

**NATIONAL  
FISTULA NEEDS ASSESSMENT**

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**FOR**

**MOH AND UNFPA**

**ASMARA, ERITREA**

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## Table of contents

Table of contents .....	2
INTRODUCTION .....	4
Acknowledgements .....	5
Acronyms .....	6
Executive Summary .....	7
1. Background .....	17
TYPES of FGM .....	20
Study Justification.....	21
2. Study Objectives and Methodology .....	22
2.1 Study objectives .....	22
2.2 Methodology .....	22
2.2.1 Study sites and sample size of the study .....	24
2.2.2 Study Limitations .....	26
3. Findings.....	28
3.1 Demographic profile of the study population .....	28
3.1.2 Age, age of at marriage and at first delivery.....	28
3.1.3. Marital status, educational level and occupation .....	29
3.2 Previous obstetric history of the study population.....	29
3.2.1 Number of pregnancy, number of living children and stillbirth .....	29
3.2.2 Development of fistula and related to the birth order of the study group.....	30
3.2.3. Type, place of delivery and source of assistance during delivery .....	31
3.2.4. Number and percentage distribution of mothers who used HFs for delivery services by background characteristics .....	31
3.3. Previous operation performed.....	33
3.3.1. Frequency of operations performed, place and approach of surgery .....	33
3.4 Physical assessment .....	33
3.4.1 Client’s height and weight in cm and kilograms .....	33
3.4.2 Type of FGM .....	34
3.4.3.Types of pelvis.....	35
3.4.4. Type of fistulae among the study group .....	35
3.4.5. Condition of Perineal body .....	35
4. Focus Group discussions.....	36
4.1 Common reproductive health problems of women in the community .....	36
4.2 How many women are affected with urine incontinence.....	36
4.3 Do you know what causes such problem? .....	37
4.4 Are women with such health problems living in your village/community?.....	37
4.5 What do they do for living? .....	38
4.6 Do they go to health facilities for any help?.....	38
4.7 How can such reproductive health problems be prevented .....	38
5. Discussions .....	39
6. Recommendations and conclusions .....	44
7. Annexes.....	47
Annex 7.1.....	47

Annex 7.2..... 50

**Tables and figures**

Table 1..... 29  
Table 2..... 32  
Table 3.....32  
Table 4.....33  
Table 5.....34  
Table 6.....34  
Figure 1.....30  
Figure 2.....32  
Figure 3.....35

## **INTRODUCTION**

The study assessed women who developed VVF/RVF after childbirth in Anseba, Gash Barka, Debub, Maekel, Semenawi and Debubawi Keih Bahri zones.

The data collected will be documented and recommendations will be made to increase awareness on the causes, possible intervention by establishing fistula center and finally to outline the basic means of prevention (strengthen the essential and basic emergency obstetric service and its accessibility) of the problem. Introduce relevant strategic IEC intervention on danger signs during pregnancy and childbirth.

The study was conducted with the support and funding from UNFPA Eritrea coordinated by PHC Division, Hospital and Clinical health Service Division and Family and Reproductive Health head of MOH,

The study is presented as follows:

Part 1	Background
Part 2	Objectives and Methodology
Part 3	Findings on VVF/RVF assessment
Part 4	Findings on Focus group discussions
Part 5	Discussions
Part 6	Recommendations/conclusions
Part 7	Annexes

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## **Acronyms**

<b>AN</b>	<b>Anseba</b>
<b>ANC</b>	<b>Antenatal Care</b>
<b>CPD</b>	<b>Cephalo Pelvic Disproportion</b>
<b>DE</b>	<b>Debub</b>
<b>EDHS</b>	<b>Eritrean Demographic Health Survey</b>
<b>EMOC</b>	<b>Emergency Obstetrical Care</b>
<b>FGM</b>	<b>Female Genital Mutilation</b>
<b>FP</b>	<b>Family Planning</b>
<b>GB</b>	<b>Gash Barka</b>
<b>HF</b>	<b>Health Facility</b>
<b>IEC</b>	<b>Information Education and Communication</b>
<b>MA</b>	<b>Maekel</b>
<b>MoH</b>	<b>Ministry of Health</b>
<b>DKB</b>	<b>Debubawi Keih Bahri</b>
<b>RVF</b>	<b>Recto Vaginal Fistula</b>
<b>SKB</b>	<b>Semenawi Keih Bahri</b>
<b>TBA</b>	<b>Traditional Birth Attendant</b>
<b>TTBAs</b>	<b>Trained traditional birth attendants</b>
<b>VVF</b>	<b>Vesico Vaginal Fistula</b>

## **Executive Summary**

Almost there is lack of data about obstetric fistula in the country thus, the MOH in collaboration with UNFPA made an effort to have fistula needs assessment in the six zones. The Study was conducted between October 23 and November 14, 2003 in the six zones of the country. Two data collectors, three physicians, the principal investigator, the coordinator and two nurses in each assessment site interviewed eighty-two cases with VVF and RVF. Out of the eighty-two cases assessed 32 women had urethral fistula, 35 vesico vaginal fistula and 15 had recto vaginal fistula. Four of the thirty-five mothers with VVF had RVF as well. Two clients had colostomy for two and five years. Colostomy was performed to correct the VVF and later to repair the RVF according to a surgeon in Massawa hospital.

Women with severe degree of prolapsed uterus (4), rectocele and cystocele or both (many), second-degree perineal tears and women with fertility problems (16 +) following instrumental and/or cesarean section came for repair and solutions. Young adults (six), and children (three) who developed urine and/or bowel incontinence due to accidental trauma, pathological, and congenital defects, older women with stress incontinence (10) and many with urgency of micturation etc came for assessment. All were assessed but not included in the study.

Two study methods were used: a validated questionnaire and guides focus group discussions. All tools were prepared in English and were translated into local languages while interviewing and in the discussion sessions. All women with obstetric fistula were invited to come for assessment to the selected sites from October 23 to November 14, 2003 via radio messages in all nine local languages. Assessment was done for twenty-three days. The principal investigator from University of Asmara worked closely with the Directors of Hospitals & Clinical Services, Primary Health Care, Family & Reproductive Health head (MoH) and UNFPA, Eritrea. All mothers were assessed in the selected hospitals and MCH centers of the zones.

Zonal medical officers in each zone were informed about the obstetric fistula assessment project and were requested to prepare an assessment center, which would be convenient for the women and the daily activities of the health facility. Assessment dates was then scheduled accordingly.

Prior to the arrival of the assessment team, all zonal medical officers were reminded and when the team arrived in the selected health facility, the head of each HF was contacted to direct the team to the assessment quarter of the clinic.

Assessment centers were Jeko MCH center for Anseba and Barentu hospital for Gash Barka zones. For the convenience of the clients two-assessment sites were selected in Debub zone, Mendefera and Adi Keih hospitals. Amatero MCH center and Tio hospital were the assessment sites for Debubawi and Semenawi Keih Bahri respectively. The radio broadcast messages for Zoba Maekel included that all women who were not able to come to the zonal assessment sites were advised to come to Godayif health center in Asmara. Indeed many mothers came from Gash Barka, Debub and Anseba zones.

Focus group discussions were held in the assessment sites and there were seven guided focus group discussion groups (five FGD with women discussants only and two FGDs with men discussants). FGD participants were elderly women (TBAs), prominent people, woman community leader (a woman administrator) religious leaders, members of the national union of Eritrean women (NUEW) and health workers. Seventy eight (78) people (fifteen men and sixty-three women) participated in the discussion sessions. FGDs guidelines concentrated on reproductive health problems, how many women are affected at the community level, causes of such problem; where do the women (victims) live and what do they do for living, do they go to the health facilities for help, if so where do they go and how can this problem be prevented.

Data collection tools, questionnaire and FGD guidelines are in Annex 7.1 and annex 7.2. The sample size of the study was women who developed urine and/or bowel incontinence due to childbirth assessed in the assessment sites.

## Results

Mean age of the study population was 29 years and mean age at marriage and age at first delivery 16.5 and 19 years respectively. The minimum age at marriage and age at first delivery were 10 year and 14 years respectively.

Married women with VVF accounted for 14.6%. Divorced and women living together for 34.2% and 42.7% respectively. The educational level of the study group was almost forty nine percent (48.9%) illiterate, 26.8% could read and write. Women who had formal education grade two to six grade and above accounted for 24.3%. The study also assessed the occupation of the women and thirty seven percent (37.8%) were dependent on their parents and other close relatives. Merchants (local beer sellers) and farmers accounted for 14.6% while forty seven percent (47%) were housewives.

Forty percent (40%) of the cases were pregnant for the first time and women who were pregnant for their second and third time accounted for 23.2%. Almost 26% of the study population was pregnant for four to seven and more times. Refer figure 1.

Eighteen percent (18.3%) had one stillbirth and 12.2% had at least two stillbirth deliveries. Mothers who had living children during their first delivery were only four, which accounted for twelve percent (12%). Majority (87.9%) of the primigravida ones had stillbirth deliveries. Almost fifteen percent (14.6%) of the study population who were pregnant for their second time had one stillbirth delivery. The number of stillbirth deliveries decreased among multipara mothers.

Majority (57.3%) women developed fistula with their first delivery, 12.2% during second, 9.8% during 5<sup>th</sup> and 7.3% during 6<sup>th</sup> deliveries. Development of fistula decreased after the 8<sup>th</sup> delivery, which was 2.4%.

Fifty one percent (51.2%) of the study population had vaginal delivery. Instrumental vaginal delivery (Vacuum and/or forceps delivery) accounted for 29.3% and cesarean

section accounted for 19.5%. Forty women (48.8%) of the study population had hospital delivery; home and HS/HC deliveries were 39% and 12.2% respectively. Source of assistance for home delivery were two percent (2%) TTBAAs and almost thirty seven percent (36.6%) untrained TBAs. Health workers' (Nurse, midwives and/or associate nurses and doctors assistance) accounted for 28% and 33% of deliveries respectively.

Use of health facilities for delivery services by background characteristic. Higher proportion (61%) of women used either the HS/HC or hospital for delivery services and the proportion increased as the level of education of the study population increased. Higher proportion (41.5%) of women who were in their 14-20 years of age used the HF for their first delivery. However, figures do not indicate that they used the HF as all of them came too late to seek skilled assistance. Refer Table 3.

Women who had fistula repair before accounted for thirty seven percent (37.8%) compared to 62.2% who did not since the development of the problem.

Approach of the operation according the respondents were almost fifty five percent (54.8%) vaginal and nine percent (9.7%) abdominal and thirty five percent (35.5% both abdominal and vaginal approaches.

Forty three percent (43.2%) of the operated cases were operated in in Mekane Hiwet Maternity hospital. As indicated in table 4, almost twenty six percent (25.8%) of the cases were operated in neighboring countries.

### **Physical Assessment.**

The mean height and weight of the study population accounted for 148.7 cm and 45.1 kilograms respectively.

The practice of FGM in Eritrea is very high as well as the complication that occur immediately and later during childbirth. Sixty-seven (67.1%) percent in this study group had Type I FGM. Type II and III FGM accounted for 19.5% and 13.4%. Refer Table 5

One of the assessment indicators was to estimate the pelvis size of the study group. Four women (4.9%) had short diagonal conjugate measurement (promontory of sacrum was easily reached on vaginal examination) while 11% had either completely or partially closed vaginal canal (gyneatresia) that prevented further assessment. Women who could not tolerate vaginal examination due to severe pain accounted for 12.2%.

#### Type of fistulae

Women with vesico vaginal fistula accounted for 42.7%. Thirty nine percent (39%) and 18.3% had urethral and recto vaginal fistulae respectively. Fistula size was measured (at list of those who did not develop gyneatresia) and the mean size was 2.9 cms. In some cases only urine leakage through the vagina was observed. There were 11 (13.4%) cases with severe scarred vaginal tissue and three (3.6%) with complete closure (Gyneatresia) of the vagina

Fifteen (18.3%) women had first-degree tear, 5 (6.1%) women with severe second-degree tear and seven (8.5%) with third and fourth degree tear among the study group.

Cystocele, rectocele and uterine prolapse were some of the findings among women who developed fistula with their fourth and more deliveries. Many of the Fistula cases all rather were ashamed of their incontinence of urine/stool and of their offensiveness. Most had dermatitis over the vulva and both thighs.

#### Focus Group discussions

There were three groups of discussants. Elderly and middle aged women, parents (men) of the fistula cases and third one, which included the fistula cases (two sessions).

Women's reproductive health problems and other guided discussions opened by introduction and the ethical aspect of the information to be gathered. The reproductive health problems mentioned, number of affected women, where these women live, what they do for living, whether they seek medical support and the prevention aspect of the problems were discussed. All relevant and frequently mentioned points are documented below.

### **Common reproductive health problems of women in the community**

- Bleeding during pregnancy
- Bleeding after delivery
- Retained placenta
- Malpresentation such as breech during delivery
- Maternal and fetal distress during labor
- Urine incontinence
- Vaginal tear
- Uterine prolapse
- Maternal and fetal death

### **How many women are affected with urine incontinence**

There are about twenty of them in our sub-zone said one man from Dehub zone.

Many discussants said, “There are many women with such problems but most of them disappear and live in some semi-towns hiding from the community, some remain in their parent’s house as their husbands divorce them”. A second discussant said “Where ever they are they are socially isolated, do not participate in any of the community’s activities as they are ashamed of their offensiveness” He continued “There are a lot of them and we know them because they smell and are wet always”.

Women discussants in Dehubawi Keih Bahri said, “ Women with such problems live in the remotest area that is why they are not here to day”. They are isolated; they cannot listen to the radio. Traditionally majority of Afar women do not listen to the radio. The community members understand their problem and some provide them with milk and old clothing.

### **Do you know what causes such problem?**

Most discussants seem to have the awareness about the main cause of the problems and responses are documented below.

- Delayed labor
- Heavy workload during pregnancy
- Narrow pelvis
- FGM (mentioned by Afar women discussants)
- Early age marriage

- Destiny “almighty God’s will”<sup>1</sup>.
- Lack of skilled health workers in health facilities (discussant in Barentu)<sup>2</sup>

### **Are women with such health problems living in your village/community?**

Women with such problem live under the tree or a tent as they are always wet and smell urine. Some parents take them to unknown places like semi-towns and provide them with small amount of food ration and pay for the house rent as they think they brought shame on the family. They live far from their home village, some travel to neighboring countries to hide and/or seek medical aid.<sup>3</sup>

### **What do they do for living?**

Majorities depend on their parents. Some live in the street begging. Women who have living children live as second or third wives and raise their children.

Local administration offices provide them with:-

- Sick report (Poverty certification) for hospital, food ration and clothing etc.
- Parcel of land for farming

### **Do they go to health facilities for any help?**

All of them seek medical help but health workers tell them that their problem is beyond their capacity. Some health workers do advice the mothers with such problems to go abroad for treatment. Few leave the country in search of treatment.

### **How can such reproductive health problems be prevented?**

- To deliver in the health facilities however, we have the problem in the society (tradition and/or culture) that first child should be born and/or delivered at home in her mother’s house. Therefore, some who live in the cities also travel to the remote villages to deliver in their mother’s house and become the victims of such problems.
- Skilled and committed health workers in all HFs.

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<sup>1</sup> The fistula cases and some family members considered pregnancy and labor as natural events and complications were not perceived as meriting appropriate medical attention.

<sup>2</sup> Mothers who arrived at health facility after prolonged labor and assisted by vacuum/forceps think that the fistula was due to the instrumental and/or forcefully pulled delivery. Therefore they blamed the health workers for causing the problem.

<sup>3</sup> “We are abounded by our husbands and sometimes by our parents we could not get any medical treatment and we have no place to live with this urine dripping, wet clothing and smelling”.

- We know that FGM does contribute to difficult/prolonged labor but we cannot avoid it and women cannot answer such issues. (Afar discussant)

### **Recommendations**

This initial national fistula assessment is done after a long distance in time, as there are many victims with this problem and has been roaming here and there to look for solutions for their offensiveness in HFs and in neighboring countries.

The study documented the obstetric fistula situation in the country. All the social and cultural values documented in the study and the women's perception (according to the focus group discussants) about the health worker's behavior (needs further study) and their skill might have ultimately prevented appropriate delivery care. Thus, the followings are suggestion and/or recommendation, which would help the MOH in collaboration with UNFPA and other interested agents and the Family and reproductive health section (MOH) in particular to plan, to solve the problems and later to prevent the causes and put an end to the problem.

1. Continuous educational efforts on the community members including the leaders and other prominent people and to address the traditional practitioners to change their perception of pregnancy and childbirth complications as natural event and/or almighty God's will. Educate them about the causes of obstetric fistula.
2. Reproductive process should not be the women's domain and husbands should be involved in the health issues arising during pregnancy and delivery (Attend antenatal clinic at list once or twice and encourage their presence in the clinics/hospital during delivery).

3. Problems related to maternity and childbirth needs to be discussed at all health services where the nurses, midwives and other professionals are attending and all must be oriented to the problems and early detection of high-risk mother through appropriate monitoring and supervisory support.
4. Training and capacity building to improve the present situation of reproductive health care skill at all level of HFs.
  - Continuous in-service training to all nurses, midwives and associate nurses to increase their knowledge and skill to provide basic emergency obstetric care and to make them more responsive to the needs of the pregnant and laboring women.
  - Increase delivery coverage by skilled health personnel and by providing awaiting homes for high-risk cases so that women can wait delivery in the vicinity of referral maternity hospitals.
  - Increase number of TTBAAs at the community level with an emphasis on culture specific educational approaches during training.
  - Retraining and/or provide continued educational effort to upgrade their knowledge on identifying risk conditions and practice of timely referrals.
  - All practicing TBAs trained or untrained must be accountable to the village health committee and HF's staff in their vicinity.
5. **Strengthen IEC programs at the community and HFs regularly**
  - Teach all women and/or community member about proper nutrition, antenatal care, and delivery care.
  - IEC message on FGM should emphasis on immediate and long term reproductive health risks including the legality of the practice if possible based on documented films and/or clinical studies. Protection of baby girls from any physical harm.
  - Communicate the traditional/cultural values that dictate pregnant and delivering mothers.

- Use of mass media, women's organization and other ministries to improve the knowledge of mothers on risk conditions during pregnancy and childbirth.
- Community members both men and women, traditional birth attendants and older women should know regarding risk conditions during pregnancy and childbirth.
- Arrange school health education and include sex education to prevent unwanted and early pregnancy between girl and boys.

**6. Organize a fistula center.**

- Look for resource from NGOs, UNFPA country offices, other organizations, and interested individuals in and outside of the country.
- Look for convenient and conducive place where there would be ample water supply and enough space for gardens and temporary homes for the cases and guesthouses. Preferably out side of the city but easily accessible.
- Plan to train interested, committed and devoted paramedics or medical doctors to perform the operations.

**7. All women with urine/bowel incontinence need to be registered and appear in the HMIS reporting system and in the monthly report of the HFs.**

## **1. Background**

Eritrea is located in East Africa (Horn of Africa). Its boundaries are the Red Sea on the East, Djibouti on the Southeast, Ethiopia on the South and the Sudan on the North and Northwest. Its coastline covers more than 1,000 kilometers (625miles) offshore waters rich in coral, fish, saltpans and two ports. Eritrea has a population of about 3.5 million. The population is culturally and linguistically diverse consisting of nine ethnic groups and majority of the people live in rural areas. It has six zones and 58 administrative sub zones.

Following the declaration of independence in 1993, medical problems, human resource and economic development were some of the many concerns of the government. Thus, the Ministry of Health adopted Primary health care (PHC) as the principal strategy towards the attainment of the general goal of Health for all Eritreans (MOH, 1998).

The MOH of the government of Eritrea developed a national policy, policy guidelines and national action plans for safe motherhood based on assessment studies. Life saving skill training on safe motherhood to doctors, midwives, nurses and associate nurses has been going on since 1998 to assure appropriate and quality reproductive health services nationwide.

Health facilities are being supplied with necessary equipment according to the skills of human resources in the health facilities to provide basic and/or comprehensive emergency obstetrical care when needed.

Since the usage of appropriate, culturally acceptable and integrated health service is an important measure of quality of health care, the reproductive health services in Eritrea starts at community level where the trained TBAs provide home based delivery assistance. Health station is the lowest formal health facility, which is run by a qualified nurses and associate nurses. These professionals provide antenatal care, normal deliveries, postnatal care and stabilize critical obstetric cases prior to referral. Health

centers are better equipped and have skilled human resource to provide basic emergency obstetric care. Hospitals are referral centers for basic and comprehensive obstetric care.

According to EDHS report nurses and nurse midwives provide antenatal care to 46% of mother while doctor provided care to 24%. Twenty eight percent of mothers did not receive any antenatal care during their pregnancy. EDHS, 2002.

Delivery assistance (coverage) by health professionals at the health facilities mostly nurses and midwives is 26% compared to 73% at home. Thus, majorities are likely to be assisted by nonprofessional persons. Use of health facilities for delivery services showed marked variations between urban and rural areas. Less than one in ten births in rural area, slightly less than half in towns and more than eight in ten in Asmara delivered in health facilities. Delivery coverage in HF in the Zobas indicated that only nine percent of births in Gash Barka compared with 67% in Maekel. (EDHS 2002)

Traditional birth attendants are illiterate who have learned what they know about assisting birth from other traditional birth attendants or by observing births of their mothers or divine gift. These birth attendants do not have the skill to identify risk conditions during pregnancy, labor and post delivery nor do have any equipment to provide clean deliveries.

TBAs supervise all the many rituals and taboos of pregnancy through labor within the culture, religion and the community. Despite their lack of formal training and shortcoming of their techniques, they offer the birth care at little or no cost and remain the key figures in cohesion of women at the community level. TBAs consider pregnancy related complications as natural and deter and/or delay referral to perform their cultural believes prior to seeking assistance.

Udoma et al (1999) found that 33% of cases of obstructed labor seen in the University of Calabar Teaching hospital Eastern Nigeria, 25.6% of ruptured uterus, 35.3% of vesico vaginal and recto-vaginal fistulae and 27.9% of perinatal sepsis were from traditional

birth attendants. About 43.8 percent of those referred were kept unduly long (more than 24 hours before referral) thus resulting in 7 percent case fatality rate.

There are many more women who after childbirth develop permanent disabilities that impair their health and reproductive functions. In Sub-Saharan Africa for every maternal death another 15 women are disabled or crippled by incontinence (due to vesico and recto vaginal fistulae), uterine prolapse and infertility due to complicated birth related causes (Paul 1993).

Millions of women around the world including in Eritrea live in rural or urban area and many of them suffer of incontinence of urine and/or bowel (fistula) or both and die needlessly due to prolonged/obstructed labor as they lack access to health facilities and skilled management as well as useful information about their reproductive health.

The purpose of the study was to conduct fistula needs assessment in the country which would help the Ministry of Health to:-

- Document the current situation of obstetric fistula for further possible intervention.
- Explore source of funding to establish a fistula center for fistula management and care.
- Training and allocate health workers who are capable to provide EMOC at all HFs particularly those in the first line maternal care providers (health stations) and at the community level.
- To provide quality reproductive health care and reduce maternal mortality and morbidity ratio nation wide.
- To use the data collected to raise awareness and prevent fistula at the community and health facility level.

## **Definitions.**

### **Obstetric Fistula.**

Obstetric fistula is the breakdown of tissue in the vaginal wall communicating into the bladder (the bladder (vesico) and/or urethral canal and the rectum (RVF) or both. Vesico vaginal fistula (VVF) or recto vaginal fistula (RVF) result due to unrelieved obstructed labor (delayed labor for three to four or more days).

Early marriage (below 18 years of age) leading to early pregnancy and labor before the adequate physical development of the young girl could lead to obstructed/prolonged labor and damage the birth canal. Malnutrition can also contribute to poor physical development (small pelvic) among women.

Traditional practices such as FGM (depending on the type of FGM) if performed too deep to damage the urethral meatus or bladder can also cause VVF.

### **FGM**

The female external genital organ normally is constituted by the vulva, which comprises the labia majora, the labia minora, and the clitoris covered by its prepuce, which is in front of the vestibule to the urinary meatus and the vaginal orifice. Therefore, Female genital mutilation is known as female circumcision, which involves the cutting away part of, or the whole of the female clitoris, labia majora and minora.

### **TYPES of FGM**

Type I. Sunna circumcision is equivalent to the male circumcision where the hood or the prepuce of the clitoris is removed. Sunna means optional and the Muslims say there is no harm in not doing it and there is a reward for doing it (Winkle, 1995).

Type II. Pharaonic circumcision is the most dangerous type of FGM. The clitoris, part of the labia majora and labia minora are excised.

Type III. (Infibulation) The clitoris, part of the labia majora and labia minora are excised

and the remaining parts of the vulva both sides are pinned/or kept together i.e. both legs are bound together for seven to ten days to facilitate fusing. A small opening at the lower end of the vagina is usually preserved for the passage of urine, menstrual flow, and sexual intercourse.

### **Study Justification**

Many women with fistula problems have been reported and managed in hospitals since the struggle for independence. After independence few women with minor VVF problems were also operated in Mekane Hiwet Maternity Hospital by the gynecologists. However, many women who are suffering from such debilitating problems were informed that, their problem could not be solved due to lack of skilled human resource in the country. Therefore, many have refrained from seeking help, due to lack of trained/skilled surgeon, lack of financial resources and lack of access to the neighboring fistula hospitals.

A medical mission (team) consisting of four gynecologists from Stanford and Johns Hopkins universities in the USA stayed in Mekane Hiwet maternity Hospital and operated thirty-seven fistula cases and shared their skills with Eritrean physicians for three weeks (September 24<sup>th</sup> to October 2<sup>nd</sup> 2002). Many fistula cases arrived to the hospital after the team left and all returned back to their home with ill feelings and hopelessness.

Regardless of the above information, the prevalence of VVF/RVF among Eritrean women is not known yet.

## **2. Study Objectives and Methodology**

### **2.1 Study objectives**

General objective.

The study is done to assess and document the current state of obstetric fistula in the six zones of the country for further possible intervention (establish a national fistula center).

Specific objectives of the study is to:-

1. To use the data collected to raise awareness and prevent fistula at the community and health facility level.
2. Explore source of funding to establish fistula center
3. Identify and recommend an area for establishing a center for fistula repair and rational for suggesting the area.

### **2.2 Methodology**

Two study methods were used: a validated questionnaire and guided focus group discussions. It is known that women with obstetric fistula are ashamed of their incontinence and of their offensiveness. Most develop and suffer of dermatitis and are spurned by their husbands sometimes their immediate parents.

Women with obstetric fistula are physically and socially traumatized and majority of them have no education and employment. They leave their community and travel a long distance to areas where no body could identify them. Literally they endure and live in an unfamiliar environment disguised. Hence, to meet these women the only possible means was to air the messages via radio in all local languages of the country.

Thus, radio message was aired three times a day for two weeks in all nine languages and later once a day for four days. All women with obstetric fistula related to childbirth were invited to come to assessment sites from October 23 to November 14, 2003. Due to the below mentioned reasons assessment period required a total of twenty-three days.

A total of eighty two (82) women with obstetric fistula were interviewed and assessed. Women with prolapsed of uterus (4), rectocele and cystocele or both (many), second degree perineal tears and women with fertility problems (16 +) following instrumental and/or cesarean section came for repair and look for solutions. Young adults (six), children (three) who developed urine/bowel incontinence due to accidental trauma, pathological, congenital defects and older women (10) with stress incontinence and many with urgency of micturation etc came for assessment. All were assessed but not included in the study.

Assessment centers were Jeko MCH center for Anseba and Barentu hospital for Gash Barka zones. For the convenience of the clients two-assessment sites were selected in Debub zone, Mendefera and Adi Keih hospitals. Amatero MCH center and Tio hospital were the assessment sites for Debubawi and Semenawi Keih Bahri respectively. The radio broadcast messages for Zoba Maekel included that all women who were not able to come to their zonal assessment sites were advised to come to Godayif health center in Asmara. Indeed many came from Gash Barka, Debub and Anseba zones.

Out of the eighty-two women with obstetric fistula, 32 women had urethral fistula, 35 vesico vaginal fistula and 15 had recto vaginal fistula. Four of the thirty-five VVF cases had RVF as well. Two clients had colostomy for two and five years. Colostomy was performed to correct the VVF and finally the RVF according to the surgeons in Massawa.

Focus group discussions were held in each assessment site and there were seven guided focus group discussions (five FGD with women discussants only and two FGDs with men discussants). FGD participants were elderly women (TBAs), prominent people, woman community leader (a woman administrator) religious leaders, members of the national union of Eritrean women (NUEW) and health workers. Seventy eight (78) people (fifteen men and sixty-three women) participated in the discussion sessions. Data collection tools; questionnaire and FGD guidelines are in Annex 7.1 and annex 7.2.

### **2.2.1 Study sites and sample size of the study**

The study was conducted to include women with VVF and RVF related to childbirth in each zone. The intended sample size was therefore, all women who developed urine and/or bowel incontinence due to childbirth. However, the information gathered from the FGD discussants was that many women with such problems did not come to the assessment sites due to different reasons documented in the FGD finding section of the study.

Zonal medical officers in each zone were informed about the obstetric fistula assessment project and were requested to prepare an assessment site, which would be convenient for the women and the daily activities of the health facility. Assessment dates was then scheduled accordingly.

Prior to the arrival of the assessment team, all zonal medical officers were reminded and when the team arrived in the selected health facility, the head of each HF was contacted to direct the team to the assessment quarter of the clinic.

The questionnaire for interview and physical assessment of the target population was prepared to include their socio-demographic data such as their present age, age at marriage and first delivery, marital status, occupation and level of education. Previous obstetrical history such as number of pregnancy, parity, number of live births, number stillbirths, type, place of delivery, delivery assistance and when they developed the problem.

The third portion of the questionnaire was physical assessment of each case. Height, weight, previous operation attempted, approach of the operation and where the operation was performed were documented.

Either a physician and/or the principal investigator performed pelvic examination on each case. Type of FGM, condition of the vaginal canal, size of pelvis, condition of the cervix and uterus, location, type and size of fistula were also determined during vaginal examination. Perineal tear and recto vaginal fistulae were also assessed. All findings were

recorded and site of fistulae were put in the diagrammatic representation of the questionnaire. Foley catheters and speculums were used to identify and locate the site of the fistulae.

To gather the qualitative information of the study several guided focus group discussions among prominent women; members of the NUEW, older women who know the traditional and cultural delivery practices in the community and men who accompanied their daughters were held. FGDs guidelines concentrated on reproductive health problems, how many women were affected, what the possible causes of the problems were, where do these women live, what do they do for living and how the problem could be prevented?

During the FGD sessions, responses were written down by the principal investigator and one of the data collectors. When the discussants miss the point of discussion the moderator sometimes intervened the discussants to stick to the topic of discussion and repeated the guideline or the topic of discussion. Nonetheless, discussants were allowed to speak freely.

The principal investigator of the study, the head of family and reproductive health selected three physicians and two data collectors. All were informed about the study methodology (quantitative and qualitative). Fistula assessment study manual was provided to all of them to read it and discussion was held for a half day based on the manual and questionnaire.

Statisticians were hired to do data entry and cleaning using SPSS software.

All research tools were prepared in English and translated into the different language of the clients during interview. Translators were informed about the ethical aspect of the information to be gathered from the interviewee just before the interview and discussion sessions resumed.

The principal investigator, a physician, data collectors, the coordinator and two nurses in each site, conducted the assessment in six zones between October 23<sup>rd</sup> and November

14<sup>th</sup> 2003. During the assessment period team meetings and discussions were held to monitor the activities. By the end of the assessment session each questionnaire was checked for completeness by the principal investigator.

All VVF and RVF cases, and focus group discussants participated the study on voluntary bases and all were informed about the ethical and legal aspect of the study verbally.

### **2.2.2 Study Limitations**

As this study is the first of its kind, the principal investigator consulted few people and discussed on how to reach women with VVF/RVF who are usually isolated due to their physical and social trauma. From the information gathered it was concluded that radio message would be the best way to inform them and they may even hear it via word of mouth

The limitation of the study was that the radio broadcast message and word of mouth information clients used to come to the assessment sites. According to the information gathered from focus group discussants many of them knew that there were a lot of women with obstetric fistulae who did not come for assessment probably they did not listen to the radio. Afar discussants said, “ Traditionally Afar women do not listen to radio”.

Majority women heard the message via word of mouth. However, Since word of mouth messages could be distorted and/or over exaggerated, fifty to eighty women with urine incontinence due to childbirth, old age, accidental injury to the genitalia, congenital defects, urinary incontinence due to pathological problems, fertility problems and other gynecological complaints came to most assessment sites. These kept the clinic very crowded. Though the team tried to explain to the crowd that the only group to be assessed was women with obstetric fistulae, all of them refused to leave the place and begged (some of them cried) to be assessed. Hence, the assessment sessions in some sites like Keren, Mendefera, Adi Keih and Godayif (Asmara in particular) were over loaded

Women with prolapsed of uterus (4), rectocele and cystocele or both (many), second degree perineal tears and women with fertility problems (16) following instrumental and/or cesarean section came for repair and look for solutions. Young adults (six), children (three) who developed urine incontinence due to accidental trauma, medical and congenital defects and older women (10) with stress incontinence and many with urgency of micturation etc came to the assessment sites for assessment. All were assessed but not included in the study.

Study limitation realized later was, the fasting time (Ramadan) for the Muslims and during this period Muslims work less (even the shops were open from 8 to 11 am). Most people sleep in the house they do not travel. Women are also busy in the house to prepare food and they fast as well. Hence this could have prevented many VVF cases to come to the assessment sites.

Following the assessment all women with obstetric fistula expected to be admitted and operated and were not able to listen to us about the approximate appointment period we were telling them. What!!!!“Is this all? We have to come back again” were some of their immediate responses. Hence, their disappointment and dissatisfaction was another limitation of the study.

### **3. Findings**

This initial study was conducted in the six zones of the country i.e. Anseba, Gash Barka, Debub, Maekel, Semenawi and Debubawi Keih Bahri zones.

Eighty two (82) women with obstetric fistula were assessed. Out of the eighty-two women, 32 women had urethral fistula, 35 vesico vaginal fistula and 15 had recto vaginal fistula. Four of the thirty-five VVF cases had RVF as well. Two clients had colostomy for two and five years. Colostomy was performed to correct the VVF and finally the RVF according to one of the surgeons in Massawa hospital.

Women with prolapsed of uterus (4), rectocele and cystocele or both (many), second degree perineal tears and women with fertility problems (16 +) following instrumental and/or cesarean section came for repair and look for solutions. Young adults (six), children (three) who developed urine and bowel or both incontinences due to accidental trauma, pathological and congenital defects and older women (10) with stress incontinence and many with urgency of micturation etc came to the assessment sites for assessment. All were assessed but not included in the study.

It is to be recalled that some fistula cases were registered in Mekane Hiwet Maternity hospital in the year 2002 and 37 cases were operated by the surgeons from Stanford and John Hopkins School of medicine. The obstetrician in Mekane Hiwet, the surgeon in Massawa and the gynecologist in Keren hospitals do perform repair of some minor obstetric fistula cases. However, their skill to perform the operations is limited, there is no equipment (instrument, suture materials, and catheters etc) to work with and no trained nurses/midwives to provide care to VVF operated cases, neither a hospital nor a separate ward for obstetric fistula care exist in the entire country.

#### **3.1 Demographic profile of the study population**

##### **3.1.2 Age, age of at marriage and at first delivery**

Mean age of the study population was 29 years and mean age at marriage and age at first delivery 16.5 and 19 years respectively. The minimum age at marriage and age at first delivery were 10 year and 14 years respectively.

### 3.1.3. Marital status, educational level and occupation

As indicated in table 1 below married women (cases) accounted for 14.6%. Divorced and women living together for 34.2% and 42.7% respectively. The educational level of the study group was almost forty nine percent (48.9%) illiterate, 26.8% could read and write.

**Table 1. Marital status, educational level and occupation of the study population**

Marital status				Total
Married	Divorce	Living together	Widow	
12 (14.6%)	28 (34.2%)	35 (42.7%)	7 (8.5%)	82 (100%)
Educational level				
Illiterate	Read & write	Grade 2-5	6 <sup>th</sup> grade+	Total
40 (48.9%)	22 (26.8%)	12 (14.6%)	8 (9.7%)	82 (100%)
Occupation				
House wife	Farmer	Merchant	Dependent	Total
39 (47.6%)	9 (11%)	3 (3.6%)	31 (37.8%)	82 (100%)

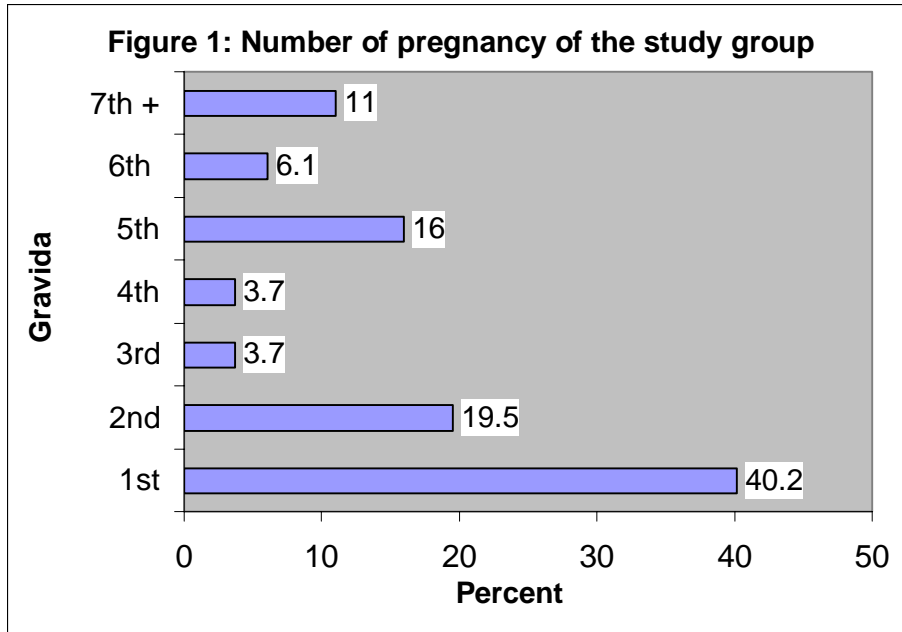
Women who had formal education grade two to six grade and above accounted for 24.3%. The study also assessed the occupation of the women and thirty seven percent (37.8%) were dependent on their parents and other close relatives. Merchants (local beer sellers) and farmers accounted for 14.6% while forty seven percent were housewives.<sup>4</sup>

## 3.2 Previous obstetric history of the study population

### 3.2.1 Number of pregnancy, number of living children and stillbirth

Forty percent (40%) of the cases were pregnant for the first time and women who were pregnant for their second and third time accounted for 23.2%. Almost thirty seven percent (26.8%) of the study group was pregnant for four to seven and more times. Refer figure 1 below

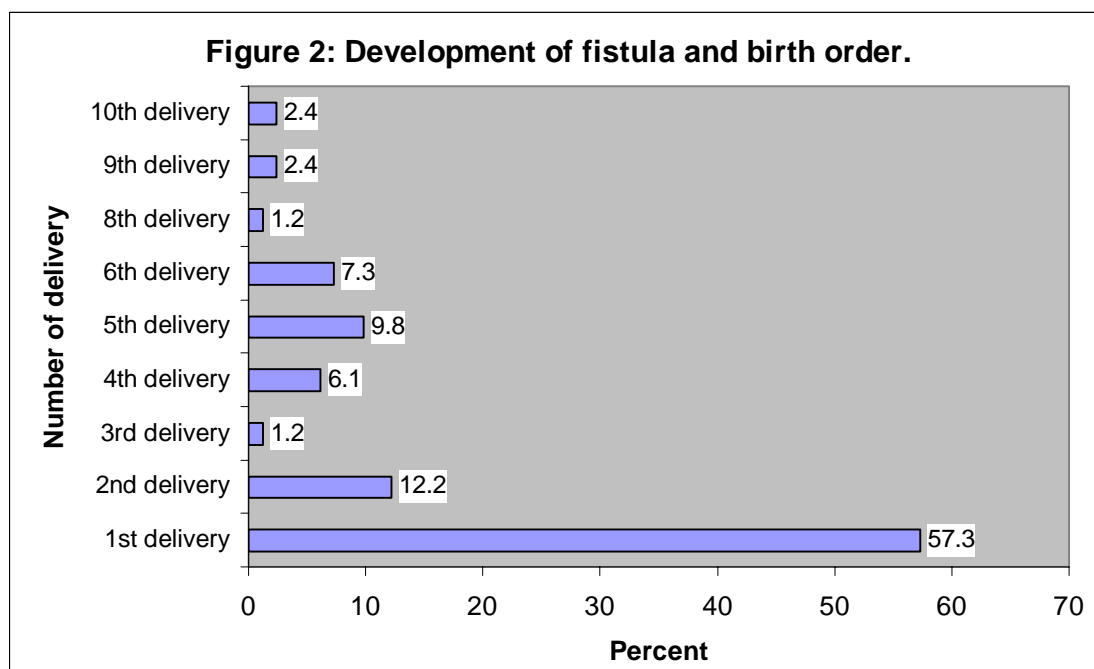
<sup>4</sup> Women with fistula and who have one or two children live with their husbands to raise their children and they categorize themselves as housewives as they are not formally divorced. However, the husband may have another wife.



Eighteen percent (18.3%) had one stillbirth and 12.2% had at least two stillbirth deliveries. Mothers who had living children during their first delivery were only four, which accounted for twelve percent (12%). Majority (87.9%) of the primigravida ones had stillbirth deliveries. Almost fifteen percent (14.6%) of the study population who were pregnant for their second time had one stillbirth delivery. The number of stillbirth deliveries decreased among multipara mothers.

### **3.2.2 Development of fistula and related to the birth order of the study group..**

As indicated in Figure 2: below majority (57.3%) developed fistula with first delivery, 12.2% during second, 9.8% during 5<sup>th</sup> and 7.3% during 6<sup>th</sup> deliveries. Development of fistula decreased after the 8<sup>th</sup> delivery, which was 2.4%.



### 3.2.3. Type, place of delivery and source of assistance during delivery

Fifty one percent (51.2%) of the study population had vaginal delivery. Instrumental vaginal delivery (Vacuum and/or forceps delivery) accounted for 29.3% and cesarean section accounted for 19.5%. Forty women (48.8%) of the study population had hospital delivery; home and HS/HC were 39% and 12.2% respectively. As shown in table 2 below, source of assistance for home delivery were two percent (2.4%) TTBA and almost thirty seven percent (36.6%) untrained TBAs. Health workers' (Nurse, midwives and/or associate nurses and doctors) assistance accounted for 28% and 33% of deliveries respectively.

### 3.2.4. Number and percentage distribution of mothers who used HF for delivery services by background characteristics

The following table shows the use of health facilities for delivery services by background characteristic. Higher proportion (61%) of women used either the HS/HC or hospital for delivery services and the proportion increased as the level of education of the study population increased.

**Table 2. Place and source assistance**

Type of delivery	Normal vaginal delivery	Instrumental delivery	Cesarean section	
	42 (51.2%)	24 (29.3%)	16 (19.5%)	
Place of delivery	Home	HS/HC	Hospital	
	32(39%)	10 (12.2%)	40 (48.8%)	
Source of assistance	TTBAs	TBAs	HW	Doctor
	2 (2.4%)	30 (36.6%)	23 (28%)	27 (33%)

Higher proportion (41.5%) of women who were in their 14-20 years of age used the HFs for their first delivery. However, figures do not indicate that they used the HFs, as all of them were late to seek skilled assistance.

**Table 3: Place of delivery by ground characteristics**

Educational level	Place of delivery			
	Home	HS/HC	Hospital	Total
Illiterate	18 (21.9%)	4 (4.7%)	18 (21.9%)	40 (48.8%)
Can read/write	9 (11%)	3 (3.6%)	10 (12.2%)	22 (26.8%)
Grade 2-5	4 (4.7%)	1 (1.2%)	7 (8.5%)	12 (14.6%)
6 <sup>th</sup> grade and above	1 (1.2%)	2 (2.4%)	5 (6.1%)	8 (9.8%)
<b>Total</b>	32 (39%)	10 (12.2%)	40 (48.7%)	82 (100%)
Age of 1 <sup>st</sup> delivery	Home	HS/HC	Hospital	Total
<b>14-20</b>	25 (30.5%)	6 (7.3%)	28 (34%)	59 (72%)
<b>21-25</b>	3 (3.6%)	3 (3.6%)	4 (4.7%)	10 (12.2%)
<b>26 and above</b>	3 (3.6%)	-	6 (7.3%)	9 (11%)
<b>Missing</b>	1 (1.2%)	1 (1.2%)	2 (2.4%)	4 (4.8%)
<b>Total</b>	32 (39%)	10 (12.2%)	40 (48.7%)	82 (100%)

### 3.3. Previous operation performed

#### 3.3.1. Frequency of operations performed, place and approach of surgery

The following table shows the number of cases who had and those who did not have fistula repair. Women who had fistula repair accounted for thirty seven percent (37.8%) compared to 62.2% who did not since the development of the problem.

**Table 4. Number of operations performed, approach and place of operation**

Operation Performed	Yes	31	(37.8%)
	No	51	(62.2%)
Frequency of surgery	Once	22	(71%)
	Twice	6	(19.4%)
	Three +	3	(9.6%)
<b>Approach</b>			
<b>Vaginal</b>	<b>Abdominal</b>	<b>Both</b>	<b>Total</b>
17 (54.8%)	3 (9.7%)	11 (35.5%)	31 (100%)
<b>Place of Operation</b>			
<b>Eritrea</b>	<b>Neighboring countries</b>		
23 (74.2%)	8 (25.8%)		31 (100%)

Approach of the operation according the respondents were almost fifty five percent (54.8%) vaginal and nine percent (9.7%) abdominal and thirty five percent (35.5% both abdominal and vaginal approaches.

Forty three percent (43.2%) of those operated in within Eritrea were operated in Mekane Hiwet Maternity hospital. As indicated in table 4, almost twenty six percent (25.8%) of the cases were operated in neighboring countries.

### 3.4 Physical assessment

#### 3.4.1 Client's height and weight in cm and kilograms

Malnutrition rate among adult Eritrean women was estimated to be 55% in the year 1993. As indicated in the table below, thirty three percent (33%) of the study group weighed between 30-40 kilograms and the height of nine women (11%) was between

132-140 centimeter. Sixty three percent (63.4%) of the obstetric fistula cases' height was 132-150 cm.

**Table 5: Height and weight of the assessed cases.**

Height in centimeters	132-140	141-150	151-163
	<b>9</b> <b>(11%)</b>	<b>43</b> <b>(52.4%)</b>	<b>30</b> <b>(36.6%)</b>
Weight in Kilograms	<b>30-40</b>	<b>41-50</b>	<b>51- and above</b>
	<b>27</b> <b>(33%)</b>	<b>40</b> <b>(48.7%)</b>	<b>15</b> <b>(18.3%)</b>

52.4% of the study population was between 141-150 centimeters tall and 48.7% weighed between 41-50 kilograms. The mean height and weight of the study population accounted for 148.7 cm and 45.1 kilograms respectively.

### 3.4.2 Type of FGM

The practice of FGM in Eritrea is very high as well as the complication that occur immediately and later during childbirth. Sixty-seven (67.1%) percent in this study group had Type I FGM. Type II and III FGM accounted for 19.5% and 13.4%. Refer Table 5 below.

**Table 6: Type of FGM by ethnic group (nationalities)**

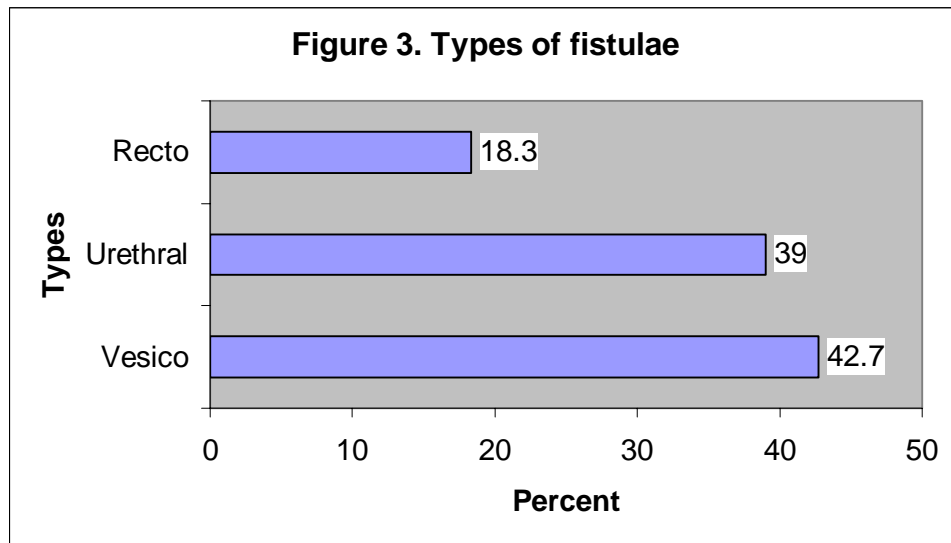
Nationalities	Types of FGM		
	Type I	Type II	Type III
Afar	-	1 (1.2%)	1 (1.2%)
Bilien	2 (2.4%)	-	-
Kunama	1 (1.2%)	-	1 (1.2%)
Saho	4 (4.8%)	4 (4.8%)	5 (6.1%)
Tigre	1 (1.2%)	2 (2.4%)	3 (3.6%)
Tigrigna	47 (57.3%)	9 (11%)	1 (1.2%)
Total	55 (67.1%)	16 (19.5%)	11 (13.4%)

### 3.4.3. Types of pelvis

One of the assessment indicators was to estimate the pelvis size of the study group. Four women (4.9%) had short diagonal conjugate measurement (promontory of sacrum was easily reached on vaginal examination) while 11% had either completely or partially closed vaginal canal (gyneatresia) that prevented further assessment. Women who could not tolerate vaginal examination due to severe pain accounted for 12.2%.

### 3.4.4. Type of fistulae among the study group

As indicated in figure 3 below, women with vesico vaginal fistula accounted for 42.7%, 39% and 18.3% had urethral and recto vaginal fistulae respectively. Four women had both VVF and recto vaginal fistulae.



The fistula size was measured (at list of those who did not develop gyneatresia) and the mean size was 2.9 cms. In some cases only urine leakage through the vagina was observed. There were 11(13.4%) cases with severe scarred vaginal tissue and three (3.6%) with complete closure (Gyneatresia) of the vagina.

### 3.4.5. Condition of Perineal body

There were 15 (18.3%) cases with first-degree tear, 5 (6.1%) women with severe second-degree tear and seven (8.5%) with third and fourth degree tear among the study group. Cystocele, rectocele and uterine prolapse were some of the findings among women who developed fistula with their fourth and more deliveries.

## **4. Focus Group discussions**

There were three groups of discussants. Elderly and middle aged women, parents (men) of the fistula cases and third one, which included the fistula cases (two sessions only). Women's reproductive health problems and other guided discussions opened by introduction and the ethical aspect of the information to be gathered. The reproductive health problems mentioned, number of affected women, where these women live, what they do for living, whether they seek medical support and the prevention aspect of the problems were discussed. All relevant and frequently mentioned points were documented below.

### **4.1 Common reproductive health problems of women in the community**

- Bleeding during pregnancy
- Bleeding after delivery
- Retained placenta
- Malpresentation such as breech during delivery
- Maternal and fetal distress during labor
- Urine incontinence
- Vaginal tear
- Uterine prolapse
- Maternal and fetal death

### **4.2 How many women are affected with urine incontinence**

- There are about twenty of them in our sub-zone said one man from Dehub zone.
- Many discussants said, "There are many women with such problems but most of them disappear and live in some semi-towns hiding from the community, some remain in their parent's house as their husbands divorce them". A second discussant said "Where ever they are they are socially isolated, do not participate in any of the community's activities as they are ashamed of their

offensiveness” He continued “There are a lot of them and we know them because they smell and are wet always”.

- Women discussants in Southern Red Sea said, “ Women with such problems live in the remotest area that is why they are not here to day”. They are isolated; they cannot listen to the radio. Traditionally majority of Afar women do not listen to the radio. The community members understand their problem and some provide with milk and old clothing.

#### **4.3 Do you know what causes such problem?**

Most discussants seem to have the awareness about the main cause of the problems and responses are documented below.

- Delayed labor
- Heavy workload during pregnancy
- Narrow pelvis
- FGM (mentioned by Afar women discussants)
- Early age marriage
- Destiny “ almighty God’s will<sup>5</sup>.
- Lack of skilled health workers in health facilities (discussant in Barentu)<sup>6</sup>

#### **4.4 Are women with such health problems living in your village/community?**

- Women with such problem live under the tree or a tent as they are always wet and smell urine.
- Some parents take them to unknown places like semi-towns as they think she brought shame on the family and provide them with food ration and pay for the house rent

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<sup>5</sup> The fistula cases and some family members considered pregnancy and labor as natural events and complications were not perceived as meriting appropriate medical attention.

<sup>6</sup> Mothers who arrived at health facility after prolonged labor and assisted by vacuum/forceps think that the fistula was due to the instrumental and/or forcefully pulled delivery. Therefore they blamed the health workers for causing the problem.

- They live far from their home village, some travel to neighboring countries to hide and/or seek medical aid.<sup>7</sup>

#### **4.5 What do they do for living?**

- Majority depend on their parents
- Some live in the street begging
- Women who have living children live as second or third wives and raise their children.
- Local administration offices provide them with:-
  - Free paper for hospital fee and food ration clothing etc.
  - Parcel of land for farming

#### **4.6 Do they go to health facilities for any help?**

- All of them seek medical help but health workers tell them that their problem is beyond their capacity.
- Some health workers advice them to go abroad for treatment.
- Few leave the country in search of treatment.

#### **4.7 How can such reproductive health problems be prevented**

- To deliver in the health facilities however, we have the problem in the society (tradition and/or culture) that first child should be born and/or delivered at home in her parent's house. Therefore, some who live in the cities travel to the remote villages to deliver in their mother's house and become the victims of such problems.
- Skilled and committed health workers in all HFs.
- We know that FGM does contribute to difficult/prolonged labor but we cannot avoid it and women cannot answer such issues. (Afar discussant)

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<sup>7</sup> “ We are abounded by our husbands and sometimes by our parents we could not get any medical treatment and we have no place to live with this urine dripping, wet clothing and smelling”.

## **5. Discussions**

Obstetric fistula, the most severe of all pregnancy related disabilities, is an injury caused by prolonged labor. It usually occurs when a young, poor woman has an obstructed labor and cannot obtain a needed Caesarean section. The baby usually dies and the mother suffers from extensive tissue damage to her birth canal, rendering her incontinent (UNFPA, 2002).

The causes of obstructed labor could be many such as Cephalo-pelvic disproportion (due to undeveloped pelvis and/or large fetus), shoulder, breech, face and brow presentations. In such abnormal conditions labor is obstructed and/or delayed up to four or more days and may end up with rupture of uterus and maternal death. If the mother survives she develops obstetric fistula and usually is childless. All these require early identification, timely referrals and skilled management.

The mean age at marriage and first delivery in this study were 16.5 and 19 years respectively. Women who developed the problem during their first delivery accounted for 40.2%.

EDHS, 2002, has also revealed that the percentage of mothers who had their first delivery at age 15-19 years accounted for 29% and when compared by background characteristic such as residence, zonal, education and wealth the total was 11% compare to 18.8 % in 1995.

Traditionally first child should be born at his/her grandparents home even when the HF is nearby and accessible. Thirty nine percent (39%) of the study population had their delivery at home assisted by TBAs (2.4% TTBA's and 36.6% by untrained TBAs). It is understood that all TBAs delay referrals until they think that every they could do is done. Study findings have also conferred that such harmful traditional practices indeed affect the young girls/women reproductive health.

FGM is also practiced highly in Eritrea. This traditional practice is performed by untrained TBAs and other practitioners and may cut the anterior wall too deep to include the external urethral meatus, which results to urine incontinence. Other FGM practice is the infibulation of the vagina before the first delivery and after each delivery in unsanitary condition. The scar formation of this procedure and total closure of vulva does delay delivery.

Though the origin of FGM is not clear, Pharaonic circumcision was practiced in 23 B.C. among the Danakils of Ethiopia and Egypt (Ntiri, 1993). In Europe and the United States, clitoridectomy was performed in the 19th century to treat epilepsy, hysteria, insanity and masturbation (Shaw, 1985). In Africa, FGM have been performed in 25 countries, mostly in the nations above and on the Sahara belt such as Egypt, Eritrea, Ethiopia, Kenya, Ghana, Nigeria, and Sierra Leone etc. In America, countries such as Brazil, Eastern Mexico and Peru also practiced FGM. In Asia, FGM was part of the culture for Muslims of India and Malaya, Pakistan, Indonesia, Oman, South Yemen and United Emirates (Verniz, 1975).

This traditional practice, performed by untrained traditional birth attendants (TBAs) is usually done with unsterilised sharp instrument. TBAs do not know the importance of cleanliness such as hand washing and sterile equipment while performing FGM which may result to a variety of Gynecological illness that require treatment during pregnancy and/or labor.

WHO estimates that worldwide between 85-115 million women undergone FGM and that 2 million girls undergo the procedure annually (UNFPA, 1998)

It is noted that the overall antenatal care service in the country was 70.4% while delivery care was 28.3% despite the availability of the delivery services in all health facilities. There are many traditions, norms and taboos, which dictate women during pregnancy and delivery. According to their belief first baby must be delivered at home where the mother

is more comfortable (usually with her mother and familiar environment) and assisted by a woman whom she trusts (TBA).

Tigre and Tigrigna nationalities discourage delivery at health facilities because they believe "it is unlucky to primigravidae to delivery at HF and newly delivered mother and newborn should not be exposed to the outside to protect them from evil spirits" (Issayas, 1996). Majority women in the remote and sometime in urban area abide such practices and cannot break the morality of the community. The use of HFs for delivery compared to home in this study was 60.1% (12.2% in HS/HCs and 48.8% in hospitals) to 39%. However, findings refer to mothers who arrived at the health facilities after being in labor for four or more days at home.

Subjects' educational level was almost forty nine percent (48.9%) illiterate and those who had formal education (2<sup>nd</sup> - 6<sup>th</sup> grade and above) accounted for twenty four percent (24.3%). In this study however, their age, educational level cannot measure their awareness as all of them came to HF very late and majority had their babies at home. As mentioned earlier due to different cultural and traditional practices and beliefs their preference to home delivery is high. Thus, safe motherhood activities (according to the plan of action) have to be strengthened particularly at the community level to encourage use of skilled delivery management.

Most remote villages do not have any means of transportation. Public transportation (buses) that pass-by once a day is usually crowded. Ambulances are available in the health facilities and cannot come to woman's house when needed. Hence, lack of transportation and other means of communication and distance do impede referrals.

Though normal vaginal delivery (both at home and HFs), instrumental and cesarean section deliveries in the study accounted for 51.2% and 48.8% respectively, regardless of their place of delivery, type of delivery and assistance provided all subjects were already affected (traumatized) due to the above mentioned contributing factors.

It is to be noted that many women did not understand that obstructed labor and lack of skilled assistance caused their problems. Some said, “We simply are unlucky ones and God did not help us to deliver normally”. Few women blamed the health workers for causing their problems as they pulled the dead fetus from below forcefully with some instrument despite their late arrival. There is therefore, a need for more extensive counseling to incorporate the risk factors that caused incontinence and other disabilities before discharge.

Health workers should also inform all pregnant mothers to seek trained assistance early during labor and the TBAs caring for them will not be able to delay them against their wish.

On pelvis assessment the study documented that almost five percent (4.9%) of the study group had short diagonal conjugate measurement (promontory of sacrum was easily reached on vaginal examination) while 11% had either completely or partially closed vaginal canal (gyneatresia) that prevented further assessment. Women who could not tolerate vaginal examination due to severe pain (narrow vaginal) accounted for 12.2%.

The cause of total or partial closure of the vagina could be due to some herbal medications applied in the genitalia to treat the incontinence (which requires further study) or adhesion of the muscles as a healing process. Thus, health professionals should realize that extension of hospital stay by few more days, strict follow up and perineal care after instrumental delivery, early ambulation, health education on self-perineal care could prevent such conditions. Insertion of foley’s catheter and use of antibiotics alone do not work.

Second and third degree perineal tears were also some of the problems documented in the study. These are easily repairable if identified early and repaired by skilled health worker. Follow up of such cases after repair is as important as the repair is. Therefore, client with such problems must stay in the HF for few days for follow up depending on how far their

home village is and their socio economic status to prevent infection. Health worker should also realize that perineal tears occur as mismanagement of the second stage of labor. Thus, it is their responsibility that this is well taken care of prior to discharge. Moreover, clients have the right to receive proper and quality reproductive health care.

## **6. Recommendations and conclusions**

This initial national fistula assessment is done after a long distance in time, as there are many victims with this problem and has been roaming here and there to look for solutions for their offensiveness in HFs and in neighboring countries.

The study documented the obstetric fistula situation in the country. All the social and cultural values documented in the study and the women's perception (according to the focus group discussants) about the health worker's behavior (needs further study) and their skill of reproductive health care might have ultimately prevented appropriate delivery care. Thus, the followings are suggestion and/or recommendation, which would help the MOH in collaboration with UNFPA, other interested agents and the Family and Reproductive Health section in particular to plan, to solve the problems and later to prevent the causes and put an end to the problem.

1. Continuous educational efforts on the community members including the leaders and other prominent people to address the traditional practitioners and health workers to change their perception of pregnancy and childbirth complications as natural event and/or almighty God's will. Educate community members about the causes of obstetric fistula.
2. Reproductive process should not be the women's domain and husbands should be involved in the health issues arising during pregnancy and delivery (Attend antenatal clinic at list once or twice and encourage their presence in the clinics/hospital during delivery).

3. Problems related to maternity and childbirth need to be discussed at all health services where the nurses, midwives and other professionals are attending. And all must be oriented to the problems and early detection of high-risk mother through appropriate supervisory support.
4. Training and capacity building to improve the present situation of reproductive health care at all level of HFs.
  - Continuous in service training to all nurses, midwives and associate nurses to increase their knowledge and skill to provide basic emergency obstetric care and to make them more responsive to the needs of the pregnant and laboring women.
  - Increase delivery coverage by skilled health personnel and by providing awaiting homes for high-risk cases so that women can wait delivery in the vicinity of referral maternity hospitals.
  - Increase number of TTBAAs at the community level with an emphasis on culture specific educational approaches during training.
  - Retraining and/or provide continued educational effort to upgrade their knowledge on identifying risk conditions and practice of timely referrals.
  - All practicing TBAs trained or untrained must be accountable to the village health committee and HF's staff in their vicinity.
5. **Strengthen IEC programs at the community and HFs regularly**
  - Teach all women and/or community member about proper nutrition, antenatal care, and delivery care.
  - IEC message on FGM should emphasis on immediate and long term reproductive health risks including the illegality of the practice if possible based on documented films and/or clinical studies. Protection of baby girls from any physical harm.
  - Communicate the traditional/cultural values that dictate pregnant and delivering mothers.

- Use of mass media, women's organization and other ministries to improve the knowledge of mothers on risk conditions during pregnancy and childbirth.
- Community members both men and women, traditional birth attendants and older women should know regarding risk conditions during pregnancy and childbirth.
- Arrange school health education and include sex education to prevent unwanted and early pregnancy between girl and boys.

#### **6. Organize a fistula center**

- Look for resource from NGOs, UNFPA country offices, other organizations, and interested individuals in and outside of the country.
- Look for convenient and conducive place where there is ample water supply and enough space for gardens and temporary homes for the cases and guesthouses. Preferably out side of the city but easily accessible.
- Plan to train interested, committed and devoted paramedics or medical doctors to perform the operations.

#### **7. All women with urine/bowel incontinence need to be registered and appear in monthly report of the HFs and in the HMIS reporting system.**

## 7. Annexes

### Annex 7.1.

#### NATIONAL FISTULA NEEDS ASSESSMENT QUESTIONNAIRES

##### A. Socio Demographic profile

Name \_\_\_\_\_ Age \_\_\_\_\_ Years.

Age at marriage \_\_\_\_\_ Yrs. Age at first delivery \_\_\_\_\_ Yrs.

Nationality \_\_\_\_\_

Address: Village/town \_\_\_\_\_ Sub  
zone \_\_\_\_\_

Zone \_\_\_\_\_.

Marital status: Married  Divorced  Living together

Educational Status: Illiterate  Can read/ write  Grade completed \_\_\_\_\_

Occupation: Housewife  Farmer  Merchant

Others \_\_\_\_\_

##### B. Previous Obstetric history:

Number of pregnancy \_\_\_\_\_ Para \_\_\_\_\_ Live birth \_\_\_\_\_ S.B  
\_\_\_\_\_

When did you develop this problem: After the first bal  Second bal   
Third

baby  Others \_\_\_\_\_

Did you deliver per vagina (normal)  Baby was pulled from below  By  
C/S.

Where did you deliver? At home  HS/HC  Hospital

Who assisted you during delivery? TTBA  TBA  Health worker   
Doctor

When did you realize that you could not hold your urine: Immediately after delivery   
Four days after delivery  A week later  two weeks later   
Others\_\_\_\_\_.

When did you realize that you could not hold your bowel: Immediately after delivery   
Four days after delivery  A week later  Two weeks later   
Others\_\_\_\_\_.

### C. Physical Assessment

Height \_\_\_\_\_ cm Weight \_\_\_\_\_ Kgm

Previous operation attempt Yes  No

If yes how many times: Once  Twice  Three times  Four times

Where were you operated \_\_\_\_\_

When \_\_\_\_\_ What was the approach: Abdominal  Vaginal  Both

### D. Pelvic examination

#### 1. External Genitalia:

FGM Type I  Type II  Type III

Vagina: \_\_\_\_\_

External Urethra: \_\_\_\_\_

Pelvic measurement:- Promontory of sacrum reached Yes  No

#### 2. Vesico Vaginal Fistulae:-

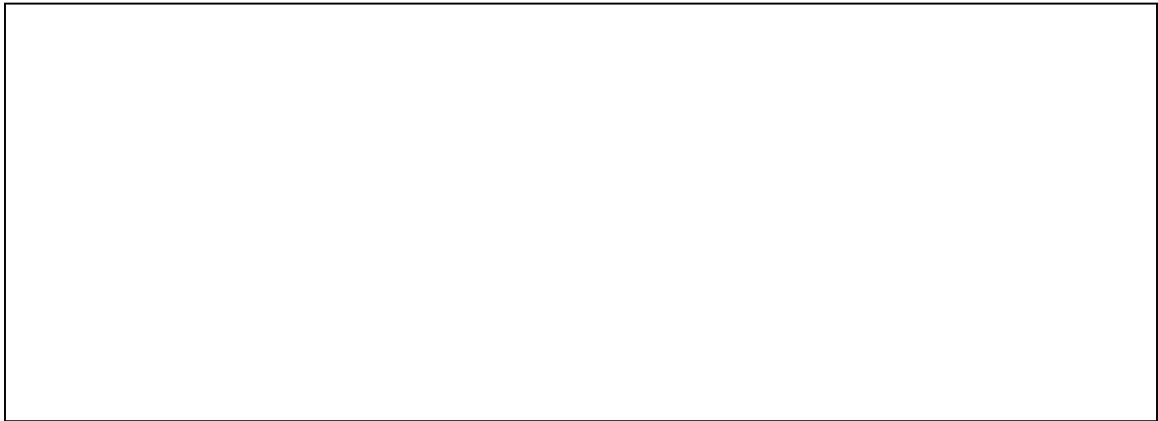
Urethral  Size (in cm) \_\_\_\_\_ other comments \_\_\_\_\_

Vesico  Size (in cm) \_\_\_\_\_ Its relation to the cervix and or the pelvic bone

\_\_\_\_\_.

**Diagrammatic representation of the fistulae**

**Vesico Vaginal fistulae**



**3. Recto fistulae**

**Perineal body:**

Intact  First-degree tear  Second-degree tear

External sphincter involved: Yes  No

Rectal fistula: size (in cm) \_\_\_\_\_

Pelvic outlet: Normal size  Inadequate



## **Annex 7.2.**

### **Focus Group discussion guidelines**

- 1. What are the common health problems of women in your community?**
- 2. Do you remember how many are affected?**
- 3. Do you know what causes such problem?**
- 4. Are the women with such problems living in your village?**
- 5. What do they do for their living?**
- 6. Do they go to the health facilities for help where do they go**
- 7. How can we prevent such problems?**