



**Lake Tanganyika Floating Health Clinic
Women's Reproductive Health Outreach Project
Rukwa Region, Tanzania and Moba Territory, Democratic Republic of the Congo
Fall 2011**

I. Context and Justification of Project

In the Lake Tanganyika basin, maternal healthcare is nearly non-existent. The population around the lake is subjected to a perfect storm of dangerous forces: prenatal care is inaccessible; dilapidated roads are often non-passable, particularly in the rainy season; there is poor communications infrastructure; childbearing often begins in teen years; extreme poverty is the norm, and the population has an extremely low socio-economic status. One result of this perfect storm is extremely high maternal-fetal death rates. Another is fistula formation in women and girls who survive obstructed labor. Realistic statistics are extremely hard to gather, as many women never present to a health center or hospital where they can be counted. Most births take place in ultra-rural areas along the lakeshore, with traditional birth attendants present, if anyone is present at all. This is a major contributor to a one in five "Under Five" childhood death rate, which is 20-25 percent in the basin. With an estimated annual population growth of about 3 percent, one can extrapolate that there is also tremendous morbidity and mortality accompanying this high birthrate.

Fistula is a devastating injury. Almost invariably, women are injured while they are simultaneously experiencing the death of their child from obstructed labor. While many injuries can heal on their own if recognized and treated immediately, most women are never evaluated or treated in a facility that can manage the injury appropriately. Women with vaginal fistulas are shunned completely by their communities, because the injury causes them to continually dribble urine and/or feces through an abnormal connection between the vagina and bladder or the vaginal and rectum. A woman's life comes effectively to an end with this injury, even if she has lived through the cause of the injury, as she is shunned from normal life in almost every sense and often abandoned by her spouse. But, optimistically, most fistula injuries can be treated successfully through appropriate surgery, if only women have access to these "VVF" repair procedures.

As such, the Lake Tanganyika Floating Health Clinic (LTFHC) spearheaded a VVF repair outreach along Lake Tanganyika, on the Tanzanian side of the lake in the remote southern region of Rukwa. To carry out this outreach, the LTFHC upgraded the Kirando Health Centre in Nkasi District, Tanzania. The Kirando Health Centre, the area's main care provider and one that is intended to serve roughly 250,000 persons, is where the LTFHC conducted the majority of the outreach activities, including surgery. Until the LTFHC performed the upgrade, the Kirando Health Centre functioned without running water and electricity. The LTFHC shipped to Kirando from Yonkers, New York, a 40-foot container full of medical supplies, equipment, etc., needed to help refurbish the clinic and conduct planned outreach activities. Infrastructural work was performed to repair plumbing piping and sink access points, and electrical wiring was redone in 2 main blocks – a large patient ward and the surgical block.

The LTFHC team was comprised of international fistula experts and health care providers from Moba Territory, Democratic Republic of the Congo (DRC); Nkasi District and other areas of Western Tanzania; Kenya; and the United States. The surgical team was led by Dr. Tom Raassen, a surgeon with 20 years of VVF repair experience in Africa with the African Medical and Research Foundation

(AMREF) and who received specialty training at the world-renowned fistula hospital in Addis Ababa, Ethiopia.

During the outreach, the team was based in Kipili and Kirando, Tanzania, and treated 44 women, 75 percent of whom were Congolese from Moba territory, DRC, and 25 percent of whom were Tanzanian from the Nkasi District. In cooperation with local health care providers from the DRC and Western Tanzania, the LTFHC examined all perspective patients in advance. The LTFHC registered those identified as having fistula and who agreed to the procedure. Additionally, during the later part of the registration period, several more patients were identified and entered into the LTFHC files for future treatment. Registration and follow-up was carried out in partnership with the *Primary Health Care Project Lake Tanganyika* in Tanzania and the Moba Regional Hospital in the DRC. Each patient received counseling (including the possibility that she would need more than one attempt at surgical repair and the chance that a surgical repair would not be possible), addressing the particulars of their injury and the treatment required for proper repair. The LTFHC operated on six women per day over a two-week period from October 17 – 28, 2011.

The Women's Reproductive Health Outreach Project, the main activities of which are listed below, consisted of much more than surgical fistula repair. The LTFHC also:

- Addressed the lifecycle of women's reproductive health.
- Held prenatal screening clinics.
- Provided access to contraception and family planning for those who desired it.
- Taught local health care providers from the DRC and Tanzania how to recognize an early fistula injury and treat it early with a simple, non-surgical method involving a four to five week catheter treatment period.
- Taught insertion techniques and proper use for various forms of contraception (Intrauterine Device (IUD), depo provera, implanon, condoms, oral contraceptive pills (OCPs)).
- Provided psychosocial counseling, access to support, and community reintegration assistance.

II. **Activities of Project**

The Lake Tanganyika Floating Health Clinic carried out the following activities:

- A. Project Conception.** The LTFHC discussed with Tanzania National and Rukwa Regional authorities, including outgoing Regional Commissioner Daniel Olenjoolay, District Commissioner Joyce Mgana, Acting Regional Medical Officer Jasper Nduasinde, and local Ministry of Health (MOH) employees, and with DRC national and Katanga provincial and local officials, including the Office of the President Joseph Kabila, Office of the Governor Moïse Katumbi, Members of Parliament and the Ministries of Health and International and Regional Cooperation, the idea and need for a women's reproductive health outreach project and determined a collaborative approach.
- B. Patient Identification.** The LTFHC worked closely with the Primary Health Care Project Lake Tanganyika and the Sumbawanga Regional MOH authorities to identify possible patients with fistula in Nkasi District. Additionally, the LTFHC worked closely with the Moba Regional Hospital to identify possible patients with fistula in Moba Territory. This activity entailed meeting with hospital officials and health care workers, local Non-Governmental Organizations (NGOs), including the Center for Victims of Torture, and conducting joint LTFHC – Moba Regional Hospital missions to the Moba Territory Health Areas of Kyavie and Mulunguzi and to Liombe, Kizike, Kapampa, Kiku, Kapote, Livua and Moliro during the period of February to April 2011 to meet with potential patients and their families and local health (and other) officials.

- C. **Clinic Refurbishment and Donation of Supplies.** The LTFHC worked with numerous international and national, regional, district and local partners in Tanzania to refurbish the Kirando Health Clinic so that the LTFHC could conduct fistula repair surgery and other related women's reproductive health projects activities. Please see partners and collaborators list below. Supplies were divided between the Kirando Health Centre, the Moba Regional Hospital, and the Sumbawanga Regional Hospital to enable continued care of the patients who underwent surgery, to treat future acute fistula patients with long-term catheter therapy, and to increase the local capacity of these centers to treat common problems in the Lake Tanganyika basin. Training was provided for cleaning, sterilization, and storage of instruments, as well as in basic inventory management.

Kirando Health Centre and Sumbawanga Regional Hospital received donations of equipment to upgrade their facilities (and were allocated appropriately in cooperation with the Acting Regional Medical Officer), including equipment for the surgical blocks, surgical tables, anesthesia machine, crutches, wheelchairs, dressings and consumables, mattresses, bed nets, and several other items.

Additionally, the LTFHC is providing the salary of two new employees at the Kirando Health Centre for one year, who are helping to maintain equipment, engage in inventory management of medical supplies and medications, sterilize instruments, keep the facility clean and organized, and provide other ancillary operational support.

- D. **Transportation of Patients.** The LTFHC rented boats, cars and motorcycles to bring the Congolese patients from their homes in Moba Territory Health Areas to Moba Port and across Lake Tanganyika to the Kirando Clinic in Tanzania. Land and water transportation was similarly provided for Tanzanian patients.
- E. **Fistula Screening and Repair Surgery.** The LTFHC team pre-screened, screened and operated on 44 women, 30 Congolese and 14 Tanzanians. A Congolese patient was not reparable using methods available at Kirando, but she was provided counseling and personal hygiene products to manage her condition as well as was recruited to join the Relais Communautaire in Moba Territory. A Tanzanian patient suffered from wound complications due to Caesarean Section secondary to obstructed labor, performed at an outside location, and her wound was closed by secondary intention during a two-week period at Kirando. Arrangements were made for fistula repair at Sumbawanga Regional Hospital at a later date with Dr. Nduasinde. Health care workers observed and assisted in surgery and anesthesia administration as appropriate according to level of medical education and training.
- F. **Women's Reproductive Health Education.** In partnership with local, national and international health care professionals and social workers, and led by representatives from the Women's Promotion Center, the LTFHC conducted educational seminars on the subjects of safe delivery of babies and infant care practices; fistula prevention, repair, and risks; family planning and sexually transmitted diseases. Seminar participants included Congolese and Tanzania patients, doctors, nurses, and other health care workers, Relais Communautaire and Tanzanian Community Health Care Workers, and local and regional specialists. Materials were used and adapted from various organizations including: AMREF; Women's Dignity; the Tanzanian Ministry of Health; and the Katanga Province Ministry of Health.
- G. **Post-Operative Care and Surgery Results.**

The LTFHC created electronic records for all patients as well as maintained paper records at Moba Regional Hospital and Kirando Health Centre to document and monitor treatment. All patients were provided with specific care plans and follow-up. Community

health care workers learned operative care for the patients and provided this care in the ward, including pre-operative patient preparation, urinary catheter care, post-operative wound care, and counseling. Please see Exhibit A for a summary of operations and outcomes for each patient. Patients whose surgical treatment failed will be offered another opportunity for treatment in the future.

III. **Project Results**

The Lake Tanganyika Floating Health Clinic Women's Reproductive Health Outreach project provided the following deliverables:

- A. Collaboration between health care providers in DRC and Tanzania during surgery, pre- and post-operative care of patients; ward rounds; educational seminars
- B. Training of health care providers and community health workers in DRC and Tanzania
- C. Surgical repair, counseling, surveillance for 44 patients
- D. Provision of medications and supplies to three hospitals/health centers; additional durable equipment donation to Sumbawanga Regional Hospital and Kirando Health Centre; salary support and employee training for two employees at Kirando Health Centre
- E. Future planning was begun to continue training for health care workers with respect to fistula injury and treatment; planning for additional outreaches based in Kirando and Moba was initiated

IV. **Outcomes Summary and Medical Record Example**

Please see attached Exhibit A.

V. **Partners and Collaborators**

Funders:

Hewlett Packard
Fistula Foundation
Private Donors

And in cooperation with..

Flying Medical Services
Clinton Health Access Initiative (CHAI)
Primary Health Care Project Lake Tanganyika
Tenke Fungurume Mine
Freight in Time Ltd (FIT)
ABS Mamry A.D.G.
Afya Foundation
AMREF
All Women's Health - Chicago, Illinois
Topline Construction

Please see attached Exhibit B for participant list.

VI. **Budget**

Please see attached Exhibit C.

Exhibit A - Outcomes Summary



Congolese Patients

PATIENT'S IDENTITY	HEALTH AREA	TYPE OF CASE	DATE OF REPAIR	DATE OF TEST	RESULTS	DATE OF REMOVING THE CATHETER
Patient nr 1	MULUNGIZI	VVF	18-Oct-11	2-Nov-11	Negative	8/11/2011 after 21 days
Patient nr 2	MOLIRO	VVF	18-Oct-11	2-Nov-11	Negative	2/11/2011 after 15 days
Patient nr 3	KAPOTE	VVF	18-Oct-11	2-Nov-11	Negative	2/11/2011 after 15 days
Patient nr 4	MOLIRO	VVF	18-Oct-11	2-Nov-11	Positive	6/11/2011 after 20 days
Patient nr 5	MOLIRO	VVF	18-Oct-11	2-Nov-11	Negative	8/11/2011 after 21 days
Patient nr 6	KAPOTE	VVF	18-Oct-11	2-Nov-11	Positive	11/11/2011 after 25 days
Patient nr 7	MOLIRO	VVF	20-Oct-11	2-Nov-11	Negative	6/11/2011 after 18 days
Patient nr 8	MOLIRO	VVF	19-Oct-11	2-Nov-11	Negative	2/11/2011 after 14 days
Patient nr 9	KANSENJE	VVF	19-Oct-11	2-Nov-11	Negative	3/11/2011 after 16 days
Patient nr 10	KAPAMPA	VVF	19-Oct-11	2-Nov-11	Positive	9/11/2011 after 21 days
Patient nr 11	KAPAMPA	VVF	19-Oct-11	2-Nov-11	Negative	2/11/2011 after 14 days
Patient nr 12	LIOMBE	VVF	19-Oct-11	2-Nov-11	Negative	6/11/2011 after 18 days
Patient nr 13	MOLIRO	VVF	21-Oct-11	2-Nov-11	Negative	6/11/2011 after 16 days
Patient nr 14	MUTAMBALA	VVF	20-Oct-11	6-Nov-11	Negative	6/11/2011 after 17 days
Patient nr 15	NKUMBULA	VVF	19-Oct-11	2-Nov-11	Positive	6/11/2011 after 19 days
Patient nr 16	NKUMBULA	VVF	20-Oct-11	2-Nov-11	Positive	10/11/2011 after 21 days
Patient nr 17	MWANZA	VVF	20-Oct-11	2-Nov-11	Negative	6/11/2011 after 17 days
Patient nr 18	KAPAMPA	VVF	21-Oct-11	6-Nov-11	Negative	6/11/2011 after 17 days
Patient nr 19	CONGOLESE	VVF				
Patient nr 20	KALOLO	VVF	20-Oct-11	2-Nov-11	Negative	3/11/2011 after 14 days
Patient nr 21	KIRUNGU	VVF	21-Oct-11	2-Nov-11	Negative	6/11/2011 after 16 days
Patient nr 22	KIRUNGU	VVF	20-Oct-11	2-Nov-11	Negative	10/11/2011 after 21 days
Patient nr 23	LUMONO	VVF	20-Oct-11	2-Nov-11	Positive	6/11/2011 after 16 days
Patient nr 24	KIRUNGU	VVF	21-Oct-11	8-Nov-11	Negative	8/11/2011 after 18 days
Patient nr 25	KIRUNGU	VVF	21-Oct-11	8-Nov-11	Positive	8/11/2011 after 18 days
Patient nr 26	SELEMBE	VVF	24-Oct-11	2-Nov-11	Negative	7/11/2011 after 14 days
Patient nr 27	KALOLO	VVF	24-Oct-11	2-Nov-11	Negative	14/11/2011 after 21 days
Patient nr 28	KARONJA	VVF	24-Oct-11	2-Nov-11	Positive	8/11/2011 after 15 days
Patient nr 29	MULONDE	RVF	25-Oct-11	7-Nov-11	Positive	16/11/2011 after 21 days
Patient nr 30	KANSENJE	VVF	24-Oct-11	2-Nov-11	Positive	14/11/2011 after 21 days

unable to operate on patient due to previous surgeries

Tanzanian Patients

PATIENT'S IDENTITY	HEALTH AREA	TYPE OF CASE	DATE OF REPAIR	DATE OF TEST	RESULTS	DATE OF REMOVING THE CATHETER
Patient nr 1	KAZOVU	VVF	24-Oct-11	28-Jan-12	Negative	24/10/2011 after 14 days
Patient nr 2	KATUMBA	RVF 1	25-Oct-11	30-Jan-12	Negative	25/10/2011 after 7 days
Patient nr 3	UTINTA	VVF	25-Oct-11	28-Jan-12	Negative	25/10/2011 after 7 days
Patient nr 4	MVUNA	VVF	25-Oct-11	28-Jan-12	Negative	25/10/2011 after 14 days
Patient nr 5	MPANDA	VVF 1	25-Oct-11	29-Jan-12	Negative	25/10/2011 after 28 days
Patient nr 6	KINGOMBE	RVF 1 / VVF 11	26-Oct-11	31-Jan-12	Negative	26/10/2011 after 14 days
Patient nr 7	NAMANYERE	VVF	26-Oct-11	27-Jan-12	Negative	26/10/2011 after 14 days
Patient nr 8	KISUMBA	VVF 11	26-Oct-11	27-Jan-12	Negative	26/10/2011 after 14 days
Patient nr 9	IKOLA	VVF	26-Oct-11	29-Jan-12	Negative	26/10/2011 after 15 days
Patient nr 10	KALUNGU	VVF 1	26-Oct-11	28-Jan-12	Negative	26/10/2011 after 14 days
Patient nr 11	KIRANDO	VVF 11	24-Oct-11	28-Jan-12	Positive	24/10/2011 after 3 days
Patient nr 12	KIRANDO	VVF	27-Oct-11	28-Jan-12	Negative	27/10/2011 after 5 days
Patient nr 13	IKOLA	VVF	27-Oct-11	29-Jan-12	Negative	27/10/2011 after 14 days

Exhibit A - Electronic Medical Record Example



REG N° Dr.....**MAHENDEKA**.....

NAME [REDACTED]
AGE **20 yrs** TRIBE
ADDRESS **Moliro : D.R.Congo**

HOSPITAL: **..KIRANDO.....** IP N° : **7**
TABWA
Referred by : **L.T.F.H.C**
Travel mode **Boat** How Long : **6 hrs**
Accompanied by : **Dr. Amy**

HEIGHT : **151** WEIGHT : **51 kgs**

CLASSIFICATION of FISTULA :

AGE at which fistula developed **17 yrs**
DURATION of leakage **3 yrs**
OUTCOME delivery, causing fistula **1st, C/S, Kashikishi hosp, ?/11/2008**
CAUSE of FISTULA : **Obstetric (no CS related) :**
Obstetric (CS related) :
Hysterectomy :
Other Causes :

PARITY when fistula developed : **1** ANC-VISITS :
DURATION of labour : **4d (3d c grandmother maternal, 15hrs)**
INTERVAL between delivery and leakage : **Immediately**
SEX of infant : **M**
CONDITION of Infant : **FSB** WEIGHT : **?Kgs**
PREVIOUS deliveries : **NO**
SUBSEQUENT deliveries : **NO**
SUCCESSFUL VVF-repair in the past : **NO**
UNSUCCESSFUL VVF-repair in the past : **NO**

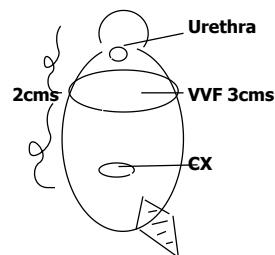
MENSTRUATION : **LMP : ?/10/11**

SOCIAL STATUTS
 Living with Husband, yes or no : **Other** **1st : no child**
 Living with Family, yes or not : **Yes, c Aunt Paternal** **3rd : ? Children**
 Living alone, yes or no :
 Remarried (with fistula) :
 Never Married :
 Husband died :

EDUCATION woman : **No school** EDUCATION partener : **School Class VII**
PROFESSION woman : **Peasant** PROFESSION partener : **Fishing**

CONCURRENT LESIONS
RVF : **No** **EUO-BC = 1,5 cms**
Paralysis peroneal nerve : **Ls Rs** **EUO-BW = 8 cms**
Pressure sores (excoriations) : **Yes** **BC = 6,5**
Vaginal stenosis : **No**
Others : **No**
Condition of woman : **GOOD**

DATE and KIND of REPAIR : **20/10/2011 VVF II Ba** **4cms**
Vaginally, transverse, vicryl 2/0,3/0
Dye test-ve. Good elevation



POSTOPERATIVE COMPLICATIONS :

OUTCOME : Dye test, pos. Org neg : **NEG** **02/11/11** FOLLOW-UP : Dye test, pos. Org neg :
 Incontinence :
 Vagina :
 Catheter removed : **06/11/2011 after 18 days** Catheter removed :

TREATMENT : **5lts/day/5months**

OTHER TREATMENTS : **Amoxicillin cap 500mg 2x2 caps/day/7days, Potassium permanganate 500 mg, Ibuprofen 400mg 2x1 tab/7days**

VILLAGE OF RETURN : **Kileba/Moliro**

OBSERVATION / WELCOMED BY : **Her Uncle and Aunt**

Exhibit B - Participants and Collaborators

LTFHC Staff	
Amy Lehman	President, LTFHC
Joel Frushone	LTFHC Staff
Melissa Vorselen	LTFHC Staff
Dr. Katherine McLean	OB/GYN, Surgical Team, Family Planning, LTFHC
Marie Omba Djunga	LTFHC DRC Coordinator
Anderson Nkwayu	LTFHC DRC Coordinator
Vincent Tshowe LTFHC	DRC Staff
Augustine Kubikonse LTFHC	DRC Staff
Marjo ten Kate	LTFHC Staff
Bert Muizebelt	LTFHC Staff
Surgical Team	
Dr. Tom Raassen	Surgical Team Leader
Dr. Marietta Mahendeka	Surgeon, Family Planning
Dr. Massau Massau	Anesthesiologist
Dr. Jasper Nduasinde	Medical Officer Regional Hospital, Sumbawanga
Mr. Ando	OR Nurse, Sumbawanga
Ms. Claudia Nurse	Anesthesiologist, Sumbawanga
Ms. Sarah	OR Nurse, Sumbawanga
Ms. Dorthe	Ward Nurse and Fistula Education Trainer, Sumbawanga
Kirando Medical Centre Staff	
Dr. Msinjili AMO Kirando	Medical Officer in Charge Kirando Health Centre
Mr. Ernest Shauri Kirando	Clinical Officer
Mr. Kanoni Nurse	Anesthesiologist
Ms. Joyce M	Ward Nurse
Ms. Chikwala	Ward Nurse
Ms. Salamica	Sterilizing Nurse
Mr. Samuel	Sterilizing Nurse
Ms. Joyce Nkana	Student Nurse
Ms. Rehema Meschak	Student Nurse
Moba Health Care Workers	
Dr. Lwamba Saidi Aime	Medical Doctor, Moba/DR Congo
Katambala Muzungu Urbain	Nurse responsible of the operating room/Moba hospital
André Musongela	Nurse, Moba/DR Congo
Kisimba Richard	Nurse, Moba/DR Congo
Kaimba Kavuna Annie	Relais Communautaire
Chomba Kalombo	Relais Communautaire
Christine Kiwele	Relais Communautaire
Other Participants	
Ms. Loyce Charles	Women's Promotion Center, Kigoma
Ms. Farida	Women's Promotion Center, Kigoma
Ms. Martha	Women's Promotion Center, Kigoma
Said Katensi	Tanzania Flora and Fauna Institute, Kigoma-Lagosa
Mr. Goodluck	Tanzania Flora and Fauna Institute, Kigoma-Lagosa

Exhibit C - Outreach Budget

Outreach Expenses (January 1 - October 31, 2011):	
Programmatic (includes program development, licensure & visas; local and international staff salaries, travel in and out of region, room and board)	\$ 156,302
Container and Clearance	\$ 18,887
Surgical Staff	\$ 10,350
Surgical Supplies	\$ 29,594
Tanzanian Expenses:	
Advance Trip	\$ 17,857
Patient Costs	\$ 3,275
Kirando Upgrade	\$ 7,521
Tanzanian Staff	\$ 10,710
Tanzanian Expense Subtotal	\$ 39,363
Congolese Expenses:	
Patient Costs	\$ 37,032
Congolese Staff	\$ 3,105
Congolese Expense Subtotal	\$ 40,137
TOTAL OUTREACH BUDGET	\$ 294,633