillin, benzathine penicillin, ampicillin, tetracycline eye ointment, erythromycin and bactrim(trimethoprim sulfamethoxazole) were all available in adequate amount in only 18% of health institutions at the time of this survey. For example, ampicillin was available in only 36% of institutions, which is much less than 56% from the national study(19).

The strategies for prevention of STDs include health education, screening, case treatment and contact tracing(3Fathalla.M.F.). As shown in this study, there is no structure for implementing these strategies. Drugs that are important in the treatment of STDs were hardly available. For example, Spectinomycin was not available in 99%, and nystatin 93% of the health institutions; ceftriaxone which was not available in any of the health institutions. Though all health institutions of in the two zones claim to treat all STDs cases, the results of this survey show that this cannot be true given their serious drug shortage. In general, there is no organised STD control activities in either zone. This is a serious matter and a gross deficiency which cannot be taken lightly given that the national HIV/AIDS epidemic is progressing at alarming pace(23).

Facilities for family planning were also found to be deficient in a considerable proportion of the health institutions. Facilities in these rural institutions are very poor compared to institutions in the capital city, Addis Ababa(20). An adequate contraceptives mix was not available in a significant proportion of the institutions. It is interesting to note that 34% of health institutions reported that they could not supply their client with the same contraceptives they want continuously throughout the year because shortages of contraceptives occur so they have to switch their clients to other methods to counter the shortage. This study indicates that health institutions have deficiencies in the area of family planning service due to the lack of basic commodities, the absence of adequate rooms for counselling activities, the fact that safety and sterility of basic equipment can not be guaranteed in rooms with no functional water supply, and due to the shortage of basic equipment such as sterilizers, and blood pressure apparatus.

A significant proportion of health institutions did not have adequate EPI facilities.

Refrigerators, steam sterilizers and vaccines were not available in adequate amount. The situation is similar to that was reported from west Gojam(24) and also similar to 89% availability for refrigerator but less than 100% availability in study in southern Ethiopia by BASICS Project(25). The deficiency observed in this study is a serious obstacle to achieving the EPI objective by limiting the outreach services and increasing the missed opportunities.

Essential laboratory tests for reproductive health care were not available in the majority of health institutions surveyed. Syphilis test was available in only 3% of health institutions, which is much less than 17% found in the national study(19). This implies that nearly all health institutions do not screen pregnant women for syphilis. Hemoglobinometer was available in 11% of institutions which is almost half the 21% figure found in the national level(19MOH Ethiopian safe Motherhood Need Assessment. 1996). Tests for urine analysis were available in 16% of the health institutions which, again, was low in comparion to 28% found in the national study(19) but it is similar to the report in rural Nigeria(22). There was only one health institution which had HIV test. The absence of essential laboratory tests in the health institutions greatly affects the quality of maternal care. With such kind of ANC service, it would be very difficult to expect any meaningful impact on the level of maternal morbidity and mortality in this country.

One of the most important functions of health institutions with regard to reproductive health is imparting reproductive health information to the clients and community which they are serving. However, this was not possible in the majority of surveyed institutions because they do not have the necessary IEC materials. Posters were the most widely(51.3%) available IEC materials, similar to the national study(19) but less than 90% availability of poster in the BASICS Study(25).

A continuous and adequate supply of clean water in a health institution is essential in order to provide clean and safe services by maintaining hygienic conditions of the instruments and equipment, and the general cleanliness of the institution. As documented in this study only 40.5% of health institutions did have water source in the compound which is less than 68% of availability

of potable water supply reported in BASICS study(25). The absence of water sources in the majority of health institutions may creates inconviences for the health workers since they often have to go some distance away to fetch water from a nearby river or spring. The absence of water sources in the compounds of most institutions implies that most of the health institutions do not have the capacity to maintain a clean and safe environment.

Of the 74 health institutions surveyed, only 11% were found to have means of communication, which is far less than the 29% found in the national survey(19). In addition, only 33.8% of health institutions surveyed had no transport facility during the survey time.

Eleven years have passed since the international community endorsed the safe motherhood initiative to combat high maternal mortality and morbidity on three fronts simultaneously namely (i) reducing the number of high risk and unwanted pregnancies,(ii) reducing the number of obstetric complications, and (iii) reducing the case fatality rate in women with complications(26, 27). The safe motherhood initiative devised four feasible strategies to achieve these goals: family planning; quality antenatal care; clean and safe delivery and essential obstetric care(8,29). However, this study indicates that the structural settings of the health institutions of the two zones are very poor and are not in a position to meaningfully contribute to the safe motherhood initiative. The findings of this study have implications for policy-makers at all levels in that it urges them not only to concentrate on constructing new institutions to increase coverage but also to consider ways of revitalizing the existing health institutions. The implication for implementors at the lower level is that they have to work hard to present the problems to higher bodies so that they get enough budget allocated to correct the structural deficiencies. Unless corrective actions are taken without further delay, the efforts being made to prevent maternal mortality and morbidity cannot be achieved.

Assessment of the quality of health care considers three dimensions: structure, process, and outcome. This study, however, focused only on the structural aspects which may be a limitation. To minimize information bias standard questionnaire developed by WHO was used. To minimize

interviewers bias experienced senior nurses were used as data collectors. They received adequate and careful training by the principal investigator. They were well acquainted with the data collection instrument during the training and during the pretest. To enhance the likelihood of collecting adequate information from service provider and the completion of all parts of the questionnaire by the data collector, the data collector had to get on each page of the questionnaire stamp of the respective health institution before leaving the institution which was surveyed. The 94% coverage of the health institutions gives the study a full representation of the area. The finding of the study can be generalizable to many rural setting in Ethiopia.

7. CONCLUSION.

Based on the results of the study, a number of conclusions can be made:

1. 83.8% of the health institutions do not have an adequate and separate delivery room with a functional water-sink, delivery coach, and sufficient beds for mothers and neonates.
2. 72.9% of the health institutions do not have the absolute minimum required equipment for delivery care and while 96% of them do not have absolute minimum required equipment for neonatal care
3. Consumable supplies (i.e., gloves, disposable syringes and needles, intravenous fluids giving sets and cord-tie) were in short of supply in 82.4% of the health institutions.
4. Basic equipment for maternity care, for example sterilizers, were absent in 82.4%, and equipment for uterine evacuation was absent in 89.2% of the health institutions.
5. Essential drugs were not widely available, both in quantity and quality:

   ferrous salt was not available in 78.4% of the institutions;

   intervenous fluids was not available in 68.9% of the health institutions;

   ampicillin capsule was not available in 63.5% of the institutions:

   ergometrine injection was not available in 33.8% of the institutions:

   methyl dopa was not available in 86.5% of the institutions; and

   diazepam was not available in 93.2% of the institutions
6. Family planning services were grossly deficient in many health institutions: only 1.4% of the health institutions had all FP commodities(i.e., oral contraceptives, injectable contraceptives, condom, diaphragm, and IUDs) at the time of data collection.

7. None of the health institutions had the vaccines, equipment and facilities needed for EPI services. For example:

   a refrigerator was not available in 20.2% of the institutions;

a steam sterilizer was available in 39.1% of the institutions; and

BCG, Polio, DPT, Measles, TT vaccines were no available in 22.9% of the institutions.

8. Essential laboratory tests are mostly not available, for example:

syphilis test was not available in 97.2% of the institutions;

Hemoglobinometer was not available in 89.2% of the institutions; and

means for urine analysis was not available in 83.7% of the institutions.

9. Materials for IEC(posters,flip charts, pamphlets and brochures) were not available in 87.8% of the of health institutions.

10. 59.4% of the health institutions had no water sources in their compound.

11. 89.2% of the institutions had no means of communication such as two-way radios or telephone.

12. 33.8% of the institutions had no transport facilities.

It can be concluded, given the above facts that the structural setting for safe motherhood (mother-baby) package is very poorly organized in the majority of the health institutions studied. In their present state of services, no reduction in the reproductive morbidity and mortality can be expected in the country.

8. RECOMMENDATIONS

Efforts should focus on correcting structural deficiencies and strengthening existing health institutions, as opposed to constructing new ones.

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10. **Annex 1:** Summary of the study finidngs of Gurage zone summarized in eight tables(Table,10.1..... table,10.8)

Table 10.1. The availability of facilities for delivery care in health institutions of Gurage Zone, 1998

Facilities	H.S(n=28)	H.C(n=10)	Hosp(n=1)	Total(n=39)
For delivery care:				
Delivery room	16(57.1%)	10(100%)	1(100%)	27(64.1%)
Delivery couch	21(75%)	8(80%)	1(100%)	30(76.9%)
Water availabl	6(21%)	7(70%)	1(100%)	14(53.9%)
Bed for mothers and neonates	5(17.8%)	4(40%)	1(100%)	10(25.6%)
All available	2(7.1%)	2(20%)	1(100%)	5(12.8%)
Equip.for delivery Care:				
Scissors	19(67.8%)	7(70%)	1(100%)	27(69.2%)
Suture materials	7(25%)	2(20%)	1(100%)	10(25.6%)
Needle holder	20(71.4%)	8(80%)	1(100%)	29(74.3%)
All available	6(21.4%)	2(20%)	1(100%)	9(23%)
For Neonatal Care:				
Cloths	5(17.8%)	3(30%)	1(100%)	9(23%)
Blanket to wrap baby	4(14.3%)	2(20%)	1(100%)	7(17.9%)
Mucus extractor	9(32.1%)	3(30%)	1(100%)	13(33.3%)
Bag and mask	3(10.7%)	3(30%)	1(100%)	7(17.9%)
All available	1(3.6%)	1(10%)	1(100%)	3(7.7%)
Consumable supplies:				
Gloves	20(71.4%)	6(60%)	1(100%)	27(69.2%)
Dispo syringes and needles.	13(46.4%)	2(20%)	1(100%)	16(41%)
IV kit	4(14.3%)	5(50%)	1(100%)	10(25.6%)
Cord tie	5(17.8%)	1(10%)	1(100%)	7(17.9%)
All available	3(10.7%)	0%	1(100%)	4(10.3%)

Table 10.2. Availability of basic equipment for maternity care in health Institutions of Gurage Zone, 1998.

Facilities	HS(n=28)	HC(n=10)	Hosp(n=1)	Total(n=39)
Basic equipment :				
Sterilizer	2(7.1%)	6(60%)	1(100%)	9(23%)
B.P appara	24(85.7%)	10(100%)	1(100%)	35(89.7%)
Stethoscope	24(85.7%)	8(80%)	1(100%)	33(84.6%)
Fetostethoscope	22(78.6%)	10(100%)	1(100%)	33(84.6%)
Infant wei scal	13(46.4%)	7(70%)	1(100%)	21(53.8%)
Vacuum extractor	8(28.6%)	8(80%)	1(100%)	17(43.6%)
Thermometer	23(82.1%)	8(80%)	1(100%)	39(74.3%)
Speculum	19(67.9%)	9(90%)	1(100%)	29(74.3%)
Screen	13(46.4%)	4(40%)	1(100%)	18(46.2%)
Adult Wei scale	18(64.3%)	7(70%)	1(100%)	26(66.7%)
Couch	22(78.6%)	8(10%)	1(100%)	31(79.5%)
Tape-meter	6(21.4%)	3(30%)	1(100%)	10(25.6%)
All available	0%	0%	0%	0%
Equipment for uterine evacuation:				
Vaginal speculum	16(57.1%)	10(100%)	1(100%)	27(69.23%)
Packing forceps	6(21.4%)	8(80%)	1(100%)	15(38.5%)
Toothed tenaculum	2(7.1%)	5(50%)	1(100%)	8(20.5%)
Dressing forceps	7(25%)	6(60%)	1(100%)	14(35.9%)
Uterine dilator	1(3.5%)	4(40%)	1(100%)	6(15.4%)
Uterine curettes	3(10.7%)	4(40%)	1(100%)	6(15.4%)
Uterine sound	2(7.1%)	4(40%)	1(100%)	6(15.4%)
All available	1(3.6%)	4(40%)	1(100%)	6(15.4%)

Table 10.3. Availability of supply of drugs for maternity care in health institutions of Gurage Zone, 1998

Facilities	H.S(n=28)	H.C(n=10)	Hosp(n=1)	Total(n=39)
Basic drugs for maternity care:				
Ferrous salt	6(21.4%)	2(20%)	1(100%)	9(23.1%)
TT injection	20(71.4%)	9(90%)	1(100%)	30(76.9%)
Lidocaine(2%)	22(78.6%)	10(100%)	1(100%)	33(84.6%)
Pethidine	0%	0%	0%	0%
All available	0%	0%	0%	0%
Drugs for care of complications:				
Ergometrine injection	21(75%)	6(60%)	1(100%)	28(71.8%)
IV fluids	5(18.5%)	4(40%)	1(100%)	10(26.3%)
Oxytocin	1(3.6%)	2(20%)	1(100%)	4(10.3%)
Hydralazine	1(3.6%)	0%	1(100%)	2(5.1%)
Methyl dopa	2(7.1%)	2(20%)	1(100%)	5(12.8%)
Magnesium sulfate	0%	1(10%)	0%	1(2.5%)
Diazepam	1(3.6%)	2(20%)	1(100%)	4(10.3%)
All available	0%	0%	0%	0%
Drugs for routine treatment:				
Chloroquine tablets	11(39.3%)	6(60%)	1(100%)	18(46.1%)
injection	6(21.4%)	1(10%)	1(100%)	8(20.5%)
Quinine injection	1(3.6%)	2(20%)	1(100%)	4(10.3%)
Ergometrine tablet	2(7.1%)	2(20%)	1(100%)	5(12.8%)
Mebendazole	16(57.1%)	6(60%)	1(100%)	23(58.9%)
Metronidazole	16(57.1%)	5(50%)	1(100%)	22(56.4%)
Savlon Solu	23(82.1%)	9(90%)	1(100%)	33(85.6%)
Alcohol Solu	6(21.4%)	2(20%)	1(100%)	9(23%)
Iodine Solu	1(3.5%)	0%	0%	1(2.5%)
Soap	25(89.3%)	8(80%)	1(100%)	34(87.3%)
All available	0%	0%	0%	0%

Table 10.4. Availability of anti-infective drugs for reproductive health care in health institutions of Gurage Zone, 1998.

Antiinfectives:	H.S(n=28)	H.C(n=10)	Hosp(n=1)	Total(n=39)
Antibacterials:				
Pro penicillin	16(57.1%)	4(40%)	1(100%)	21(53.8%)
Benz penicillin	15(53.6%)	4(40%)	1(100%)	20(51.2%)
Ampicillin	11(39.3%)	4(40%)	1(100%)	16(41.1%)
TTC eye ointment1	5(53.6%)	7(70%)	1(100%)	23(58.9%)
Erythromycin	0%	1(10%)	1(100%)	13(33.3%)
Bactrim	9(32.1%)	3(30%)	1(100%)	13(33.3%)
All available	6(21.4%)	1(10%)	1(100%)	8(20.5%)
Drugs for STDs:				
Nystatin	2(7.1%)	0%	1(100%)	3(7.7%)
Spectinomycin	0%	0%	0%	0%
Ceftriaxon	0%	0%	0%	0%
All available	0%	0%	0%	0%

Table 10.5. Availability of facilities for family planning service in health institutions Gurage Zone, 1998

Facilities:	H.S(n=28)	H.C(n=10)	Hosp(n=1)	Total(n=39)
For family planning				
FP room	8(28.5%)	7(70%)	1(100%)	16(41%)
Couch	2(7.1%)	4(40%)	1(100%)	7(17.9%)
Working water	5(17.8%)	5(50%)	1(100%)	11(28.2%
Trained worker for FP	22(78.7%)	8(80%)	1(100%)	31(79.5)
Trained to counsel	22(78.7%)	8(80%)	1(100%)	31(79.5)
Room for counsel	2(1.4%)	3(30%)	1(100%)	6(15.4%)
Service available				
Monday to Friday	26(92.8%)	1(10%)	1(100%)	37(94.9%)
Screen	17(46.4%)	4(40%)	1(100%)	18(46.6%)
BP apparatus	24(85.7%)	9(90%)	1(100%)	34(87.2%))
Stethoscope	24(85.7%)	8(80%)	1(100%)	33(84.6%)
Weight Scale	18(64.3%)	7(70%)	1(100%)	26(66.7%)
Can meet needs	21(80.7%)	8(80%)	0%	29(80.5%)
All available	0%	0%	0%	0%
contraceptives				
Any oral type	20(71.4%)	9(90%)	0%	29(74.4%)
Any injectabl	16(57.1%)	8(80%)	0%	24(61.5%)
Condom	19(67.8%)	7(70%)	0%	26(66.7%)
Diaphragm	2(7.1%)	2(20%)	0%	4(10.2%)
IUDs	0%	3(30%)	0%	3(7.6%)
All available	0%	1(10%)	0%	1(2.6%)

Table 10.6. Availability of facilities for EPI services in health institutions of Gurage Zone, 1998

Facilities:	H.S(n=28)	H.C(n=10)	Hosp(n=1)	Total(n=39)
Tables and chairs	16(57.1%)	9(90%)	1(100%)	26(66.7%)
Water sink	4(14.2%)	5(50%)	1(100%)	10(25.6%)
Trained on EPI	20(71.4%)	7(70%)	1(100%)	28(71.8%)
Vaccination card	7(25%)	4(40%)	1(100%)	12(30.7%)
Vacc Stock card	7(25%)	6(60%)	1(100%)	14(35.9%)
Weighing scale	17(60.7%)	7(70%)	1(100%)	25(64.1%)
Forceps	20(71.4%)	8(80%)	1(100%)	29(74.3%)
Refrigerator	24(85.7%)	9(90%)	1(100%)	34(87.2%)
Sterilizer	19(67.8%)	5(50%)	1(100%)	25(64.1%)
Syringes	18(64.3%)	3(30%)	1(100%)	22(56.4%)
Needles	19(67.8%)	3(30%)	1(100%)	23(58.9%)
Working timer	15(53.6%)	8(80%)	1(100%)	24(85.7%)
Vaccine carrier	20(71.4%)	9(90%)	1(100%)	30(76.9%)
Cold Box	11(39.3%)	7(70%)	1(100%)	19(48.7%)
Ice packs	26(92.8%)	8(80%)	1(100%)	35(89.7%)
Plastic cup	15(53.6%)	5(50%)	1(100%)	21(53.8%)
Vaccines	22(78.7%)	9(90%)	1(100%)	32(82.5%)
TT vaccine	20(71.4%)	9(90%)	1(100%)	30(76.9%)
All available	0%	0%	0%	0%

Table 10.7. Availability of essential laboratory test, at the health institutions of Gurage Zone, 1998

Laboratory tests:	H.S(n=28)	H.C(n=10)	Hosp(n=1)	Total(n=39)
Essential tests				
Syphilis test	1(3.8%)	0%	1(100%)	2(5.1%)
Hgb/Hct test	2(7.1%)	0%	1(100%)	4(10.2%)
Urine analysis	2(7.1%)	3(30%)	1(100%)	6(15.4%)
All available	0%	0%	1(100%)	1(2.6%)
Other tests				
Gram stain	2(7.1%)	2(20%)	1(100%)	5(12.8%)
WBC,differential	2(7.1%)	1(10%)	1(100%)	4(10.2%)
Pregnancy test.	0%	2(20%)	1(100%)	3(7.8%)
Wet mount test	1(3.8%)	2(20%)	1(100%)	4(10.2%)

Table 10.8. Availability of Health Education Materials in the Health Institutions of Gurage zone, 1998.

IEC materials:	H.S(n=28)	H.C(n=10)	Hosp(n=1)	Total(n=39)
Poster	15(53.6%)	6(60%)	0%	22(56.4%)
Flip chart	8(28.6%)	5(50%)	1(100%)	14(35.9%)
Brochure	6(21.4%)	3(50%)	1(100%)	10(28.6%)
Pamphlet	6(21.4%)	5(50%)	1(100%)	12(30.7%)
All available				

11.Annex 2: Summary of the study finidngs of Hadiya Gurage zone in eight tables(Table,11.1..... table,11.8)

Table 11.1. The availability of facilities for delivery care in health institutions of Hadiya zone, 1998

Facilities:	H.S(n=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
For delivery care:				
Delivery room	21(72.4%)	5(100%)	1(100%)	27(77.1%)
Delivery couch	21(72.4%)	4(80%)	1(100%)	26(74.3%)
Functional water sink in	9(31%)	2(40%)	1(100%)	12(34.3%)
Beds for mothers and neonates	9(31%)	2(40%)	1(100%)	12(34.3%)
All available	3(10.3%)	1(20%)	1(100%)	5(14.3%)
Equip.for delivery Care:				
Scissors	13(44.8%)	5(100%)	1(100%)	19(54.3%)
Suture materials'	9(31%)	1(20%)	1(100%)	11(31.4%)
Needle holder	10(34.4%)	3(60%)	1(100%)	14(40%)
All available	9(31.%)	1(20%)	1(100%)	11(31.4%)
For Neonatal Care:				
Cloths	5(15.2%)	2(40%)	0%	7(20%)
Blanket to wrap baby	4(13.8%)	2(40%)	0%	6(17.1%)
Mucus extractor	10(34.5%)	2(40%)	1(100%)	13(37.1%)
Bag and mask	2(6.8%)	1(20%)	1(100%)	4(11.4%)
All available	0%	0%	0%	0%
Consumable supplies:				
Gloves	20(68.9%)	3(60%)	1(100%)	24(68.6%)
Dispo syringes and needles.	13(44.8%)	3(60%)	-	16(45.7%)
IV kit	12(41.4%)	4(80%)	-	16(45.7%)
Cord tie	12(41.4%)	3(60%)	-	15(42.8%)
All available	8(27.6%)	1(20%)	0%	9(25.7%)

Table 11.2. Availability of basic equipment for maternity care in health Institutions of Hadiya Zone, 1998.

Facilities:	H.S(n=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
Basic equipment :				
Sterilizer	2(6.9%)	1(20%)	1(100%)	4(11.4%)
B.P apparatus	15(51.7%)	5(100%)	1(100%)	21(60%)
Stethoscope	17(58.6%)	5(100%)	1(100%)	23(65.7%)
Fetostethoscope	23(79.3%)	5(100%)	1(100%)	29(82.8%)
Infant weit scale	18(62.1%)	3(60%)	1(100%)	22(62.8%)
Vacuum extractor	3(10.3%)	3(60%)	1(100%)	7(20%)
Thermometer	22(75.8%)	5(100%)	1(100%)	28(80%)
Speculum	12(41.4%)	5(100%)	1(100%)	18(51.4%)
Screen	6(20.7%)	1(20%)	1(100%)	8(22.8%)
Adult Wei scale	16(55.2%)	3(60%)	1(100%)	20(57.1%)
Couch	17(58.6%)	3(60%)	1(100%)	21(60%)
Tape-meter	7(24.1%)	0%	1(100%)	8(22.8%)
All available	0%	0%	0%	0%
Equipment for uterine evacuation:				
Vaginal speculum	11(37.9%)	5(100%)	1(100%)	17(48.6%)
Packing forceps	7(24.1%)	4(80%)	1(100%)	12(34.3%)
Toothed tenaculum	4(13.8%)	1(20%)	1(100%)	6(17.1%)
Dressing forceps	7(24.1%)	3(60%)	1(100%)	11(31.4%)
Uterine dilator	2(6.9%)	1(60%)	1(100%)	4(11.4%)
Uterine curettes	2(6.9%)	0%	1(100%)	3(8.6%)
Uterine sound	1(3.4%)	0%	1(100%)	2(5.7%)
All avaiiable	1(3.6%)	0%	1(100%)	2(5.7%)

Table 11.3. Availability of supply of drugs for maternity care in health institutions of Hadiya zone, 1998

Facilities:	H.S(n=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
Basic drugs for maternity care:				
Ferrous salt	5(17.2%)	1(20)	1(100%)	7(20%)
TT injection	19(65.5%)	5(100)	1(100%)	25(71.4%)
Lidocaine(2%)	15(51.7%)	1(20%)	0%	16(45.7%)
Pethidine	0%	0%	0%	0%
All available	0%	0%	0%	0%
Drugs for care of complications				
Ergometrine injection	18(62%)	3(60%)	1(100%)	21(60%)
IV fluids	12(41.3%)	1(20%)	1(100%)	14(40%)
Oxytocin	2(6.9%)	3(60%)	1(100%)	6(17.1%)
Hydralazine	0%	0%	0%	0%
Methyl dopa	1(3.4%)	3(60%)	1(100%)	5(14.3%)
Magnesium sulfate	0%	0%	0%	0%
Diazepam	0%	0%	1(100%)	1(2.8%)
All available	0%	0%	0%	0%
Drugs for routine treatment				
Chloroquine tablets	17(58.6%)	2(40%)	1(100%)%	20(57.1%)
injection	8(25.6%)	1(20%)	1(100%)	10(28.7%)
Quinine injection	1(3.4%)	1(20%)	0%	2(5.7%)
Ergometrine tablet	3(10.3%)	0%	0%	3(8.6%)
Mebendazole	15(51.7%)	1(20%)	1(100%)	17(48.6%)
Metronidazole	12(41.4%)	2(40%)	1(100%)	15(42.8%)
Savlon Solu	19(65.5%)	3(60%)	1(100%)	23(65.7%)
Alcohol Solu	10(34.5%)	2(40%)	1(100%)	13(37.1%)
Iodine Solution	0%	0%	0%	0%
Soap	15(51.7%)	1(20%)	1(100%)	17(48.6%)
All available	0%	0%	0%	0%

Table 11.4. Availability of anti-infective drugs for reproductive health care in health institutions of Hadiya Zone, 1998.

Antiinfectives:	H.S(n=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
Antibacterials:				
Pro penicillin	14(48.3%)	4(80)	1(100%)	19(54.3%)
Benza penicillin	13(44.8%)	4(80)	1(100%)	18(51.4%)
Ampicillin	9(31%)	2(40)	1(100%)	12(34.3%)
TTC eye ointment	17(58.6%)	3(60%)	1(100%)	21(60%)
Erythromycin	0%	0%	1(100%)	1(2.8%)
Bactrim	6(20.7%)	1(20%)	1(100%)	8(22.8%)
All available	4(13.8%)	1(20%)	1(100%)	5(14.3%)
Drugs for STDs				
Nystatin	2(6.9%)	0%	1(100%)	3(8.6%)
Spectinomycin	0%	0%	1(100%)	1(2.8%)
Ceftriaxone	0%	0%	0%	0%
All available	0%	0%	0%	0%

Table 11.5. Availability of facilities for family planning service in health institutions of Hadiya Zone, 1998

Facilities:	H.S(n=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
For family planning:				
FP room	5(17.2%)	2(40%)	1(100%)	8(22.8%)
Couch	6(20.7%)	1(20%)	1(100%)	8(22.8%)
Working water sink	6(20.7%)	1(20%)	1(100%)	8(22.8%)
Trained worker for FP	24(82.7%)	2(40%)	1(100%)	27(77.1%))
Trained to counsel	18(62.1%)	2(40%)	1(100%)	21(60%)
Room for counselling	5(17.2%)	1(20%)	0%	6(17.1%)
Service available				
Monday to Friday	22(75.8%)	4(80%)	1(100%)	27(77.1%)
Screen	4(13.8%)	2(40%)	1(100%)	7(20%)
BP apparatus	15(51.7%)	5(100%)	1(100%)	21(60%)
Stethoscope	15(51.7%)	5(100%)	1(100%)	21(60%)
Weight Scale	17(58.6%)	3(60%)	1(100%)	21(60%)
Can meet needs	13(44.8%)	2(60%)	1(100%)	16(45.7%)
All available	0%	0%	0%	0%
contraceptives:				
Any oral type	17(58.6%)	3(60%)	1(100%)	21(60%)
Any injectable	13(44.8%)	3(60%)	1(100%)	17(48.6%)
Condom	10(68.9%)	4(80%)	1(100%)	25(71.4%)
Diaphragm	2(6.9%)	0%	0%	2(5.7%)
IUDs	0%	1(20%)	1(100%)	2(5.7%)
All available	0%	0%	0%	0%

Table 11.6. Availability of facilities for EPI services in health institutions of Hadiya Zone, 1998

Facilities:	H.S(n=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
Tables and chairs	15(51.7%)	3(60%)	1(100%)	19(54.3%)
Working water sink	8(27.6%)	1(20%)	1(100%)	10(28.6%)
Trained on EPI	19(67.8%)	3(60%)	1(100%)	23(67.7%)
Vaccination card	20(68.9%)	2(40%)	1(100%)	23(67.7%)
Vacci Stock card	9(31%)	0%	1(100%)	10(28.6%)
Weighing scale	18(62.1%)	3(60%)	1(100%)	22(62.8%)
Forceps	19(67.8%)	4(80%)	1(100%)	24(68.6%)
Refrigerator	19(67.8%)	5(100%)	1(100%)	25(71.4%)
Sterilizer	18(62.1%)	1(20%)	1(100%)	20(57.1%)
Syringes	16(55.2%)	1(20%)	1(100%)	18(51.4%)
Needles	17(58.6%)	1(20%)	1(100%)	19(54.3%)
Functional timer	15(51.7%)	2(40%)	1(100%)	18(51.4%)
Vaccine carrier	18(62.1%)	4(80%)	0%	22(62.8%)
Cold Box	5(17.4%)	3(60%)	0%	8(22.8%)
Ice packs	20(68.9%)	4(80%)	1(100%)	25(71.4%)
Plastic cup	10(34.5%)	0%	1(100%)	11(31.4%)
Vaccines	19(65.5%)	5(100%)	1(100%)	25(71.4%)
TT vaccine	19(65.5%)	5(100%)	1(100%)	25(71.4%)
All available	0%	0%	0%	0%

Table 11. 7. Availability of essential laboratory test, at the health institutions of Hadiya Zone, 1998

Laboratory tests:	H.S(=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
Essential tests:				
Syphilis test	0%	0%	0%	0%
Hgb/Hct test	2(6.9%)	1(20%)	1(100%)	4(11.4%)
Urine analysis	4(13.8%)	1(20%)	1(100%)	6(17.1%)
All available	0%	0%	0%	0%
Other tests				
Gram stain	0%	0%	1(100%)	1(2.8%)
WBC, differential	4(13.8%)	1(20%)	1(100%)	6(17.1%)
Pregnancy test.	2(6.9%)	0%	1(100%)	3(8.6%)
Wet mount test	0%	1(20%)	1(100%)	2(5.7%)
All available	0%	0%	1(100%)	1(2.8%)

Table 11.8. Availability of Health Education Materials in the Health Institutions of Hadiya Zone, 1998.

IEC materials	H.S(n=29)	H.C(n=5)	Hosp(n=1)	Total(n=35)
Poster	15(51.7%)	1(20%)	0%	16(45.7%)
Flip chart	6(21.4%)	1(20%)	0%	7(20%)
Brochure	5(17.8%)	1(20%)	0%	6(17.1%)
Pamphlet	5(17.2%)	1(20%)	0%	6(17.1%)
All available				

12. Annex 3: Summary of the study finidngs of both Hadiy and Gurage zone in eight tables(Table, 12.1..... table, 12.8)

Table 12.1. The availability of facilities for delivery care in health institutions of Hadiya and Gurage Zone, 1998

Facilities:		Hadiya zone (n=35)	Gurgage zone(n=39)	Total(n=74)
For delivery care:				
	Delivery room	27(77%)	27(64.1%)	54(72.9%)
	Delivery couch	26(74.3%)	30(76.91%)	56(75.5%)
	Functional water sink	12(34.3%)	14(35.9%)	26(35.1%)
	Beds for mothers and neonates	12(34.3%)	10(25.6%)	22(29.7%)
	All available	5(14.3%)	5(12.8%)	10(13.5%)
Equip.for delivery Care:				
	Scissors	19(54.3%)	27(69.2%)	46(62.2%)
	Suture m aterials*	11(31.4%)	10(25.6%)	21(28.7%)
	Needle holder	14(40%)	29(74.3%)	43(58.1%)
	All available	11(31.4%)	9(23.1%)	20(27.0%)
For Neonatal Care:				
	Cloths	7(20%)	9(23%)	16(21.6%)
	Blanket to wrap baby	6(17.1%)	7(17.9%)	13(17.6%)
	Mucus extractor	4(11.4%)	13(33.3%)	26(35.1%)
	Bag and mask	13(37.1%)	7(17.9%)	11(14.9%)
	All available	0%	3(7.9%)	3(4.1%)
Consumable supplies:				
	Gloves	24(68.6%)	27(69.2%)	51(68.9%)
	Dispo syringes and needles.	16(45.7%)	16(41%)	32(43%)
	IV kit	16(45.7%)	10(25.6%)	26(35.1%))
	Cord tie	15(42.8%)	7(17.9%)	22(29.7%)
	All available	9(25.7%)	4(10.2%)	13(17.6%)

* Suture material include suturing needles and suturing cat gut or silk or similar materials.

Table 12.2. Availability of basic equipment for maternity care in health Institutions of Hadiya and Gurage zone, 1998.

Facilities:	Hadiya zone(n=35)	Gurage zone(n=39)	Total(n=74)
Basic equipment :			
Sterilizer	4(11.4%)	9(23%)	13(17.6%)
B.P apparatus	21(60%)	35(89.7%)	56(75.7%)
Stethoscope	23(65.7%)	33(84.6%)	56(75.7%)
Fetostethoscope	29(82.8%)	33(84.6%)	62(83.8%)
Infant wei scale	22(62.8%)	21(53.8%)	43(57.3%)
Vacuum extractor	7(20%)	17(43.6%)	24(32.4%)
Thermometer	28(80%)	32(82.1%)	60(81.1%)
Speculum	18(51.4%)	29(74.3%)	47(63.5%)
Screen	8(22.8%)	18(46.2%)	27(36.5%)
Adult Wei scale	20(57.1%)	26(66.7%)	47(63.5%)
Couch	21(60%)	31(79.5%)	52(81.5%)
Tape-meter	8(22.8%)	10(25.6%)	18(24.3%)
All available	0%	0%	
Equipment for uterine evacuation:			
Vaginal speculu	17(48.6%)	27(69.2%)	44(59.5%)
Packing forceps	12(34.3%)	15(38.5%)	27(33.8%)
Toothed tenaculum	6(17.1%)	8(20.5%)	14(18.9%)
Dressing forceps	11(31.4%)	14(35.9%)	25(33.8%)
Uterine dilator	4(11.4%)	6(15.4%)	10(13.5%)
Uterine curettes	3(8.6%)	6(15.4%)	9(12.2%)
Uterine sound	2(5.7%)	6(15.4%)	8(10.8%)
All available	2(5.7%)	6(15.4%)	8(10.8%

Table 12.3. Availability of supply of drugs for maternity care in health institutions of Hadiya and Gurage zones, 1998

Facilities	Hadiya zone(n=35)	Gurage Zone(n=39)	Total(n=74)
Basic drugs for maternity care:			
Ferrous salt	7(20%)	9(23.1%)	16(21.6%)
TT injection	25(71.4%)	30(76.9%)	55(74.3%)
Lidocaine(2%)	16(45.7%)	33(84.6%)	49(66.2%)
Pethidine	0%	1(5.1%)	2(2.7%)
All items available			
Drugs for care of complications:			
Ergometrine injection	21(60%)	28(71.8%)	49(66.2%)
IV fluids	14(40%)	10(26.3%)	23(31.1%)
Oxytocin	6(17.1%)	4(10.3%)	7(9.4%)
Hydralazine	0%	2(5.1%)	2(2.7%)
Methyl dopa	5(14.3%)	5(12.8%)	10(13.5%)
Magnesium sulfate	0%	1(2.5%)	1(1.4%)
Diazepam	1(2.8%)	4(10.3%)	5(6.8%)
All available	0%	0%	0%
Drugs for routine treatment:			
Chloroquine tablets	20(57.1%)	18(46.1%)	38(51%)
injection	10(28.7%)	8(20.5%)	18(24.3%)
Quinine injection	2(5.7%)	4(10.3%)	6(8.1%)
Ergometrine tablet	3(8.6%)	5(12.8%)	8(10.8%)
Mebendazole	17(48.6%)	23(58.9%)	40(54%)
Metronidazole	15(42.8%)	22(56.4%)	36(48,6%)
Savlon Solu	23(65.7%)	33(84.6%)	56(75.6%)
Alcohol Solu	13(37.1%)	9(23%)	22(29.7%)
Iodine Solu	0%	1(2.5%)	1(1.4%)
Soap	17(48.6%)	34(87.3%)	51(68.9%)
All available	0%	0%	0%

Table 12.4. Availability of anti-infective drugs for reproductive health care in health institutions of Hadiya and Gurage zones, 1998.

Antiinfectives:	Hadiya Zone(n= 35)	Gurage zone(n=39)	Total(n=74)
antibacterials			
Pro penicillin	19(54.3%)	21(53.8%)	40(54.1%)
Benz. penicillin	18(51.4%)	20(51.2%)	38(51.4%)
Ampicillin	12(34.3%)	16(41.2%)	27(36.5%)
TTC eye ointment	21(60%)	23(58.9%)	43(58%)
Erythromycin	1(2.8%)	2(5.1%)	2(2.7%)
Bactrim	8(22.8%)	13(33.3%)	21(28.8%)
All available	5(14.3%)	8(20.5%)	13(17.6%)
Drugs for of STDs:			
Nystatin	3(8.6%)	3(7.7%)	5(6.7%)
Spectinomycin	1(2.8%)	0%	1(1.4%)
Ceftriaxone	0%	0%	0%
All available	0%	0%	0%

Table 12.5. Availability of facilities for family planning service in health institutions of Hadiya and Gurage zones, 1998

Facilities:	Hadiya Zone(n=35)	Gurage zone(n=39)	Total(n=74)
For family planning:			
FP room	8(22.8%)	16(41%)	23(31%)
Couch	8(22.8%)	7(17.9%)	12(16.2%)
Working water sink	8(22.8%)	11(28.2%)	19(25.7%)
Trained worker for FP	27(77.1%)	31(79.5%)	58(78.3%)
Trained to counsel	21(60%)	31(79.5%)	52(70.2%)
Room for counselling	6(17.1%)	6(15.4%)	12(16.2%)
Service available Monday to Friday	27(77.1%)	37(94.9%)	64(86.5%)
Screen	7(20%)	18(46.6%)	25(33.8%)
BP apparatus	21(60%)	34(87.2%)	55(74.3%)
Stethoscope	21(60%)	33(84.6%)	54(72.9%)
Weight Scale	21(60%)	26(66.7%)	47(63.5%)
Can meet need	16(45.7%)	29(80.5%)	45(63.5%)
All available	0%	0%	0%
contraceptives:			
Any oral type	21(60%)	29(74.4%)	50(67.6%)
Any injectable	17(48.6%)	24(61.5%)	41(55.4%)
Condom	25(71.4%)	26(66.7%)	51(68.9%)
Diaphragm	2(5.7%)	4(10.2%)	6(8.1%)
IUDs	2(5.7%)	3(7.6%)	5(6.8%)
All available	0%	1(2.6%)	1(1.4%)

Table 12.6. Availability of facilities for EPI services in health institutions of Hadiya and Gurage Zones, 1998

Facilities:	Hadiya zone(n=35)	Gurage Zone(n=39)	Total(n=74)
Tables and chairs	19(54.3%)	26(66.7%)	45(60%)
Functional Water sink	10(28.6%)	10(25.6%)	20(27.2%)
Workers Trained on EPI service	23(67.7%)	28(71.8%)	51(68.9%)
Vaccination card	23(67.7%)	12(30.7%)	21(21.4%)
Vacci Stock card	10(28.6%)	14(35.9%)	24(32.4%)
Weighing scale	22(62.8%)	25(64.1%)	47(63.5%)
Forceps	24(68.6%)	29(74.3%)	42(56.8%)
Refrigerator	25(71.4%)	34(87.2%)	59(79.7%)
Sterilizer	20(57.1%)	25(64.1%)	45(60.8%)
Syringes	18(51.4%)	22(56.4%)	42(56.8%)
Needles	19(82.9%)	23(58.9%)	42(56.8%)
Functional timer	18(51.4%)	24(85.7%)	42(56.8%)
Vaccine carrier	22(62.8%)	30(76.9%)	52(70.3%)
Cold Box	8(22.8%)	19(48.7%)	27(36.5%)
Ice packs	25(71.4%)	35(89.7%)	60(83.3%)
Plastic cup	11(31.4%)	21(53.8%)	32(43.2%)
Vaccines	25(71.4%)	32(82.5%)	57(77.2%)
TT vaccine	25(71.4%)	30(76.9%)	55(74.3%)
All available	0%	0%	0%

Table 12.7. Availability of essential laboratory test, at the health institutions of Hadiya and Gurage zones, 1998

Laboratory tests:	Hadiya Zone(n=35)	Gurage Zone(n=39)	Total(n=74)
Essential tests:			
Syphilis test	0%	2(5.1%)	2(2.7%)
Hgb/Hct test	4(11.4%)	4(10.2%)	8(10.8%)
Urine analysis	6(17.1%)	6(15.4%)	12(16.2%)
All available	0%	1(2.6%)	1(1.4%)
Other tests:			
Gram stain	1(2.8%)	5(12.8%)	6(8.1%)
WBC, differential	6(17.1%)	4(10.2%)	10(13.5%)
Pregnancy test.	3(8.6%)	3(7.8%)	6(8.1%)
Wet mount test	2(5.7%)	4(10.2%)	6(8.1%)
All available	0%	1(2.6%)	1(1.4%)

Table 12.8. Availability of Health Education Materials in the Health Institutions of Hadiya and Gurage Zones, 1998.

IEC materials	Hadiya Zone(n=35)	Gurage Zone(n=39)	Total(n=74)
Poster	16(45.7%)	22(54.5%)	38(51.3%
Flip chart	7(20%)	14(35.9%)	19(25.7%)
Brochure	6(17.1%)	10(25.6%)	16(21.6%)
Pamphlet	6(17.1%)	12(30.7%)	18(24.3%)
All available			

13.ANNEX 4 : Survey Questionnaire

Survey on Reproductive Health Services

We are from the Department of Community Health, Faculty of Medicine, Addis Ababa University. The purpose of our visit is to carry out an assessment of the status of the REPRODUCTIVE HEALTH SERVICES(FP,ANC,DELIVERY,EPI,STDs,) in all health institutions in Gurage zone and Hadiya zones of the SNNPRS. The study is done as part of the requirement of a Masters Degree at Addis Ababa University. All the information collected in this study will kept confidential and will not be made available to any body else except for researchers directly involved in the study. Aggregate figures without a mention of the name of the institution and name of interviewee will be reported for consumption for the local planning and for general advocacy. Please be assured that this discussion is strictly confidential and that your name is not recorded. May I, now, continue with the questions?

We very much appreciate your cooperation!!

Survey Questionnaire on Reproductive Health Services

Name of Interviewer:
Date of Interview:

Health Institution Identification

001. Name of the health institution _____

002. Address: 2.1 Region_____
2.2 Zone _____ 2.3 Wereda_____

003. Category of the health institution:
1. Health station 2. Health centre 3. Hospital

004. Owner of the health institution:
1. Government 2. NGO
3. Private 4. Other(specify) _____

005. Year of establishment of the health institution: _____

006. Health worker interviewed and profession
1. Head of institution(profession)
2. Head of unit (specify) _____
3. Member of the institution(profession)
4. Institution administrator
5. Other(specify) _____

007. Health institution staff by category:

Category	Female	Male	Total
1. Technical			
Doctor			
Nurse			
lab technician			
Health Assistant			
Sanitarian			
Midwife			
2. Administrative			
Clerical			
Cleaning			
Guard			
Total			

008	What is the total population of the Wereda?		
090	What is the total catchment population of the health unit (including static and outreach)?		
010	What is the total catchment population within 5 k.m radius of the health unit (including static and outreach)?		

Plan document

	Action plans for specific activities	
011	Does the health institution have prepared action plan for the current budget year for FP, ANC, delivery, EPI and STD program activities and targets?	1 = yes 2 = no 3 = yes ,but for some of them
012	Is there clear job description for all staffs in this health institutions?	1 = yes 2 = no 3 = yes for same
013	Is there means of communication(telephone or radio)?	
	Logistics	
014	Does this health institution have transport facilities for outreach activities?	1 = Car 2 = Motorcycle 3 = Motor + car 4 = Bicycle 5 = Horse/mule 6 = none
015	If yes, is it functional?	1 = yes 2 = no
016	Is there enough budget for vehicle maintenance and fuel?	
017	Is there enough budget for per diem ?	
018	Are all components of RHS(FP,ANC, DEliv,EPI,STDs) delivered in the facility ?	
019	Are they integrated and provided daily?	
020	When was this health institution last supervised?	
021	Sources of light in this institution 1.24 hours electric city supply 2.no 3.Intermittent electric city supply 4.Kerosine head light 5.Kuraz	
022	Does the institution have stand by generator?	
023	What is the source of water for this health institution 1.Pipe water in the compound 2.no water source in the compound 3.Well water in the compound 4.Pipe and Well water in the compound 5.Spring water/river/pond out side the compound 6.Pipe water out side the compound 7.Well out side the compound	

laboratory facilities		1. available 2.not available
024	Syphilis test	
025	Gram stain	
026	Urine analysis	
027	Wet mount for trichomoniasis	
028	HIV test	
029	Pregnancy test	
030	Hgb/ Hct test	
031	CBC(WBC, differentia)	
Sterilization		
032	Sterilizer (dry oven autoclave)	
033	Boiling pan	
034	If yes to q 030and 031 indicate their numbers	Sterilizer(autoclave/ dry oven) Boiler
035	Stove	

1. **Delivery Services**

WHICH OF THE FOLLOWING ITEM ARE AVAILABLE AND IN SATISFACTORY CONDITION		1 = yes 2 = no
101	Does this health institution have delivery room?	
102	If yes to q 101 is there separate waiting and delivery room ?	
103	Does the delivery room have delivery coach ?	
104	Does the delivery room have sufficient light sources(lamp)?	
105	Does the delivery room have functional water sink for washing hands?	
106	Does this health institution have sufficient beds for mothers and neonates in post natal area. ?	
107	Who is mainly in charge of the delivery service in this health institution? 1. Doctor 2. Midwife 3. Nurse 4. Health assistant	
Registers		
108	Delivery register or log book	
Basic equipment		Enter correct number below 1 = Available and satisfactory 2 = Not available 3 = Available but not satisfactory 9 = Not applicable for this facility
109	Blood pressure apparatus(Sphygomanometer)	
110	Stethoscope	
111	Infant weighing scale	
112	Fetal stethoscope	

113	Clinical thermometer	
114	Manual vacuum aspirator (MVA)	
115	Protective clothing(drapes, Aprons, Shoes)	
116	Speculum(various sizes)	
117	Vacuum extractor	
118	Obstetric forceps	
Absolute minimum equipment for delivery		
119	Scissors	
120	Suture needles and suture material	
121	Needles holder,	
Absolute minimum equipment for neonatal care		
122	Cloth or towel to dry baby	
123	Blanket to wrap baby	
124	mucous extractor	
125	Bag and mask for neonatal resuscitation	
Basic equipment for uterine evacuation		
126	Vaginal speculum(sims)	
127	Sponge (ring)forceps or uterine packing forceps	
128	Single toothed tenaculum forceps	
129	Long dressing forceps	
130	Uterine dilators, size 13-27(French) (1 set)	
131	Sharp and blunt uterine curettes Size 0 or 00	
132	Malleable metal sound	
Essential drugs and consumable supplies		

For essential drugs and consumable supplies, it is sufficient to look for and see that a particular item is available ,regardless of condition or expiration date		enter correct number below 1 =seen at facility and adequate 2 =not seen at facility 3=seen at facility and inadequate 9=not applicable for this facility
134	Gloves	
135	Disposable syringes and needles	
136	IV kit	
137	Cord tie	
Referral for emergency cases		
138	Is there means of transferring complicated obstetric cases for referral?	
139	If no how is complicated obstetric case transferred? 1=by human shoulder 2=by public transport 3=private car	

2. Family Planning

WHICH OF THE FOLLOWING ITEMS ARE AVAILABLE AND IN SATISFACTORY CONDITIONS		
FP room		1 = yes 2 = Not available
201	Does this health institution have separate FP room	
202	Does the room have Gynaecological examination coach?	
203	Does the examination room have sufficient light source(lamp)?	
204	Does the examination room have functional water sink for washing hands?	
205	Who is mainly in charge in family planning in this health institution? 1.Doctor 2.Midwife 3.Nurse 4.Health assistant	
206	Is the person in charge of the programme trained in Family planning? 1=Yes 2=No	
207	IS the service provider trained to counsel?	
208	Is there separate room for counselling FP clients?	
209	Is checklist available on information for provider to cover during counselling session?	
210	ARE service available through the working days Monday- Friday?	
211	If no to q 210 how many days in week do you give FP?	
Registers		
212	Clinical management guidelines/flow charts for Family planning care	
213	Family planning register or log book	

214	Identification card Client record	
215	Reporting forms	
216	Stock card for commodities	
	Basic equipment	Enter correct number below 1 = Available and satisfactory 2 = Not available 3 = Available but not satisfactory 9 = Not applicable for this facility
217	Screen	
218	Blood pressure apparatus	
219	Stethoscope	
220	Weight scale	
221	Lamp/torch/light	
	Contraceptive	enter correct number below 1 =seen at facility and adequate 2 =not seen at facility 3=seen at facility and inadequate 9=not applicable for this facility
222	Oral contraception (any type)	
223	Injectable contraceptives (any type)	
224	Condoms	
225	Diaphragms with spermicide (nonxinonol)	
226	IUCDS/IUDS	
227	Voluntary surgical sterilization	
		1=yes 2=no
228	Can this health institution supply the same methods that the clients need continuously?	

229	If no for Q 227, How often are you out of stocks of contraceptive methods ?	1.once in a year 2.twice in a year 3.three times in a year 4.other specify
230	For how long month could the present stock is expected to serve your clients?	1.for one month 2.for two months 3.for three months 4.for four months 5.for six months 6.for nine months

3. Antenatal Care

WHICH OF THE FOLLOWING ITEMS ARE AVAILABLE AND IN SATISFACTORY CONDITIONS		
ANC room		1 = yes 2 = no
301	Does the room have examination coach ?	
302	Does the examination room have sufficient light source?	
303	Does the examination room have functional water sink for washing hands?	
304	Who is mainly in charge of ANC services in this health institution? 1 = Doctor 2 = Midwife 3 = Nurse 4 = Health assistant	
305	Is this person trained on ANC? 1 = Yes 2 = No	
	Registers	1 = yes, available in satisfactory condition 2 = not available 3 = yes, but not available in satisfactory condition
306	Clinical management guidelines/flow charts for antenatal care	
307	Antenatal care register or log book	
308	Identification card	
309	Client record	
310	Reporting forms	
311	referral forms	
Basic equipment		Enter correct number 1 = yes,available in satisfactory condition 2 = not available 3 = yes, but not available in satisfactory condition 9 = not applicable for this facility

12	screen	
313	Blood pressure apparatus	
314	Stethoscope	
315	Weight scale	
316	Lamp/torch/light	
317	Fetosthetoscope	
318	Tape meter	

4.EPI

	WHICH OF THE FOLLOWING ITEMS ARE AVAILABLE AND IN SATISFACTORY CONDITIONS	
EPI room		
		1=yes 2=no
401	Does the EPI room have adequate tables and chairs?	
402	Does the EPI room have sufficient light source?	
403	Does the EPI room have functional water sink for washing hands?	
404	Who is mainly in charge of EPI service in this health institution? 1=Doctor 2=Midwife 3=Nurse 4=Health assistant 5=Sanitarian	
405	Are they trained to run EPI service?	
	Registers	Enter correct number below 1= Available and satisfactory 2= Not available 3= Available but not satisfactory 9= Not applicable for this facility
406	Clinical management guidelines/flow charts for EPI	
407	EPI register or log book	
408	Children vaccination card	
409	vaccination record(tally sheets)	
410	vaccine Stock card	
411	EPI monitoring charts on the wall	
	Basic equipment	Enter correct

412	functional Timer(time clock)	
413	weighing scale	
414	functional Steam sterilizer	
415	Boiling pan	
416	Containers for needles and syringes	
417	Syringes	
418	Needles	
419	Pick up forceps for handling syringes and needles	
Cold chain equipment		
420	Refrigerator /freezer(kerosine/electrical/solar)	
421	Does the refrigerator have temperature monitoring	
422	Ice packs	
423	Vaccine carriers	
424	Cold box	
425	Plastic cup for Ice to stand vaccine in	
		1 =yes
426	If you use kerosine as energy source for cold chain,	
427	Is there shortage of spare parts of cold chain	
Vaccine		
428	BCG	
429	Polio	
430	DPT	
431	Measles	
432	TT vaccine	1 =yes
433	IS there stock out of vaccines in this health institution?	
434	If yes to 433 ,Which antigen is out of stock? Specify	
435	How often is the stock out in a year?	
436	EPI activities of this health institutions	

5.STD/HIV

	WHICH OF THE FOLLOWING ITEMS ARE AVAILABLE AND IN SATISFACTORY CONDITIONS	
501	Who is mainly in charge of STDs and HIV\AIDS management? 1=Doctor 2=Midwife 3=Nurse 4=Health assistant	
502	Did he receive training on STDs management? 1=Yes 2=No	
		1=yes 2=no
503	Is there a counselling service for HIV/STD in this health institution?	
504	Is the service provider trained to counsel ?	
505	Is there separate room for counselling HIV/STD cases?	
506	Is there organised STD control activities with case management and registration of cases?	
507	Is there mechanism for follow up of STD/HIV patients?	
	If there is no organized STD control activity **END INTERVIEW**	
	Registers	Enter correct number below 1= Available and satisfactory 2= Not available 3= Available but not satisfactory 9= Not applicable
508	Clinical management guidelines/flow charts for STD/AIDS health care service	
509	STD/HIV/AIDS register or log book	
510	Identification card	
511	Client record	
512	Reporting forms	

512	Reporting forms	
513	Stock card for STD drugs	
514	STD referral forms	

600 Clinic for youth

		1=yes 2=no
601	Is there clinic for youth(adolescents) in the in your area ?	

7.Drug and Health education materials

Drugs		Enter correct number below 1 = Available and satisfactory 2 = Not available 3 = Available but not satisfactory 9 = Not applicable for this facility
Anti-infectives drugs: antibacterial		
701	Procaine penicillin/Benzathin penicillin	
702	Ampicillin(capsule or injection)	
703	Sulfamethoxazole + Trimethoprim (Bactrim)	
704	Tetracyclines (ointment) or silver nitrate (eye drops)	
Anti-infective drugs: antimalarial		
705	Chloroquine (tablets)	
706	Quinine(injection) or chloroquine (injection	
Antianaemia drugs		
707	Iron + folic acid tablets	
Antihypertensive drugs		
708	Methyldopa or propranolol or any antihypertensive	
709	Hydralazine(injection)	
Anticonvulsive drugs		
710	Magnesium sulfate(injection) or Diazepam(injection)	
oxytocics		
711	Ergometrine tablets	
712	Ergometrine(injection) or Oxytocin (injection)	
Disinfectants and antiseptics		
713	Chlorhexidine or surgical spirit or any other/savlon/alcohol	
714	Soap	
Intravenous solutions		

Intravenous solutions		
715	saline solution or sodium lactate compound solution or any other	
Analgesics:		
716	Pethidine	
Anaesthetics : Local		
717	Lidocaine 2% or other	
Anti parasite		
718	Metronidazole	
719	Mebendazole	
STD drugs		
720	Nystatin	
721	Erythromycin tablets	
722	Spectinomicin(Togamicin)	
723	Ceftriaxone	
724	Cefixime	
725	Ciprofloxacin	
Educational materials...		
726	.....posters, flip charts, brochures, pamphlets on family planning	
727	... posters, flip charts, brochures, pamphlets on pregnancy	
728	... on warning signs of complications in pregnancy	
729	..... on postpartum or newborn care or breast-feeding and nutrition	
730	..... posters, flip charts, brochures, pamphlets on EPI	
731	.....posters, flip charts, brochures, pamphlets on sexually transmitted diseases/HIV/AIDS	

DECLARATION

I,the undersigned,declare that this thesis is my work and that all rources of material used for this thesis have been duly acknowledged.

Name Getachew Wako, MD

Signature _____

Place Addis Ababa

Date of submission: _____

The thesis has been submitted for examination with my approval as a university advisor.

Name Dr. Yemane Berhane _____