

**The ACQUIRE Project Final Report
Obstetric Fistula in Amhara Regional State, Ethiopia
January 2006 – March 2007**

**Under
Cooperative Agreement No. GPO-A-00-03600006-00**



the ACQUIRE project



TABLE OF CONTENTS

Acronyms	1
Project Profile	2
I. Background	3
II. Geographic Focus	4
III. Implementation Strategies	5
IV. How Did the Project Work?	7
V. Achievements and Results	10
VI. Pre and Post Intervention Assessments	13
VII. Achieved Versus Planned	23
VIII. Challenges	26
IX. Lessons Learned	26

Appendices

- 1A: Treated Fistula Patients
- 1B: Screened Uterine Prolapse Patients
- 2: Medical Equipment and Supplies for Obstetric Care
- 3: Obstetric Fistula Patient Screening and Referral Format
- 4: Back Referral Format
- 5: Monthly Reporting Format
- 6: Fistula Patient Registry Log Book

The views expressed in this document do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

ACRONYMS

AAFH	Addis Ababa Fistula Hospital
ANC	Antenatal care
ACQUIRE	Access, Quality and Use in Reproductive Health
BLSS	Basic Life Saving Skills
B/Dar	Bahir Dar
BDFH	Bahir Dar Fistula Hospital
CA	Cancer
CBHRAs	Community Based Reproductive Health Agents
CPR	Contraceptive Prevalence Rate
EmOC	Emergency Obstetric Care
FP	Family Planning
HCs	Health Centers
HEWs	Health Extension Workers
HPs	Health Posts
L & D	Labor and delivery
Lab. Tech	Laboratory Technician
MoH	Ministry of Health
No./n	Number
OF	Obstetric Fistula
PMTCT	Prevention of Mother-To-Child Transmission
PNC	Postnatal Care
RTI	Reproductive Tract Infections
RVF	Recto-Vaginal Fistula
TBAs	Traditional Birth Attendants
USD	United States Dollars
VCT	Voluntary Counseling and Testing
VVF	Vesico-Vaginal Fistula

Project Profile

Project Name:	Obstetric Fistula Prevention and Repair
Project Period:	Fifteen Months (January 2006-March 2007)
Funded by:	USAID
Budget in USD:	\$283,036
Implementer:	ACQUIRE Project/IntraHealth International in Ethiopia
Implementation site:	Ethiopia, Amhara Regional State, Adet, Dangla and Woreta Woredas
Objectives:	<ol style="list-style-type: none"> 1. To improve facility based and provider capacity to deliver quality fistula screening, care, prevention and rehabilitation at three Health Centers and 15 Health Posts in the Amhara Regional State 2. To increase access of fistula patients to treatment and care at the Bahir Dar Fistula Hospital 3. To bring about broad behavior change at all levels around maternal health that include obstetric fistula prevention and care, pre and post fistula treatment services and increased seeking of maternity services

I. BACKGROUND

Obstetric fistula is one of the devastating complications of ignored and/or mismanaged labor. It is simply an abnormal opening between the vagina and adjoining organs created by the pressure of the unborn baby's head on the mother's bony pelvis and the surrounding tissues. Though obstructed labor is the main causative factor, accidental surgical injuries, pelvic infections such as tuberculosis, pelvic cancers and pelvic traumas (physical injuries or radiation) are some of the physical factors¹ that might also result in obstetric fistula. Poverty, malnutrition, child marriage, teenage delivery, unattended labor/delivery, illiteracy, unhealthy traditional practices and the different forms of gender inequality also play major direct and indirect roles in the development of obstetric fistula.²

Established in 1974, the Addis Ababa Fistula Hospital (AAFH) has been the only center in Ethiopia dedicated for treating obstetric fistula victims. Taking into consideration the inaccessibility of the sole center for most of the fistula patients, the Addis Ababa Fistula Hospital has opened obstetric fistula centers in different parts of the country. The Amhara Regional State is one of the regions in which the AAFH has opened a branch obstetric fistula repair center.

Utilizing its already established community and facility based network, IntraHealth International/Ethiopia, through the ACQUIRE Project, implemented a USAID-funded obstetric fistula prevention and repair project in the Amhara Region. The project collaborated with the AAFH branch hospital in Bahir Dar in addition to the Ministry of Health, Regional Health Bureau, Woreda Health Bureaus, EngenderHealth and Pathfinder International. The goal of the 15 month project was to contribute to the reduction of obstetric fistula in Ethiopia through repair and prevention activities. These activities included:

1. Supporting fistula identification (at the community and clinic level) and repair, prevention and rehabilitation
2. Building a communications and referral network to transfer fistula repair patients to the Bahir Dar Fistula Hospital
3. Supporting increased skilled care at birth, including the use of the partograph and skill building of the health extension workers (HEWs) and traditional birth attendants (TBAs) on how to recognize danger signs of obstetric emergencies.

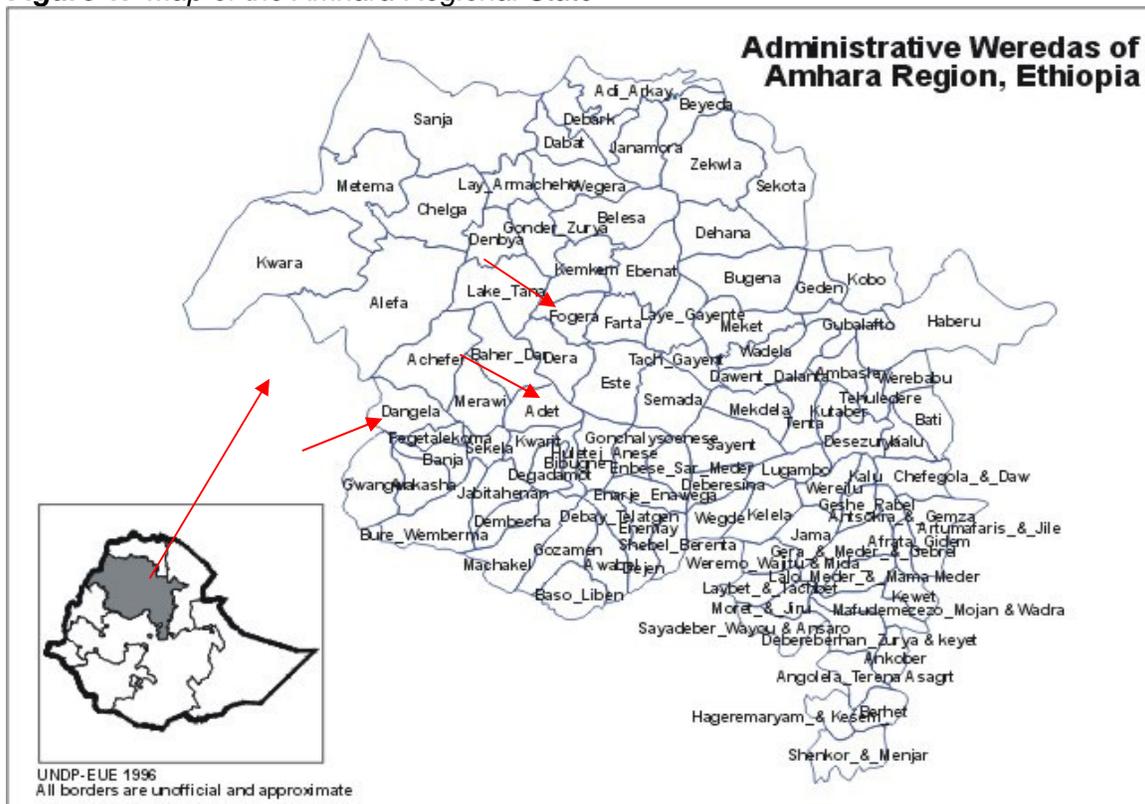
¹ Tahzib, E (1983), "Epidemiological Determinants of Vesicovaginal Fistula." *British Journal of Obstetrics and Gynecology*, 90:387-91

² Arrowsmith, S., Hamlin, EC., Wall, LL., (1996), "Obstetric Labor Injury Complex": Obstetric Fistula Formation and multifaceted morbidity of maternal birth trauma in the developing world. *Obstetric and Gynecology Survey* 51: 568-574

II. GEOGRAPHIC FOCUS

The Amhara Regional State is located in the North Western and North Central part of Ethiopia. The Regional State has 10 administrative zones, 1 special zone, 105 woredas and 78 urban centers. The Regional State covers an area of 170,752 square Kilometers and has a population of 19.2 million. Women of child bearing age comprise 23.4% of the population and the contraceptive prevalence rate (CPR) is estimated to be 16.1%.³ Only 26.5% of pregnant women attend antenatal care (ANC) and facility based delivery is at 3.5%. Obstetric fistula is prevalent among 0.5% of women of reproductive age, making the number of obstetric fistula patients in the region around 22,370.^{3, 4}

Figure 1: Map of the Amhara Regional State



The ACQUIRE/IntraHealth obstetric fistula prevention and repair project was implemented in the woredas of Adet, Dangla and Woreta (also known as Fogera). Table 1 below gives basic indicators in these three woredas. These data were collected and reviewed as the project was being designed to identify the woredas in Amhara that would be appropriate for the fistula interventions.

³ 2005 Ethiopia Demographic and Health Survey, 2005, Central Statistic Agency (CSA)

⁴ Health and Health Related Indicators, 2006, Federal Ministry of Health, ACQUIRE Project Final Report: Obstetric Fistula in Amhara Regional State, Ethiopia

Table 1: Demographic Indicators of the three Woredas

Indicator⁴	Adet	Dangla	Woreta
Distance from the B/Dar Fistula Hospital	42 Km	85 Km	47 Km
Population	334,412	207,769	256,499
Population of women of reproductive age	78,252	48,617	60,020
Health facilities	1HC, 17 HPs*	2HCs, 37 HPs	1HC, 26 HPs
Population of health care providers ⁺	73	43	50
Population of HEWs	62	94	56

* HC= health center, HP= health post

+ Health officers, nurses, midwives, junior nurses, laboratory techs, druggists, sanitarians

III. IMPLEMENTATION STRATEGIES

The implementing partners agreed that the fistula project would build upon IntraHealth's extensive experience supporting reproductive health care at the health center and health post level, and the treatment experience of the Addis Ababa Fistula Hospital to address obstetric fistula. The partners used a three-pronged strategy to inform communities about the existence and treatment of fistula, prepare health facilities to receive potential fistula patients, and ensure identified fistula patients received appropriate treatment and rehabilitation. As such, the project worked at the following levels:

- 1) At the community level, to increase awareness of the problem and knowledge of where to obtain maternity and fistula services as well as to re-integrate women post-repair into the community through community dialogue, sensitization and awareness. Inputs included:
 - ◇ Conducting community sensitization activities reaching a wide range of audiences
 - ◇ Preparing existing health extension workers, traditional birth attendants and reproductive health agents [CBRHA] to recognize danger signs and refer obstetric emergencies as well as to detect and refer fistula cases
 - ◇ Involving local micro-financing institutions for re-integration of fistula patients post-repair.

- 2) At the facility level – health center and post – expanding availability of quality comprehensive fistula care and prevention services to the primary care level. Inputs included:

- ◇ Updating health provider skills to ensure safer obstetrical practices
 - ◇ Establishing referral systems between health center and fistula hospital
 - ◇ Coordination and communication among and between the community/community health workers, between the health post and health centers and the fistula hospital and project staff
 - ◇ Equipping facilities with basic supplies and equipment for providing quality fistula and EmOC services
 - ◇ Involving surgeons and gynecologists working in the B/Dar hospital in fistula repair and care.
- 3) Strengthening communication and referral between and among the community and the health delivery network. Consistently conducting community-facility dialogues to share lessons learned about:
- ◇ fistula screening, care, prevention and rehabilitation
 - ◇ transferring emergency fistula cases to the appropriate level of care.

In order to document progress and outcomes of the project, and to contribute through ACQUIRE to the global understanding about fistula, the project prepared and used standard, simple and user friendly reporting formats on fistula activities. Project staff worked with providers and community members to record data appropriately (See Appendix 3). Project staff also offered facility and community level mentoring and supportive supervision for improved performance in fistula detection, screening, referral, repair, re-integration and skills for delivery; as well as documenting challenges and lessons learned. Regular project review meetings with partners were held to allow for consistent review of the project based on set objectives and stated indicators.

To implement the project, ACQUIRE/IntraHealth hired four project staff: three fistula mentors and one fistula project manager. The Fistula Mentors were based at the health center sites in the woredas and the Fistula Project Manager was based in Bahir Dar at the IntraHealth Amhara Regional Office, but with frequent travel to the sites for support. This placement allowed for frequent and easy interaction with the Bahir Dar Fistula Hospital and the Regional Health Bureau. USAID also transferred two vehicles to the project to facilitate transportation of fistula patients to and from repair in Bahir Dar or Addis Ababa if necessary. However, it was also necessary at times to rent an additional vehicle due to the number of referrals and the distances between residences and the BDFH.

IV. HOW DID THE PROJECT WORK?

The ACQUIRE Fistula Project in Ethiopia used a model combining prevention and repair, building upon the strengths of the two central partners: IntraHealth/Ethiopia and the Addis Ababa Fistula Hospital. Figure 2 visually illustrates how the project functioned, beginning first with raising awareness of what fistulae are, and how they can be prevented, then making appropriate referrals for women needing repairs. Preparation for the awareness raising and identification/referral process began with training of various cadres of providers, staff and community leaders. This resulted in buy-in from leaders in the community and the health facilities, thereby allowing this set of interventions to proceed with support from the necessary individuals.

Three midwives were trained on obstetric fistula screening, pre- and post-repair care and community mobilization at the Addis Ababa Fistula Hospital and at Bahir Dar Fistula Hospital. These midwives were based at the three woredas as fistula mentors to coordinate, mentor and supervise obstetric fistula prevention and repair activities at the facility and community levels.

Building upon existing structures at the community level, the community mobilization and awareness raising was conducted by community health workers (HEWs, CBRHAs) and community members (teachers, religious/opinion leaders, representatives of women associations). They received training on specific messages about obstetric fistula: causes, pre-repair care, repair, post-repair re-integration and prevention, before conducting sessions in their respective communities/settings. Thereafter, the flow of potential fistula patients proceeded as follows:

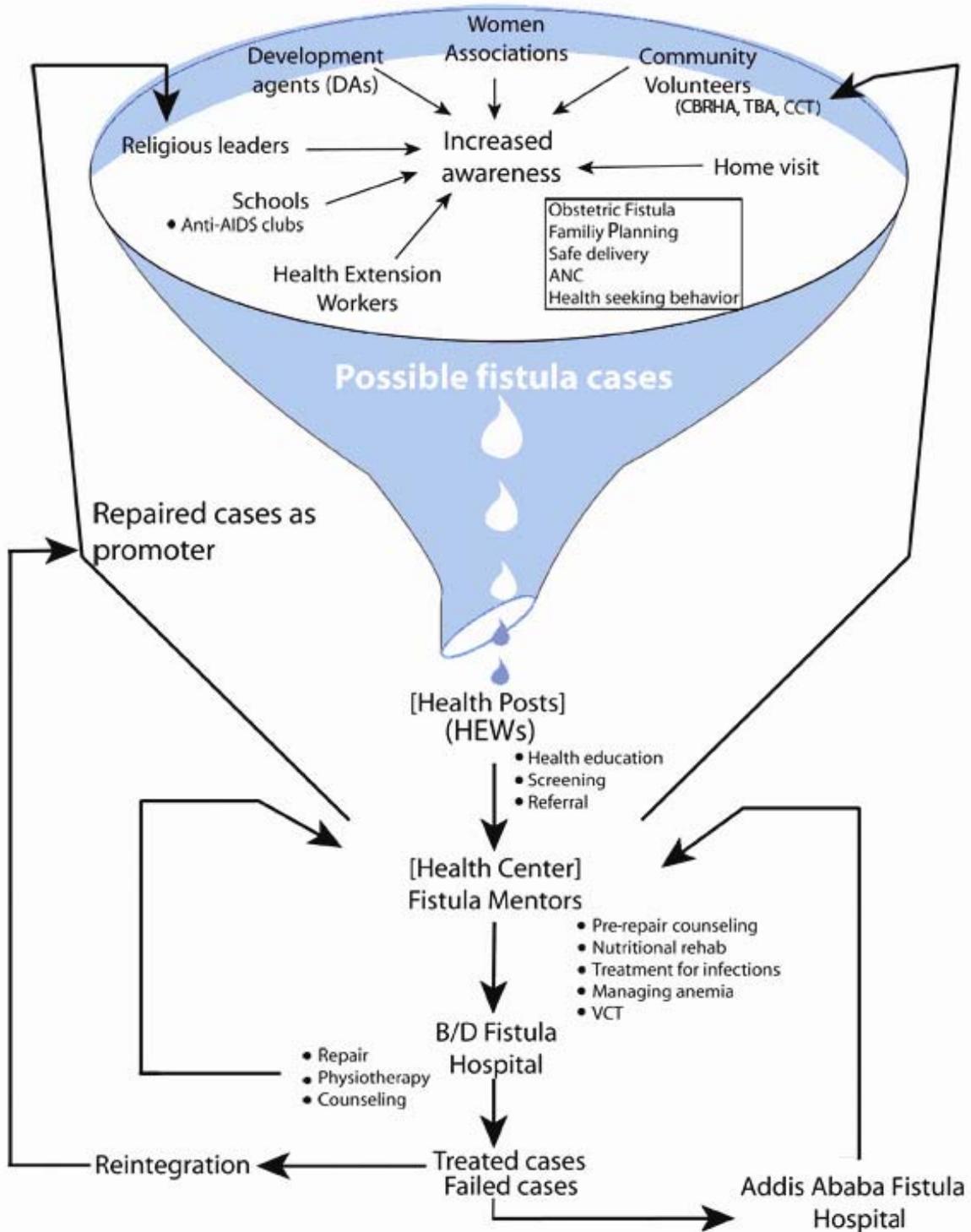
1. The community based health cadres contacted the HEW who was based at the health post whenever they identified a fistula patient during their house-to-house visits or during community dialogues.
2. The HEW completed the referral slip and contacted the fistula mentor(s) based at the health center(s) via telephone.
3. The mentor traveled to the health post or to the woman's residence. During this visit, the mentor confirmed the diagnosis and would either take the woman to the pre-repair center or make an appointment to come back and take her to the center at her convenience.

In addition, sometimes HEWs, CBRHAs, and women associations contacted the fistula patients and subsequently the mentor, instead of summoning the mentor for the individual patient. This happened when the health post or the patient's residence was too remote.

4. Once admitted to the pre-repair care center, the woman received nutritional support, health education, counseling on repair and its possible outcomes, and post-repair re-integration, screening and treatment for anemia, screening for infections/infestations and treatment, sitz bath, skin care and voluntary counseling and testing for HIV.
5. After communicating with the BDFH about the availability of beds through the project coordinator, based at Bahir Dar, the mentor sent the patient with a formal referral form to the BDFH, where the patients received the repair service. One of the project vehicles would transport the patient to (and from) the hospital.
6. The BDFH informed project staff (usually the coordinator) of the number and addresses of the patients to be discharged from the hospital a day before the actual discharge date.
7. The project coordinator sent a vehicle(s) to the hospital on the next day and informed the responsible mentor(s) accordingly. The patient(s) were transported to the respective mentor(s) who first referred her to the hospital.
8. Upon her arrival to the referring health center, the patient presented the mentor the feedback (back-referral) form given to her by the operating doctor from the BDFH. This form informed the mentor of the outcome of the repair and the follow up recommendation(s) suggested by the surgeon; she then carried them out accordingly.
9. Patients who needed complicated repairs were sent to the AAFH with formal referral papers from the BDFH using the project's vehicles; after completing their treatment at the AAFH, they were transported back to their home.

Figure 2: Fistula Project Model

How the Fistula Project Works

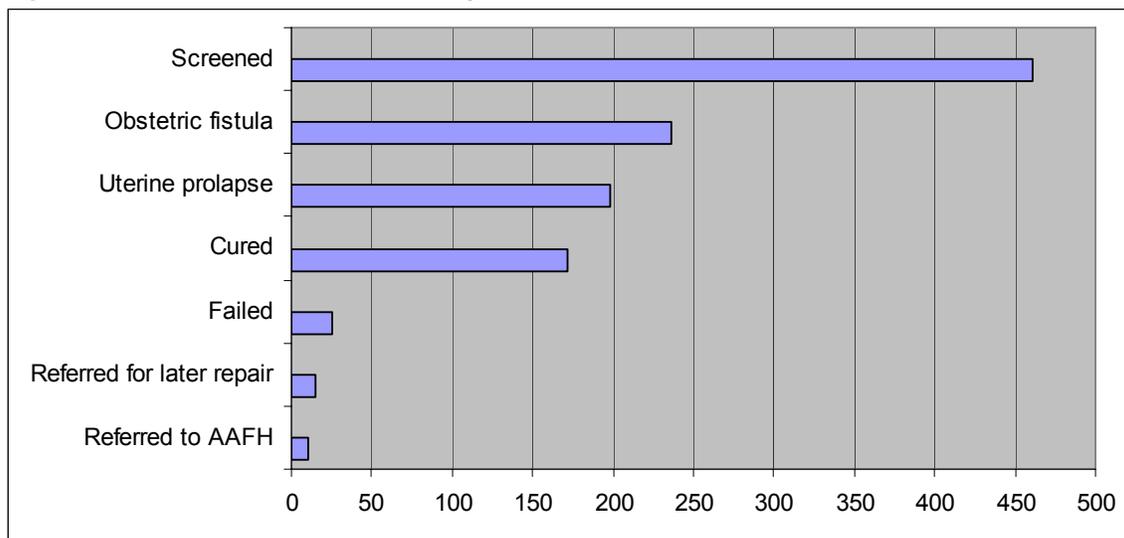


V. ACHIEVEMENTS AND RESULTS

A. Clinical

In the 12 months of active screening and referral, a total of 461 women with different complaints of urinary incontinence were screened for obstetric fistula. Among these, 236 were confirmed as obstetric fistula patients and referred to the Bahir Dar Fistula Hospital for repair services. One-hundred and seventy two of the confirmed cases were cured, 10 referred to the Addis Ababa Fistula Hospital for expert evaluation and surgery, and 15 were referred for later repairs as they came within 12 weeks after the occurrence of the fistula. The remaining 25 have failed to cure in the first attempt and are on frequent follow ups. Fourteen women were lost to follow up. In addition to these, 104 obstetric fistula patients were admitted to the Bahir Dar Fistula Hospital and got repair services even though they did not get the referral and transport services from the IntraHealth obstetric fistula prevention and repair project (See Appendix 1 for list of patients and status).

Figure 3: Results of fistula screening and referral



A complicating discovery through the screening process was the number of women presenting with uterine prolapse; it was one of the most common findings during the assessment of women coming to the health centers with complaint of urinary incontinence. Of the 461 women who were screened, 195 women were diagnosed with uterine prolapse. This major problem remains unaddressed and is a major cause for continued suffering of thousands of women. The project staff continued throughout the project lifespan to dialogue with the hospital staff as well as ACQUIRE/IntraHealth technical staff to identify a possible solution for these women.

B. Training

Since skills and capacity development of the health care providers and the facilities was one of the objectives of the project, numerous trainings for both facility and community based health care providers were conducted during the project. A total of 104 health care providers in the three health centers and their satellite 15 health posts were trained on fistula prevention, screening, pre-repair care and referral. In addition, 12 nurses and midwives from the three health centers and 11 nurses and midwives from the two referral hospitals (B/Dar and Debremarkos) were trained on basic life saving skills (BLSS) focusing on emergency obstetric care.

Community level health cadres, opinion and religious leaders, women associations' representatives, teachers and agricultural development agents were another focus of the training activities. The emphasis of the training for these community members was on community mobilization methods and referral networking. Table 2 summarizes the number of trainees from each of the categories.

Table 2: Community Members Trained on OF Referral and Community Mobilization

Community Member	Trained on Patient Referral and Community Mobilization Methods		
	Female	Male	TOTAL
Health Extension Workers	161	-	161
Community based reproductive health agents (CBRHAs)	50	67	117
Religious leaders	-	408	408
Opinion leaders	-	77	77
Women Association Representatives	154	-	154
Agricultural Development Agents	8	21	29
Schoolteachers	8	23	31
<i>Total</i>	<i>381</i>	<i>596</i>	<i>977</i>

C. Developing Facility Capacity

Three pre-repair rehabilitation centers, each with a capacity of admitting at least three fistula patients, were established at the three health centers. To prepare the rehabilitation centers, different equipment and supplies for improving the screening and diagnosis of obstetric fistula were distributed to the three health centers, 15 health posts and the two referral hospitals (Appendix 2).

The providers' knowledge and skills in screening, diagnosis and formal referral of fistula patients has shown significant improvement as evidenced by subsequent supportive supervision and the end-project knowledge assessment.



Pre-repair rehabilitation center in Woreta Health Center

D. Community Mobilization

As bringing attitudinal and behavioral changes in the community toward reproductive health issues, including causes, treatment and prevention of obstetrical fistula, was one of the three main objectives of the project, all existing gatherings and institutions (schools, churches, mosques, markets and formal and informal community meetings) were utilized for delivering awareness raising messages.



Sensitization for religious leaders, Dangla Woreda

More than 150,000 community members were reached. Health care workers at the facility and community level, fistula mentors, schoolteachers and cured fistula patients were the main channels through whom the message was delivered to the community. The channels used and the number of community members reached are shown in Table 3.

Table 3: Health Education and Community Mobilization Forums Conducted

Place	Educators/Mobilizers	Number of Community Members Reached		
		Female	Male	TOTAL
Health Facility (HCs + HPs)	Mentors, HEWs, HW	6,899	8,455	15,354
Schools	Mentors, Teachers, HEWs	20,342	28,025	48,367
Religious centers (Mosques & Churches)	Mentors, religious leaders, fistula patients, HEWs, CBRHAs	33,178	29,364	62,542
Formal Kebele meetings	Mentors, kebele leaders, women association rep., fistula patients	6,830	13,069	19,899
Community gatherings (Edir, Markets)	Mentors, CBRHAs, HEWs, fistula patients, kebele leaders	2,656	4,351	7,007
GRAND TOTAL		69,905	83,264	153,169

E. Mentoring, Monitoring and Evaluation

This project used the global ACQUIRE fistula indicators and reporting formats. In order to complete these reports and collect accurate data, the project developed fistula patient identification slips, referral and back-referral forms, and monthly reporting formats and used them throughout the project (Appendices 3-5). Four quarterly reports and two semi-annual activity reports (SARs) were sent to ACQUIRE and USAID respectively.

The IntraHealth Reproductive Health Technical Advisor, based in Addis Ababa, and the Project Coordinator provided supportive supervision and mentoring to the project fistula mentors. This consisted of site visits to their health centers, review of data and problem-solving/lessons learned discussions. Staff was also available by phone for consultation when needed.

As part of the project workplan, two evaluation activities were included: a pre-and post-intervention knowledge and awareness assessment of providers and community/clients. The pre-intervention assessment was conducted in April 2006, and the post-intervention assessment, using the same tools, was conducted at the end of the project in February 2007.

VI. PRE AND POST INTERVENTION ASSESSMENTS

Health care providers working at the three fistula project health centers and clients who visited these facilities during the data collection periods (pre-intervention assessment: *April-May, 2006*; and post-intervention assessment: *February 12-26, 2007*) were interviewed with the objectives of:

- Determining the level of awareness of community members (clients) about obstetric fistula
- Determining the level of knowledge of health care providers about obstetric fistula
- Identifying gaps in the level of awareness/knowledge and determining root causes for the gaps
- Finding appropriate interventions that address the identified causes and improving the awareness/knowledge of the community and health care providers about causes of obstetric fistula and its management
- Identifying the change in the level of awareness/knowledge of both clients and providers as compared with the pre-implementation baseline assessment (post-intervention assessment).

Semi-structured open and closed-ended questionnaires were used to collect the data for providers and clients. Data from 69 health care providers and 609 clients were collected. Participation in the assessment was voluntary; and procedures to protect the confidentiality and anonymity of the respondents were strictly followed. Data were then analyzed using SPSS version 11.0. A summary of the knowledge findings is presented below.

Table 4 A: Comparison of Pre and Post-Intervention Survey Results (Providers)

KNOWLEDGE AND BELIEFS	Pre- Intervention	Post- Intervention	Respondents as proportion of entire sample~	
	% (#)	% (#)	Pre- (N=48)	Post- (N=69)
Responses from All Providers In Survey	(N=48)	(N=69)		
Received training in obstetric fistula in the past 12 months	0% (48)	58% (40)	0%	58%
Stated they knew what obstetric fistula is	79% (38)	97% (67)	79%	97%
Responses from Providers in Survey Who Stated That They Knew What Obstetric Fistula Is	(N=38)	(N=67)		
Single major cause of OF in Ethiopia is:				
Obstructed labor	53% (20)	85% (57)	42%	83%
Rape	32% (12)	12% (8)	25%	12%
Reproductive tract infections	8% (3)	2% (1)	6%	1%
Reproductive tract cancers	5% (2)	2% (1)	4%	1%
Surgical trauma	3% (1)	0% (0)	2%	0%
Others	0% (0)	0% (0)	0%	0%
Did not know any major cause	0% (0)	0% (0)	0%	0%
Consequences of OF:				
Leakage of urine from vagina	82% (31)	93% (62)	65%	90%
Leakage of stool from vagina	53% (20)	88% (59)	42%	86%
Stigma and discrimination	47% (18)	61% (41)	38%	59%
Mental illness such as depression	26% (10)	37% (25)	21%	36%
Reproductive tract infections	32% (12)	36% (24)	25%	35%
Foot drop	11% (4)	19% (13)	8%	19%
Infertility	0% (0)	9% (6)	0%	0%
Amenorrhea	3% (1)	6% (4)	2%	6%
Others	0% (0)	3% (2)	0%	3%
Did not know any consequence	3% (1)	2% (1)	2%	1%
Obstetric fistula is preventable	97% (37)	100% (67)	77%	97%
Potential intervention to prevent OF:				
Discourage early marriage/teenage pregnancy	55% (21)	85% (57)	44%	83%
Improve facility based ANC & delivery	66% (25)	81% (54)	52%	78%
Teach community	82% (31)	72% (48)	65%	70%
Provide quality care at facility	18% (7)	28% (19)	15%	28%
Avail family planning methods	21% (8)	19% (13)	17%	19%
Increase male involvement	21% (8)	18% (12)	17%	17%
Improve women's education	21% (8)	16% (11)	17%	16%
Reduce poverty	16% (6)	8% (5)	13%	7%

~Most questions were asked only of sub-sample of participants who stated that they knew what obstetric fistula was (if they didn't it was presumed they could not answer specific questions about fistula). This final column indicates what proportion of the entire sample their responses represented.

Table 4 A cont.

KNOWLEDGE AND BELIEFS	Pre- Intervention	Post- intervention	Respondents as proportion of entire sample	
	% (#)	% (#)	Pre- (N=48)	Post (N=69)
Responses from Providers in Survey Who Stated They Knew What Obstetric Fistula Is	(N=38)	(N=67)		
Obstetric fistula is curable	97% (37)	97% (65)	77%	94%
Ultimate treatment for OF:				
Surgical repair	79% (30)	94% (63)	63%	91%
Medical treatment	5% (2)	5% (3)	4%	4%
Counselling	3% (1)	0% (0)	2%	0%
Holy water	0% (0)	0% (0)	0%	0%
Traditional medicine	0% (0)	0% (0)	0%	0%
Did not know any treatment	13% (5)	1% (1)	10%	1%
Pre-repair care:				
Nutritional rehabilitation	50% (19)	76% (51)	40%	74%
Counselling	61% (23)	63% (42)	48%	61%
Treatment for anaemia	24% (9)	40% (27)	19%	39%
Treatment for RTI and other infections	45% (17)	55% (37)	35%	54%
Treatment for infestations	29% (11)	33% (22)	23%	32%
Sitz bath	40% (15)	39% (26)	31%	38%
Catheterization for fresh fistula	29% (11)	12% (8)	23%	12%
Did not know any pre-repair care	3% (1)	3% (2)	2%	3%
Believed a woman with a successfully repaired fistula could get pregnant	84% (32)	90% (60)	67%	87%
Ever examined a fistula patient	45% (17)	30% (20)	35%	29%

Table 4 A cont.

KNOWLEDGE AND BELIEFS	Pre- Intervention	Post- Intervention	Respondents as proportion of entire sample	
	% (#)	% (#)	Pre- (N=48)	Post (N=69)
Responses from Providers in Survey Who Stated They Knew What Obstetric Fistula Is	(N=38)	(N=67)		
Post repair women should:				
Remain away from community in order not to suffer from stigma and discrimination	18% (7)	8% (5)	15%	7%
Be trained in income generating skills	13% (5)	27% (18)	10%	26%
Be advised to get pregnant as soon as possible to prove to to prove to community that they are cured	13% (5)	10% (7)	10%	10%
Be supported by micro-financing schemes	13% (5)	21% (14)	10%	20%
Establish fistula support groups for easy access to support/donations	26% (10)	31% (21)	21%	30%
Be enabled to act as peer educators and community mobilizers	47% (18)	87% (58)	38%	84%
Others	0% (0)	1% (1)	0%	1%
Did not know what women should do	21% (8)	0% (0)	17%	0%

A. Comparison of results for providers

Of all providers in the surveys, from pre to post-intervention there was:

- a great increase in percentage who had received training in OF in past 12 months (0 % to 58%)
- a sizeable increase in percentage who stated they knew what obstetric fistula was (79% to 97%).

Among those providers who stated they knew what obstetric fistula was — and who were therefore asked further knowledge questions about fistula — there were:

- generally positive increases (of varying magnitude) in knowledge of causes, consequences, treatment and pre-repair care for obstetric fistula.

However, as illustrated in the table, the changes in knowledge of providers who stated that they knew what OF is, as shown by percentages in columns 2 and 3, are less impressive than what they represent in absolute numbers of providers and as a proportion of the entire survey sample. As an example, of the pre-intervention and post-intervention providers who stated that they knew what fistula is and were asked whether it was preventable, the % who believed it was preventable rose from 97% to 100%. However, when those 37 and 67 providers who believed it was preventable are considered as a proportion of the entire study sample (i.e., of both those who were asked the question and those who were not asked it because they did not know what OF was) it represents a more impressive increase: from 77% to 97% of all providers in the survey (pre to post-intervention).

- a decrease in the percent of these providers who indicated they had seen a fistula patient. This may be due to greater knowledge about fistula. With knowledge gains, by post-intervention more providers may have been able to distinguish between fistula and non-fistula patients.

Table 4 B: Comparison of Pre and Post-Intervention Survey Results (Clients)

KNOWLEDGE AND BELIEFS	Pre- Inter- vention	Post- Inter- vention	Respondents as proportion of entire sample~	
	% (#)	% (#)	Pre- (N=597)	Post (N=609)
Responses From All Clients in Survey	(N=597)	(N=609)		
Had ever heard of obstetric fistula (OF)	18% (105)	77%* (468)	18%	77%
Responses from Clients in Survey Who Had Heard of Obstetric Fistula	(N=105)	(N=468)		
Stated that they knew what OF was	64% (67)	91% (427)	11%	70%
Responses From Clients in Survey Who Stated That They Knew What Obstetric Fistula Is	(N=67)	(N=427)		
Single major cause of OF in Ethiopia is:				
Obstructed labor	42% (28)	70% (297)	5%	49%
Rape	48% (32)	28% (118)	5%	19%
Reproductive tract infections	2% (1)	<1% (1)	<1%	<1%
Reproductive tract cancers	2% (1)	1% (2)	<1%	1%
Surgical trauma	7% (5)	2% (9)	1%	2%
Others	0% (0)	0% (0)	0%	0%
Did not know major cause	0% (0)	0% (0)	0%	0%
Consequences of OF:				
Leakage of urine from vagina	78% (52)	82% (352)	9%	58%
Leakage of stool from vagina	37% (25)	51% (219)	4%	37%
Stigma and discrimination	16% (11)	20% (84)	2%	14%
Mental illness such as depression	16% (11)	5% (22)	2%	4%
Reproductive tract infections	6% (4)	29% (122)	1%	20%
Foot drop	5% (3)	4% (18)	1%	3%
Infertility	5% (3)	15% (63)	1%	10%
Amenorrhea	5% (3)	21% (88)	1%	14%
Others	0% (0)	<1% (2)	0%	<1%
Did not know any consequence	13% (9)	3% (13)	2%	2%
Obstetric fistula is preventable	81% (54)	92% (393)	9%	65%

Not including the 21 clients who had heard about a condition in which a woman continuously passes urine and/or stool but not the word 'obstetric fistula'

Table 4 B cont.

KNOWLEDGE AND BELIEFS	Pre-inter vention	Post-inter vention	Respondents as proportion of entire sample~	
	% (#)	% (#)	Pre- (N=597)	Post (N=609)
Responses from Clients Who Stated That They Knew What Obstetric Fistula Is	(N=67)	(N=427)		
Potential intervention to prevent OF:				
Discourage early marriage/teenage pregnancy	58% (39)	82% (351)	7%	58%
Improve facility based ANC & delivery	22% (15)	27% (115)	3%	19%
Teach community	34% (23)	34% (145)	4%	24%
Improve quality of care at health facilities	10% (7)	4% (16)	1%	3%
Avail family planning methods	21% (14)	11% (46)	2%	8%
Increase male involvement	10% (7)	4% (17)	1%	3%
Improve women's education	22% (15)	5% (21)	3%	3%
Reduce poverty	6% (4)	0% (0)	1%	0%
Did not know any potential intervention	3% (2)	8% (33)	<1%	5%
Obstetric fistula is curable	78% (52)	91% (388)	9%	
Ultimate treatment for OF: ⁺				
Surgical repair	85% (57)	76% (325)	10%	53%
Counselling	0% (0)	0% (0)	0%	0%
Holy water	21% (14)	1% (5)	2%	1%
Medical treatment	0% (0)	0% (0)	0%	0%
Traditional medicine (herbal)	0% (0)	2% (8)	0%	1%
Others	3% (2)	2% (9)	<1%	2%
Did not know treatment or did not believe it could be treated	9% (6) ⁺	19% (79)	1%	13%
Pre-repair care:				
Nutritional rehabilitation	63% (42)	36% (154)	7%	25%
Counselling	40% (27)	41% (175)	5%	29%
Treatment for anaemia	15% (10)	<1% (1)	2%	<1%
Treatment for RTI and other infections	16% (11)	12% (49)	2%	8%
Treatment for infestations	12% (8)	0% (0)	1%	0%
Sitz bath	17% (11)	1% (3)	2%	<1%
Did not know any pre-repair care	8% (5)	24% (104)	<1%	17%
Believed a woman with a successfully repaired fistula could get pregnant	61% (41)	66% (283)	7%	46%
Had ever seen a fistula patient	39% (26)	58% (246)	4%	40%

⁺ The results for this question are a little inconsistent with the previous question. Several respondents who said that OF was not curable then went on to list treatments.

Table 4 B cont.

BELIEFS AND KNOWLEDGE	PRE-INTERVENTION	POST-INTERVENTION	Respondents as proportion of entire sample~	
	% (#)	% (#)	Pre- (N=597)	Post (N=609)
Responses From Clients In Survey Who Stated They Thaknew What Obstetric Fistula Was	(N=67)	(N=427)		
Post-repair women should:				
Remain away from community to not suffer from stigma and discrimination	42% (28)	28% (120)	5 %	20%
Be trained in income generating skills	19% (13)	34% (142)	2 %	23%
Be advised to get pregnant as soon as possible to prove to the community that they are cured	34% (23)	21% (88)	4 %	14%
Be supported by micro-financing schemes	28% (19)	11% (47)	3 %	8%
Establish fistula support groups for easy access to support/donations	10% (7)	18% (75)	1 %	12%
Be enabled to act as peer educators and community mobilizers	25% (17)	51% (218)	3 %	36%
Others	0% (0)	1% (3)	0 %	<1%
Did not know what women should do or did not respond	2 % (1)	4% (16)	<1 %	3%

B. Comparison of results for clients

Of all clients in the surveys, from pre- to post-intervention there was

- a great increase in percentage who had heard of obstetric fistula (from 18% to 77%).

Of all clients in the surveys who had heard of obstetric fistula, from pre to post-intervention there was:

- a sizeable increase in percentage who stated they knew what obstetric fistula was (64% to 91%).

Among those clients who stated they knew what OF was there were:

- increases (of varying magnitude) in the percent knowing the causes, consequences, preventability (and methods of prevention) and curability of OF.

Among this sub-sample of clients who knew what OF was, these percentage increases in knowledge are less impressive than what they represent in absolute numbers of providers and as a proportion of the entire survey sample. As an example, of respondents who stated they knew what OF was, the percentage who were aware that a consequence of OF was leakage of urine rose very modestly from 78% to 82% (pre to post). However, in numerical terms this represented an increase from 52 to 352 respondents or an increase from 9% of the entire pre-test sample to 58% of the entire post-test sample of respondents.

- there were no increases in the percentage knowledgeable about appropriate treatment; indeed, there were decreases in the percentage aware of surgical repair and of some aspects of pre-repair care.

However, it should be noted that while there were decreases in these percentages among respondents who stated they knew what OF was, they still represented large numerical increases. For example, of survey respondents who stated they knew what OF was, there was a decrease from 85% to 76% in those who knew it could be cured by surgical repair. However, because there was such a large increase in the number of survey respondents who stated they knew what OF was (and therefore answered the question about treatment methods), the number of survey respondents who knew about surgical repair actually rose from 57 to 325. This represented an increase from 10% of the pre-intervention sample to 53% of the post-intervention sample.

In general, the post-intervention assessment showed improvement in the level of awareness and knowledge about obstetric fistula causes, repair and prevention at community and health care providers' levels. However, wide awareness/knowledge gaps still exist at both the community and health care provider levels regarding the health and social consequences of obstetric fistula, and post-repair re-integration of cured fistula patients.

Based on the findings, continuous in-service trainings focusing on the 'obstetric fistula complex' and post-repair re-integration; and frequent community dialogues and conversations giving emphasis on prevention and post-repair re-integration were recommended. Intensifying the involvement of cured fistula patients was also recommended as a crucial prevention intervention.

VII. PROJECT ACTIVITIES: PLANNED VERSUS ACHIEVED

Planned Activity	Status at the end of the Project	Remarks
Conduct a baseline knowledge and awareness assessment on obstetric fistula diagnosis, care, treatment, post-repair re-integration and prevention at client and provider levels	100% completed	Completed in May 2006 and subsequent trainings and community sensitizations were guided by the findings and recommendations from this assessment.
Train three IntraHealth hired fistula mentors in coordination with Health Center, Health Post staff	100% completed	Mentors trained for a week at the AAFH and BDFH.
Knowledge, skill building of health workers in selected health posts and health centres on fistula screening, management, prevention, importance of/procedures for referral, management of obstetrical emergencies	100% completed	Eighty health care providers were expected to be trained. However 104 (130%) health workers from the three health centers and the 15 health posts were trained.
Conduct refresher knowledge and skill building for HEW, other community health care cadres (TBA, CBRHA) on fistula identification, referral, danger signs of pregnancy and labor, community mobilization	100% completed	More than 900 HEWs, CBRHAs, TBAs, religious leaders, school teachers and women associations' representatives were trained on causes of fistula, prevention, pre-repair care, and referral of obstetric fistula patients.
Establish pre-repair rehabilitation centers in the three health centers	100% completed	Three pre-repair centers were established and started rendering services as of the 2 nd quarter of the project.
Prepare minimum nutrition package for the woman who is going to be referred for repair at the three health centers	100% completed	Nutritional package was prepared based on the menu obtained from the BDFH
Provide pre-repair care for fistula patients prior to their referral for repair at the BDFH	100% completed	Beginning in the 2 nd quarter, patients were getting counselling, nutritional support, treatment for infections/infestations, screening and treatment for anaemia; and voluntary counselling and testing (since the 3 rd quarter of the project).
Transport identified fistula victims and obstetric emergencies from the community to pre-repair centers and to B/Dar Fistula Hospital.	Not fully accomplished	236 fistula patients were transported from the community to the three pre-repair centers, to BDFH and to AAFH. However, no obstetric emergency patient got

Planned Activity	Status at the end of the Project	Remarks
		transport service from the project.
Equip and enable the 3 HC and the 15 HP to deliver pre-referral and post repair services	100% completed	\$14,000 USD worth of medical equipment and supplies were locally procured and distributed to the health centers, the health posts and the two referral hospitals in the 2 nd and 4 th quarters of the project.
Produce and distribute standardized medical records and facility reporting forms for documentation and referral for use by all facilities.	100% completed	Formats, patient record slips and registries were distributed to all the targeted health care facilities. Referral and reporting formats were distributed for all community level workers.
Produce and distribute job aids on OF for facility level providers	100% completed	Algorithm on the diagnosis of OF was prepared in collaboration with the BDFH and a one pager key message on OF (in Amharic) was distributed for all facility and community based health cadres.
Erect banners/posters on fistula at the three health centers	100% completed	Three posters with pictures of cured fistula patients were erected at the three health centers.
Coordinate and carry out “Fistula Week” celebration in Amhara Region	100% completed	The “Fistula Week” was celebrated for the first time in Ethiopia in the week of the 20 th of October. Four women parliamentarians were the guests of honor for the launching ceremony conducted in the compound of the BDFH.
Treatment at the Bahir Dar Hospital for Types 1, 2 and referral/treatment at the Addis Ababa Fistula Hospital for Types 3, 4 obstetrical fistula patients	100% completed	236 (95%) out of the 250 obstetric fistula patients were referred for repair by the project. In addition to these, 104 fistula patients who were informed about the availability of the service by the project staff got the repair service at the BDFH though they were not formally referred through the HP-HC-Hospital channel. Ten patients with type 3 and 4 obstetric fistulae were referred to the AAFH for repair.

Planned Activity	Status at the end of the Project	Remarks
Liaise with Pathfinder International and other community organizations to ensure post repair rehabilitation	Not accomplished	Despite the different discussions, Pathfinder International was not able to secure funds to carryout this crucial intervention component throughout the year.
Train health workers at Dangla Health Center on basic Emergency obstetric care (EmOC) (Parental oxytocic, anticonvulsants and antibiotic administration; manual removal of placenta; MVA, assisted vaginal delivery)	100% completed	Not only health workers from the Dangla health center but an additional 4 health workers from Woreta, 4 from Adet, 6 from Bahir Dar Referral Hospital and 5 from Debremarkos Referral Hospital were trained on basic life saving skills (BLSS) focusing on EmOC.
Facilitate and sponsor the training of a health officer from the Dangla Health Center on emergency obstetric surgery	Not accomplished	The health officer was not trained as the EmOC center that was expected to be established by the AAFH through the fund from Japan International cooperation agency (JICA) did not come into reality; and training the health officer when there was not found to be appropriate.
Integrate fistula project process and output indicators to the existing IntraHealth M&E system	100% completed	Using the forms from ACQUIRE, IntraHealth incorporated the indicators into the existing M&E system at the Addis office
Provide supportive supervision to the selected facilities	100% completed	Eight (2x/quarter) supportive supervision visits focusing on screening skills and community-facility referral model strengthening were conducted
Conduct review meeting with stakeholders	100% completed	Four review meetings were held with Governmental and NGO partners in the Amhara Regional State; and an experience sharing event was held at the end of the project in Addis with all partners and organizations working in the area of RH at the national level.
Conduct end-project assessment	100% completed	End-project knowledge and awareness assessment was done in February 2007 using the same tools that were used in the pre-intervention assessment at the start of the project.

VIII. CHALLENGES

The following were some of the major challenges encountered during the 12 implementation months of the project:

- Initial delay in start up due to partner negotiation, thereby leaving 12 months for implementation of the intervention.
- The deep rooted misconceptions about the causes, treatment and consequences of obstetric fistula.
- Most of the fistula patients live in very remote areas that are not accessible to motor vehicles.
- Almost half of the women coming to the health facilities with complaints of different forms of urinary incontinence were having uterine prolapse. Returning these women to the community without giving them any intervention has resulted in lack of trust of the project staff and might have contributed to the decreased client flow in the 3rd and 4th quarters as compared to the first six months of the project.
- Absence of organizations that work on post-repair re-integration of fistula patients resulted in a huge gap in the prevention-repair-re-integration continuum that was envisaged to be established through this project.

IX. LESSONS LEARNED

- *Partnership*: Establishing strong partnerships with various entities close to the project implementation areas was essential to gaining support for the intervention and making progress toward bringing about behavior change for fistula prevention, identification and treatment. Partnering with Pathfinder International to engage their CBRHAs – a cadre based in the community – resulted in almost half of the fistula patients being referred from the community level by the CBRHAs. IntraHealth International/Ethiopia trained them on obstetric fistula screening, case identification and referral and they were able to identify many women suffering from incontinence. Another valuable partner was the Regional Health Bureau. They contributed to most of the community conversations and dialogues, thereby lending validity to the project and intervention. Additionally, the involvement of the information bureau, education bureau and women's affair offices in the three woredas was one of the main factors for the successful completion of this project.
- *Referral mode*: One of the key issues for fistula patients is the stigma of their condition. Therefore, the project invested in strong referral processes and chains to ensure the safety and quality care of women who were identified as

needing fistula repair. The points along the chain were the community to the health post to the health center to the hospital and back to the community. Fistula patients were more comfortable using the project's vehicle than using rental cars or being given money for transport, as these two modes were more risky for preserving their confidentiality. The close coordination between all points along the referral chain contributed to satisfied clients and achievement of the targeted number of repairs. Before this coordination and joint effort, the Bahir Dar Fistula Hospital served 30-35 fistula patients in a month, whereas after the initiation of this project the average client flow to the hospital increased to 65-70 clients per month.

- *Pre-repair rehabilitation:* The establishment of the three pre-repair rehabilitation centers has helped in reducing the duration of stay at the hospital and facilitated better services for the clients. Fistula patients used to stay 7-10 days in the hospital prior to the fistula repair operation as part of pre-operation preparation. With the opening of the pre-repair rehabilitation centers, this pre-operative stay in the hospital has decreased to only 1-2 days.
- *Community mobilization:* Activities carried out by non-governmental organizations are often perceived as income generating and business oriented by the public. Involving the public sector and higher government officials in the advocacy and community mobilization forums helped in gaining the trust and confidence of the community (as noted under Partnerships). The active participation of the four women parliamentarians in the 'Fistula Week' celebration has resulted in gaining this trust not only from the community, but also from other partners and stakeholders.
- *Comprehensive approach:* Identifying fistula patients and helping them to get the repair service is a very crucial activity. However, unless the prevention-repair-re-integration circle is complete, the problem of obstetric fistula will continue for decades to come. Upgrading of maternal health services (providing family planning, ANC services, emergency obstetric services, labor and delivery, postnatal care services) and systematic and sustainable re-integration mechanisms have to be implemented in order to bring about a palpable change in the endeavor to prevent and eliminate obstetrical fistula in Ethiopia. During the course of this project, improvements in maternal health services were made, as well as initial steps to establish sustainable re-integration activities. These two components of the circle will be emphasized during the next phase of the fistula project in Ethiopia.

APPENDICES

Appendix 1A

Patients Who Received Transport and Referral Services from the IntraHealth's Obstetric Fistula Prevention, Repair and Reintegration Project.

No	Address	Age	Parity	Diagnosis
Patient #1	Dangla	28	I	VVF*
Patient #2	Dangla	50	I	VVF
Patient #3	Dangla	40	I	VVF
Patient #4	Dangla	30	I	VVF
Patient #5	Dangla	22	II	VVF+pregnant
Patient #6	Dangla	40	II	VVF
Patient #7	Dangla	22	I	VVF
Patient #8	Dangla	47	III	VVF
Patient #9	Ankesha	40	I	VVF+RVF**
Patient #10	Ankesha	39	I	VVF + RVF
Patient #11	Ankesha	40	II	VVF
Patient #12	Ankesha	21	I	VVF
Patient #13	Ankesha	40	X	VVF
Patient #14	Ankesha	30	I	VVF
Patient #15	Jawi	25	I	VVF + RVF
Patient #16	Jawi	28	I	VVF + RVF
Patient #17	Jawi	35	II	VVF
Patient #18	Jawi	20	I	VVF + RVF
Patient #19	Jawi	17	I	VVF + RVF
Patient #20	Dangla	45	II	VVF
Patient #21	Dangla	34	I	VVF
Patient #22	Ankesha	22	I	VVF
Patient #23	Dangla	24	I	VVF
Patient #24	Dangla	32	III	VVF
Patient #25	Ankesha	18	I	VVF
Patient #26	Dangla	25	V	VVF
Patient #27	Jawi	25	I	VVF
Patient #28	Fenesbet	28	I	VVF
Patient #29	Dangla	30	IV	VVF
Patient #30	Dangla	32	V	VVF
Patient #31	Dangla	58	V	VVF
Patient #32	Guanga	18	I	VVF
Patient #33	Barija	35	IV	VVF
Patient #34	Fagita	23	II	VVF + RVF
Patient #35	Dangila	30	I	VVF + RVF
Patient #36	Ankesha	40	III	VVF
Patient #37	Ankesha	25	I	VVF
Patient #38	Ankesha	17	I	VVF
Patient #39	Ankesha	40	V	VVF

No	Address	Age	Parity	Diagnosis
Patient #40	Fagita	36	V	VVF
Patient #41	Ankesha	38	V	VVF
Patient #42	Ankesha	20	II	VVF
Patient #43	Ankesha	22	I	VVF
Patient #44	Ankesha	40	I	VVF
Patient #45	Guanga	40	I	VVF
Patient #46	Dangla	35	II	VVF
Patient #47	Dangla	22	II	VVF
Patient #48	Dangla	25	I	VVF+pregnancy
Patient #49	Dangla	19	I	VVF
Patient #50	Fagita	18	I	VVF
Patient #51	Banja	54	I	VVF
Patient #52	Banja	56	VI	VVF
Patient #53	Banja	18	I	VVF
Patient #54	Banja	58	II	VVF
Patient #55	Banja	60	II	VVF
Patient #56	Banja	35	I	VVF
Patient #57	Dangla	27	I	VVF
Patient #58	Guange	18	I	VVF
Patient #59	Fayita	22	II	VVF
Patient #60	Banja	50	VIII	RVF
Patient #61	Jabi	55	III	VVF
Patient #62	Burie	60	I	VVF
Patient #63	Banja	38	III	VVF
Patient #64	Achefer	25	V	VVF
Patient #65	Achefer	20	I	VVF
Patient #66	Fayita	20	I	VVF
Patient #67	Fayita	21	I	VVF
Patient #68	Fersbet	20	I	VVF
Patient #69	Achefer	25	II	VVF
Patient #70	Ankesh	25	III	VVF
Patient #71	Ankesh	25	I	VVF
Patient #72	Ankesh	27	I	VVF
Patient #73	Ankesh	15	III	VVF
Patient #74	Ankesh	34	iV	VVF
Patient #75	Ankesh	50	II	VVF
Patient #76	Sekela	22	II	RVF
Patient #77	Fayita	36	I	VVF
Patient #78	Jabi	17	I	VVF
Patient #79	Sekela	20	I	VVF
Patient #80	Jabi	20	I	VVF
Patient #81	Jabi	40	V	VVF
Patient #82	Barjct	25	I	VVF

No	Address	Age	Parity	Diagnosis
Patient #83	Jabi	28	I	RVF
Patient #84	Dangila	20	I	VVF
Patient #85	Bunjra	46	I	VVF
Patient #86	Dangila	28	Iv	VVF
Patient #87	Sekela	20	I	VVF
Patient #88	Sek	46	I	VVF
Patient #89	Sek	28	I	VVF
Patient #90	Dangils	16	I	VVf
Patient #91	Sekela	18	I	VVF
Patient #92	Ganga	21	II	VVF
Patient #93	Fatiga	19	I	VVF
Patient #94	Ganga	51	VI	VVF
Patient #95	Barie	23	II	VVF
Patient #96	Sekela	24	I	VVF
Patient #97	Sekela	20	I	VVF
Patient #98	Dangla	15		VVF
Patient #99	Denbecha	25	I	VVF
Patient #100	Dembech	22	I	VVF
Patient #101	Tumuha	34	I	VVF
Patient #102	Ankesha	43	I	VVF + RVF
Patient #103	Guga	20	III	VVF
Patient #104	Fagita	29	I	VVF
Patient #105	Denebcha	40	I	VVF
Patient #106	Sekela	25	III	VVF
Patient #107	Gunga	20	I	VVF
Patient #108	Dangla	37	III	VVF + RVF
Patient #109	Agita	22	II	VVF
Patient #110	Gonji	16	I	VVF
Patient #111	Senkega	17	I	VVF
Patient #112	Kolilagusquam	35	I	VVF + RVF
Patient #113	Senkegna	25	II	VVF
Patient #114	Senkegna	50	I	VVF
Patient #115	Senkegna	40	II	VVF
Patient #116	Senkegna	36	II	VVF
Patient #117	Gebish	55	I	VVF
Patient #118	Gonji	35	VII	VVF
Patient #119	Dem Dingaye	19	I	VVF
Patient #120	Dem Dingaye	20	IV	VVF
Patient #121	Debremawi	20	I	VVF
Patient #122	Agita	30	IV	VVF
Patient #123	Dem Dingaye	35	VII	VVF
Patient #124	Goshmeda	38	VIII	VVF
Patient #125	Arefa M/alem	25	VI	VVF

No	Address	Age	Parity	Diagnosis
Patient #126	Abika	36	VIII	VVF
Patient #127	Chefakiet	22	I	VVF
Patient #128	Kolilagusquam	20	I	VVF
Patient #129	Endriase	28	VI	RVF
Patient #130	Wolekie	25	II	VVF
Patient #131	Korie	22	-	RVF
Patient #132	Kotie	30	I	VVF
Patient #133	Atetamariam	27	I	VVF
Patient #134	Sekela	30	II	VVF
Patient #135	Anbesit	50	I	VVF + RVF
Patient #136	Keranyo	25	I	VVF
Patient #137	Yezora	34	IV	RVF
Patient #138	Atetamariam	32	III	VVF
Patient #139	Debrework	21	I	VVF
Patient #140	Mertolemariam	24	II	VVF
Patient #141	mertolemariam	20	I	VVF
Patient #142	Mertolemariam	30	II	VVF
Patient #143	Mertolemariam	27	I	VVF
Patient #144	Motta	40	III	VVF
Patient #145	Quariet	23	I	VVF
Patient #146	Quariet	45	I	VVF
Patient #147	Bebugne	18	I	VVF
Patient #148	Gebish	24	I	VVF
Patient #149	Dem Dingaye	30	III	VVF
Patient #150	Quariet	55	I	VVF
Patient #151	Koker	48	0	VVF 2 ⁰ CA
Patient #152	Kotie	40	I	VVF + RVF
Patient #153	Debrework	65	X	VVF
Patient #154	Debrework	29	I	VVF
Patient #155	Goshye	35	I	VVF
Patient #156	Korie	30	I	VVF
Patient #157	Adet	40	IV	VVF
Patient #158	Sefatira	19	II	VVF
Patient #159	Geregera	25	III	VVF
Patient #160	Bebugne	25	I	VVF + RVF
Patient #161	Kotie	29	III	VVF
Patient #162	Debrework	46	II	RVF
Patient #163	Debrework	18	I	VVF
Patient #164	Zeng	26	III	VVF + RVF
Patient #165	Arida	28	I	VVF
Patient #166	Rib Gebheal	45	VI	VVF
Patient #167	Altihua	45	II	VVF
Patient #168	Zeng	40	V	VVF

No	Address	Age	Parity	Diagnosis
Patient #169	Bebekes	27	I	VVF
Patient #170	Arida	22	I	VVF
Patient #171	Nabega	40	IV	VVF
Patient #172	K.Hana	26	I	VVF
Patient #173	04	60	II	VVF
Patient #174	Ahida	22	I	VVF
Patient #175	Shina	30	II	VVF
Patient #176	Nabega	38	VI	VVF
Patient #177	Altihua	25	VI	VVF
Patient #178	Shamo	25	II	VVF
Patient #179	Abuara	30	I	VVF
Patient #180	Altihua	16	I	VVF
Patient #181	Addis Zemen	50	I	VVF + RVF
Patient #182	Addis Zemen	25	II	VVF
Patient #183	Fogera	30	IV	VVF
Patient #184	Fogera	26	IV	VVF
Patient #185	Nabega	24	II	VVF
Patient #186	K.Hana	23	II	VVF
Patient #187	Atetamariam	21	II	VVF
Patient #188	Sekela	19	I	VVF
Patient #189	Anbesit	22	I	VVF + RVF
Patient #190	Keranyo	23	I	VVF
Patient #191	Rib Gebheal	22	I	VVF
Patient #192	Altihua	21	II	VVF
Patient #193	Zeng	20	I	VVF
Patient #194	Zenga	16	I	VVF
Patient #195	Zenemenga	15	I	VVF + RVF
Patient #196	Addis Zemen	16	I	VVF
Patient #197	Addis Zemen	16	I	VVF
Patient #198	Fogera	19	II	VVF
Patient #199	Fogera	21	III	VVF
Patient #200	Fogera	19	II	VVF
Patient #201	Fogera	25	I	VVF
Patient #202	Fogera	22	I	VVF
Patient #203	Addis Zemen	25	I	VVF
Patient #204	Fogera	22	I	VVF
Patient #205	Addis Zemen	36	IV	VVF
Patient #206	Belesa	15	0	VVF 2 ⁰ CA
Patient #207	Debre Tabor	25	I	VVF
Patient #208	Dembia	40	VII	VVF
Patient #209	Gonder	30	III	VVF
Patient #210	Belesa	30	II	VVF
Patient #211	Ambesam	21	I	VVF

No	Address	Age	Parity	Diagnosis
Patient #212	Debre Tabor	22	I	VVF
Patient #213	Fogera	32	III	VVF
Patient #214	Addis zemen	16	I	VVF
Patient #215	Dembia	38	VI	VVF
Patient #216	Fogera	54	IV	VVF + RVF
Patient #217	Addis Zemen	44	VII	VVF
Patient #218	Fogera	34	II	VVF
Patient #219	Bebekes	56	II	VVF
Patient #220	Arida	62	V	RVF
Patient #221	Fogera	50	V	VVF
Patient #223	Fogera	30	II	VVF
Patient #223	Fogera	35	III	VVF
Patient #224	Fogera	60	VI	VVF
Patient #225	Fogera	35	I	RVF
Patient #226	Fogera	27	II	VVF
Patient #227	Fogera	21	I	VVF
Patient #228	Addis zemen	17	I	VVF + RVF
Patient #229	Dembia	26	II	VVF
Patient #230	Fogera	35	VI	VVF
Patient #231	Addis Zemen	40	I	VVF
Patient #232	Fogera	17	I	VVF
Patient #233	Fogera	17	I	VVF
Patient #234	Fogera	38	I	VVF
Patient #235	Fogera	30	I	VVF
Patient #236	Fogera	31	VI	VVF

* VVF = Vesico-Vaginal Fistula

** RVF= Recto-Vaginal Fistula

Appendix 1B

Patients with **Uterine Prolapse** Identified by the IntraHealth's Obstetric Fistula Prevention and Repair Project

Patient	Age	Address
Patient #1	35	Keliefet
Patient #2	40	Kudad
Patient #3	40	Kudad
Patient #4	25	Debremawi
Patient #5	50	Ganji
Patient #6	40	Zegansa
Patient #7	50	Adergria
Patient #8	45	Senkegna
Patient #9	50	Adet
Patient #10	35	Woleke
Patient #11	35	Cjinkuliet
Patient #12	50	Tengoba ausguam
Patient #13	22	k-01/Adet /
Patient #14	30	Chinkulet
Patient #15	60	Debremawi
Patient #16	35	Kudad
Patient #17	30	Walka
Patient #18	57	Senkegna
Patient #19	36	Ambatina
Patient #20	40	Konch
Patient #21	39	Kotie
Patient #22	35	Den Dingaye
Patient #23	60	Diwuro
Patient #24	30	Danbash
Patient #25	23	Anbesit
Patient #26	40	Ambatinu
Patient #27	50	Benbe Georgis
Patient #28	40	Wexazerite
Patient #29	32	Abiku
Patient #30	35	Sekela
Patient #31	60	Kelielet
Patient #32	18	Adet hanna
Patient #33	30	Kudad
Patient #34	40	Zegahsa
Patient #35	20	Quarier
Patient #36	50	Sheba
Patient #37	45	Sheba
Patient #38	42	Korie
Patient #39	34	Adet 03
Patient #40	65	Ambition

Patient	Age	Address
Patient #41	56	Deble work
Patient #42	45	Korie
Patient #43	28	Dangla
Patient #44	60	Dangla
Patient #45	42	Dangla
Patient #46	25	Dangla
Patient #47	45	Dangla
Patient #48	25	Ankesh
Patient #49	50	Achefer
Patient #50	45	Achefer
Patient #51	25	Dangla
Patient #52	50	Dangla
Patient #53	50	Dangla
Patient #54	50	Dangla
Patient #55	26	Dangla
Patient #56	51	Dangla
Patient #57	20	Dangla
Patient #58	26	Dangla
Patient #59	52	Dangla
Patient #60	28	Dangla
Patient #61	21	Dangla
Patient #62	50	Dangla
Patient #63	48	Dangla
Patient #64	25	Dangla
Patient #65	16	Dangla
Patient #66	55	Dangla
Patient #67	56	Dangla
Patient #68	35	Dangla
Patient #69	33	Dangla
Patient #70	30	Jawi
Patient #71	39	Dangla
Patient #72	28	Bolesa
Patient #73	30	Ankesha
Patient #74	35	Ankesha
Patient #75	18	Dangla
Patient #76	65	Dangla
Patient #77	40	Dangla
Patient #78	58	Dangla
Patient #79	30	Dangla
Patient #80	18	Guaya
Patient #81	45	Shina
Patient #82	25	Shina
Patient #83	25	Shina

Patient	Age	Address
Patient #84	40	Kint
Patient #85	34	Kint
Patient #86	33	Kint
Patient #87	40	A.kint
Patient #88	35	A.kint
Patient #89	35	Zeng
Patient #90	40	Zeng
Patient #91	40	Zeng
Patient #92		Zeng
Patient #93	35	W.zuria
Patient #94	25	Ebenat
Patient #95	35	A.betedarstan
Patient #96	40	Alem /zuri
Patient #97	23	Kokit
Patient #98	50	Arebaba
Patient #99	50	A/Tihua
Patient #100	48	Addis Zemen
Patient #101	50	Oz
Patient #102	50	Addis zemen
Patient #103	60	Ahida
Patient #104	35	Dibasifate
Patient #105	60	Gutamba
Patient #106	37	Gutamba
Patient #107	45	Altihua
Patient #108	50	Gufanba
Patient #109	40	Ribgebrial
Patient #110	60	A/Tihua
Patient #111	35	Mengeguzer
Patient #112	25	Wojj
Patient #113	45	Kint
Patient #114	60	Kint
Patient #115	45	Alemba
Patient #116	60	A.betachg
Patient #117	45	Wotemb
Patient #118	60	Genazaselekas
Patient #119	50	Dibasifateha
Patient #120	27	Addis zemen
Patient #121	58	A/Tihula
Patient #122	25	Guala
Patient #123	50	Guala
Patient #124	30	Guala
Patient #125	32	Guala
Patient #126	37	Guala

Patient	Age	Address
Patient #127	24	Guala
Patient #128	28	Guala
Patient #129	45	Guala
Patient #130	40	Guala
Patient #131	45	Guala
Patient #132	60	Guala
Patient #133	28	Guala
Patient #134	40	Guala
Patient #135	40	Guala
Patient #136	37	Guala
Patient #137	28	Guala
Patient #138	32	K/Hana
Patient #139	45	K/Hana
Patient #140	26	K/Hana
Patient #141	30	K/Hana
Patient #142	34	K/Hana
Patient #143	32	K/Hana
Patient #144	31	K/Hana
Patient #145	30	K/Hana
Patient #146	44	K/Hana
Patient #147	38	K/Hana
Patient #148	52	K/Hana
Patient #149	25	K/Hana
Patient #150	27	K/Hana
Patient #151	30	K/Hana
Patient #152	30	Semada
Patient #153	40	Semada
Patient #154	28	Semada
Patient #155	38	Semada

Note: The detail address of additional 40 patients who came in the first month of the project was not registered.

Appendix 2

Medical Equipment and Supplies for Strengthening Obstetrical Services in the Health Facilities

No	Equipment and Supplies
<i>A. Equipment</i>	
1	Refrigerator (small size)
2	Autoclave
3	Tissue scissors
4	Episiotomy scissors
5	Suture scissors
6	Artery forceps (medium size)
7	Pick-up (Tissue forceps-toothed)
8	Sponge forceps
9	Forceps jar
10	Fetoscope
11	Stethoscope
12	Thermometer
13	Sphygmomanometer
14	Speculum (metallic)
15	Urinary catheter (metallic)
16	Kidney dish
17	Bowels
18	Electric heater
19	Delivery set
20	Trolley
21	Infant Weight Scale
<i>B. Supplies</i>	
1	Gentian Violet (GV)
2	Adhesive tape
3	Transparent tape
4	Gauze
5	Alcohol
6	Cotton
7	Bandage
8	Syringe and needles
9	Plastic catheter
10	Vaseline
11	Calamine lotion
12	Pregnancy test
13	Urine dip sticks

C. Infection Prevention	
1	Surgical glove
2	Examination glove
3	Arm length glove
4	Apron
5	Google
6	Boots
7	Safety box for sharps
8	Heavy duty gloves
9	Disinfectants
10	Bowels for decontamination
D. Drugs	
1	Paracetamol
2	Metronidazol
3	Tinidazol
4	Amoxacilline
5	ORS
6	Iron tablets
7	Multivitamin tabs
8	Oxytocine
9	Ergometrine
10	Antacids
11	Quinine tab and Injections
12	Methyldopa tabs
13	Hydralazine injections

Appendix 3
Obstetric Fistula patient Detection/Screening form (FORM I)

NO:-----

Name of Patient (in Triplet)-----
Age----- Address: W-----K-----PA-----H.NO-----
Level of education:-----
Current marital status: Married Separated Divorced Single Widowed
Age at first marriage:-----Years
Age at index* pregnancy:-----Years
No of children:-----
Date of index delivery:----- (DD/MM/YYYY)
Place of index delivery:-----
Index delivery was attended by: TBA Relatives Neighbors H. Professional
Duration of labor (index delivery):----- hours
Outcome of index delivery: Dead Alive

Symptoms-----

Symptoms started -----days/weeks/months after delivery.
Duration of symptoms-----
Did patient visit health care facility for this symptom?-----
Where?-----
When?-----
What treatment was given?-----

- Reason for referral pre-repair counseling
 Nutritional rehabilitation
 Treatment for infestation
 Treatment for anemia
 Others

Specify-----

Patient identified by-----
Patient Referred by-----
Signature-----
Date-----

* **index** pregnancy/delivery= pregnancy/delivery after which the problem happened

Appendix 4
Fistula Patient Referral Form (FORM II)

Ref. No.-----

Name of Patient (in Triplet)-----
Age----- Address: W-----K-----PA-----H. No-----
Referred from community/health post on:----- (DD/MM/YYYY)
Arrived at health facility on: -----
Came to health facility by (Means of transport):-----

Stayed in the health center for-----days.

Treatment/care given in the health center:

- pre-repair counseling
- Nutritional rehabilitation
- Treatment for infestation
- Treatment for anemia
- Others

Specify-----

Reason(s) for referral -----

Referred by:-----
Signature:-----
Date:-----

FEEDBACK

Name of Patient (in Triplet)-----
Age----- Address-----
Referred from:-----Health center H. center Ref. NO.-----
Referred on:----- (DD/MM/YYYY)
Come to B/Dar hospital on:----- (DD/MM/YYYY)
Reason for referral was:-----
Patient condition on arrival:-----

Intervention at B/Dar Hospital:-----

Patient stayed in the hospital for-----days/weeks
Follow up recommendations:-----

Feedback by:-----Signature:-----Date:-----

Appendix 5

IntraHealth International Fistula Project Monthly Summary Report Form

Month:	Year:
Region:	Name of Health Center:
Reporting person:	Date of reporting:

No.	Activity	Data	Remark
OBJECTIVE-1			
1	No. of health care providers trained in obstetric fistula screening, care, prevention and management and/or timely referral of obstetric emergencies [Comment on the duration of the training & topics given]	H. Assistant	M F T
		Nurse	
		Mid wife	
		H. officer	
		Doctors	
		G.TOTAL	
2	No. of management personnel trained in fistula identification, care and program management [Comment on the duration of the training & topics given]	Mangers	
		Supervisors	
3	No. of health education sessions on fistula: prevention, predisposing factors, treatment, care and reintegration in the health facility		
4	No. of people who attended the health education sessions	Male Female TOTAL	
OBJECTIVE-2			
5	No. of women referred from community to health center		
6	Among the screened women (F =Fistula; P =Utrine Prolapse; SI =Stress incontinence; UI =Urethral incontinentinence)	F P SI UI TOTAL	
7	No. of women who received transport service from community to health center		
8	No. of fistula patients who were admitted to the health center for pre-repair care		
9	No. of fistula patients who received pre-repair counseling at the health center		
10	No. of fistula patients who received nutritional rehabilitation		

No.	Activity	Data					Remark
	at the health center						
11	No. of fistula patients who received treatment for anemia at the health center						
12	No. of fistula patients who received treatment for reproductive tract infections at the health center						
13	No. of fistula patients who received treatment for intestinal parasites at the health center						
14	No. of fistula patients who received sitz bath						
15	No. of fistula patients who received treatment for dermatologic infections						
16	No. of fistula patients referred to the B/Dar Fistula Hosp.						
17	No. of fistula patients who were admitted to the B/Dar Fistula Hospital (among those who were referred from the H. center)						
18	No. of women who received transport service from health center to the B/Dar Fistula Hospital						
19	No. of patients who received repair treatment at the B/Dar Fistula Hospital (among those who were referred from the H. center)						
20	Among the repaired (C =cured; F =failed on 1 st attempt; F2 =Failed on 2 nd attempt; R = Referred to A/A Fistula Hospital; T =Total)	C	F	F2	R	T	
21	No. of patients who received physiotherapy at B/Dar Hospital (among those who were referred from the H. center)						
22	No. of post-repair women who were referred back to the H. center for post-repair care						
23	No. of women with feedback who received transport service from B/Dar Fistula Hospital to the H. center						
24	No. of women in obstetrical emergency who received transport to health care facility						
OBJECTIVE-3							
25	No. of community dialogues on fistula and obstetric emergencies conducted in the community						
26	No. of participants in the community dialogues conducted	Religious Leaders	M	F	T		
		Tradition. healers					
		Women Association					
		Youth					
27	No. of HEWs trained in fistula detection and emergency obstetric signs	M	F	TOTAL			

No.	Activity	Data			Remark
28	No. of CBRHAs trained in fistula detection and emergency obstetric signs				
29	No. of TBAs trained in fistula detection and emergency obstetric signs				
30	No. of school teachers trained in fistula detection and emergency obstetric signs				
31	No. of DAs trained in fistula detection and emergency obstetric signs				
32	No. of awareness raising sessions held in schools				
33	No. of schools included in the awareness sessions				
34	No. of students who participated in these sessions	M	F	TOTAL	
35	No. of post repair women who are reintegrated into the community				
36	No. of home visits to the post repair women				
37	Is there a functional fistula core team (FCT) in the community	YES	NO		
38	No. of meetings conducted by the FCT				
General comment/Other activities: _____ _____ _____ _____ _____					

