

OBSTETRIC FISTULA: A NEEDS ASSESSMENT IN GHANA AND RWANDA

EXPANDING OUR KNOWLEDGE



ENGENDERHEALTH
Improving Women's Health Worldwide

*Prepared by EngenderHealth
with support from*

AMDD
Averting Maternal Death
& Disability Program
 Columbia University
**MAILMAN SCHOOL
OF PUBLIC HEALTH**

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EngenderHealth works worldwide to improve the lives of individuals by making reproductive health services safe, available, and sustainable. We provide technical assistance, training, and information, with a focus on practical solutions that improve services where resources are scarce. We believe that individuals have the right to make informed decisions about their reproductive health and to receive care that meets their needs. We work in partnership with governments, institutions, and health care professionals to make this right a reality.

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EXECUTIVE SUMMARY

Obstetric fistula, a debilitating complication of childbirth that persists mostly in developing countries, endures with particular stubbornness in sub-Saharan Africa. A result of prolonged, obstructed labour, fistulae develop when prolonged pressure of the baby's head against the mother's pelvis interrupts blood supply to the tissues surrounding the pelvic organs, causing a hole to develop between the vagina and bladder to create a vesico-vaginal fistula (VVF) or between her vagina and rectum to produce a recto-vaginal fistula (RVF). Either condition can result in incontinence that leaves the woman leaking urine or feces or both.

Fistula predominantly affects young women and girls who are poor, of small stature (often due to malnutrition), and have little to no access to emergency obstetric care. The World Health Organization (WHO) estimates that roughly two million girls and women live with fistula and an additional 50-100,000 develop the condition each yearⁱ. However, these numbers most likely do not capture the breadth of the problem, given that many women with fistula do not know that treatment is possible nor do they possess the resources to seek treatment even if they know it is available. In addition, the condition is cloaked in stigma and many women with fistulae live in silence and shame.

To start to understand this issue in context of Africa and to recognize the range of possible strategic interventions, EngenderHealth, in partnership with the United Nations Population Fund (UNFPA), conducted a study between May and October 2002 to assess the resources and effectiveness of fistula-repair services in nine Sub-Saharan African countries: Benin, Chad, Malawi, Mali, Mozambique, Niger, Nigeria, Uganda, and Zambia. As part of the continuing effort to map the landscape of fistula repair across sub-Saharan Africa, EngenderHealth shared responsibility with the Averting Maternal Death and Disability programme (AMDD) at the Mailman School of Public Health of Columbia University for a similar evaluation in Ghana and Rwanda. (Both EngenderHealth and AMDD are partners with UNFPA in the initiative to eradicate fistula.)

This mapping exercise, modeled on the earlier study, was intended to build on what has been learned since the previous needs assessment to develop an even clearer grasp of the complexities of fistula in Africa. This new study was not an exhaustive examination of all facilities in each country nor does it include quantitative data on fistula prevalence. However, the assessment was intended to provide a snapshot of fistula in each country, depicting how services are organized and how the healthcare infrastructure supports them. A team of researchers used an 11-question survey instrument as a basis for collecting data on clinical sites where fistula repair is or has been availableⁱⁱ. Hospital administrators, providers, and policy makers were interviewed, as well as fistula clients when possible. Wards, waiting areas, and operating theatres were visited and observed.

This report presents the survey findings from visits to 11 public and private sector health facilities in Ghana and Rwanda. The results were consistent in many ways with what has been learned about fistula in sub-Saharan Africa and other nations: few staff members or surgeons are trained or are experienced in fistula repair, leaving minimal options for

women who can access services. More dauntingly, some women are not even aware that they have a problem; if they do know what fistula is, they often do not know where or how to seek treatment. The difficulty of obtaining transportation often prevents women from seeking emergency obstetric services such as a Caesarean section (C-section), an intervention that can prevent fistula.

Recommendations from providers and policy makers in Ghana and Rwanda and in the countries visited during the earlier assessment echoed one another on several levels. In particular, possible strategic interventions that might reduce the frequency of fistula across these countries could be implemented at three different levels. In terms of policy, key decision-makers need help to become aware of fistula as a public-health issue and to link prevention to emergency obstetric care when they allocate resources. In terms of institutional response, new and existing staff need to be trained to provide emergency obstetric care and fistula surgery and facilities must be supplied with the basic materials to carry out repair. In terms of communities, awareness has to be raised among men and women about the warning signs of obstetric complications to ensure planning for potentially obstructed labours; in addition, communities need to inform their members that fistula is both preventable and treatable.

TABLE OF CONTENTS

Acknowledgements	vii
List of Acronyms	viii
Findings by Country: Introduction	1
Ghana	3
Summary of findings	3
Fact sheets on facilities visited	7
Key Contacts	19
Rwanda	21
Summary of findings	21
Fact Sheets on facilities visited	25
Key Contacts	35
References	37
Appendix A: Questionnaire for Mapping Exercise	
Appendix B: Notes	

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LIST OF ACRONYMS

AMDD	Averting Maternal Death and Disability
ANC	Antenatal Care
BMC	Baptist Medical Center
BUE & Cr	Blood Urea, Electrolyte & Creatinine
CHK	Centre Hospitalier de Kigali
DRC	Democratic Republic of Congo
EUA	Examination Under Anesthesia
FEMME	Foundation to Enhance the Management of Maternal Emergencies
Frw	Franc Rwandais (1 USD is approximately 550 Frw)
GHS	Ghana Health Service
HIV	Human Immunodeficiency Virus
IVF	Intravenous Fluids
IVP	Intravenous Pyelogram
IVU	Intravenous Urogram
LGV	Lympho Granuloma Venerium
MOH	Ministry of Health
NGO	Non-Governmental Organization
Ob/Gyn	Obstetrician/Gynecologist
OPD	Out Patient Department
PHU	Public Health Unit
PMTCT	Preventing Mother to Child Transmission
PNC	Prenatal Care
POC	Products of Conception
RVF	Recto-Vaginal Fistula
TBA	Traditional Birth Attendant
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	United States Dollar
VVF	Vesico-Vaginal Fistula

INTRODUCTION

In 1857, the widespread prevalence of fistula prompted the building of the world's first fistula hospital, known as the Women's Hospital of New York. Eventually, economic development and improvements in healthcare drastically reduced the incidence of obstetric injuries in the United States. However, even though it has long been known in the West that fistula is both preventable and often treatable, this condition still affects large numbers of young women in the developing world, a situation that speaks to problems with both economic resources and healthcare infrastructure and specifically in maternal health care. But improved access to adequate antenatal and emergency obstetric care would allow many women to avoid days of obstructed labour, which can often result in fistula.

Women living with fistula are typically between 15 and 30 years old, illiterate, poor and unaware that treatment is available. If they are aware of treatment options, they often cannot afford them. Direct causes of fistula include bearing a child before reaching full physical maturity, limited access to obstetric care, and malnutrition. Some of the indirect causes, such as poverty, women's status in society, and lack of education, keep women from accessing services, such as C-sections, that could keep them safe even in a difficult labour and delivery. Prevalence is highest in impoverished communities in Africa and Asia.

UNDERSTANDING THE CONTEXT

Indicators Country	Total Fertility Rate (2000-2005)	Maternal Mortality Ratio (per 100,000 live births)	Infant Mortality Ratio (per 1,000 live births)	% of Births with Skilled Attendants	Contraceptive Prevalence (%) (Any method)	HIV Prevalence Rate for Women (%) (age 15-24)
Ghana	4.22	214*	62	44	22	2.97
Rwanda	5.77	1,071**	119	31	13	11.20

Source: UNFPA State of the World Population, 2002

** Source: Ghana Maternal and Child Health Annual Report, 2002*

*** Source: Republique du Rwanda, Ministere de la Santé. Politique Nationale de Santé de la Reproduction. Imprimerie Select Graph. Rwanda, 2003*

GHANA

Background

Ghana is located in central West Africa and until independence from Great Britain in 1957, it was called the Gold Coast because of its reserves of the precious metal. The country is broadly divided into the northern savanna and the forested south. **The north is poorly endowed with natural resources and is far less developed compared to the south. The health delivery system mirrors this dichotomy.** Approximately 100 OB/GYNs work across the country, but only three practice in the north. **The maternal mortality ratio is 214 deaths for every 100,000 live birthsⁱⁱⁱ.** The total fertility rate has declined from more than 6 births per woman in the mid 1980s to the current 4.6 births per woman^{iv}. **Knowledge of family planning is very high--more than 90% -- and contraceptive use has risen steadily from 13% in 1988 to 21.2% in 2002.**

The general impression is that fistula is less prevalent now compared to years ago. Several factors have contributed to this state of affairs. First, women have more opportunities to receive education and to acquire literacy. **Antenatal care (ANC) coverage has improved and now stands at nearly 100%^v. In addition, more women are delivering in institutions—the Ghana Health Service (GHS) has instituted free ANC and deliveries in some institutions to make deliveries in facilities more attractive to women.** The C-section rate stood at 5.6% in 2002 and a high rate of supervised deliveries currently exists. Finally, traditional birth attendants (TBAs) who conducted 29.6% of deliveries in 2002, have received additional training in infection prevention and the early detection of labour complications.^{vi}

Individuals as well as international and local organizations working on the issue include Elizabeth Burns, a catholic nun of the Cape Coast Archdiocese, who has set up a centre for deprived women at Mankessim. This centre has recently had added a wing to cater for the repair and care of VVF clients. Mater Care, a non-profit Canadian organization that develops new initiatives in maternal health care, has been collaborating with the Catholic Archdiocese of Cape Coast to work toward setting up a fistula centre in the Apam region. However at the time of the needs assessment, the project had not yet been launched. Plans are in the works to organise a task force to find and talk with women living with fistula once the centre is completed. The Worldwide Fund for the Prevention of Maternal Injury, an NGO based in the United States, has sponsored the training of four Ghanaian fistula surgeons. Operation Ghana Medical Mission offers urological services in the country and provides some fistula repair as well.

Issues and Challenges

Cultural beliefs and traditional practices prevalent in Ghana may keep women from seeking care at a facility. Some also believe that if labour is prolonged, the woman in distress has committed adultery and must confess before her baby is delivered. One midwife told the assessment team that she recently delivered a client who had been in

labour for several hours and began to declare the names of men with whom she had committed adultery instead of pushing.

Delays in seeking care also prevent many women from receiving services in a timely manner. In most rural communities, a woman must be granted permission by her husband before going to a hospital. In his absence, his mother may have to make the choice, potentially postponing the decision even further. Some clients also feel the need to consult a soothsayer to determine the cause of prolonged delivery, which further puts off the decision to seek care. In addition, herbs sometimes used to hasten delivery may be uterotonic and lead to uterine rupture.

The complications of transportation may further complicate the desire to seek help at a facility. In most rural areas of the country, the rainy season poses significant transportation barriers, making it necessary for women to be carried on a litter, by bicycle, and/or in a canoe in order to get to a hospital. In some cases, a messenger rides a bicycle to the hospital to ask an ambulance to come.

The exact prevalence of fistula in Ghana is not known. According to work done by Danso et al in 1996 in Kumasi, 150 out of 157,449 deliveries resulted in fistulae due to obstetric complications. Of those, 73.8 % occurred because of prolonged obstructed labour. Although increased ANC has been cited as a contributing factor in the decrease of fistula observed at facilities, some believe that this decrease may more likely stem from a lack of awareness about fistula in the general public. For instance, fistula is not mentioned as a possible result of complications in labour during ANC, although such care provides a strategic moment for raising awareness about the issue.

In addition, maternal mortality ratios have not improved over the years, which implies that **fistula is likely to be more widely spread than acknowledged and is probably not declining to any great degree. Many Ghanaians do not know about the condition, a gap in awareness that many public health managers share.** The launching of the safe motherhood initiative in Ghana emphasizes the prevention of maternal death. Even though uterine rupture is reported during delivery, fistula often is not. However, fistula is considered by the government to be a debilitating injury, and the minister of health has proposed that the treatment of fistula be free.

The Ghana Urologist Association recently organised a conference in which a gynaecologist also participated. The meeting featured demonstrations on the repair of VVF. This occasion appeared to be one of the few in the country that have highlighted the existence and treatment of fistula. **Medical professionals are aware of the problem but only a few are interested in VVF repairs. Most clients are poor and the doctors treating them do not earn any extra income for performing repairs.**

Recommendations and Critical Needs

Heighten awareness of and strengthen the commitment of stakeholders and national policy makers.

Fistula treatment in Ghana could well be improved if the condition were regarded as a public health issue. Maternal health in all its aspects should be considered a human rights issue. Ghana's Urological Society should be encouraged to organise health education talks on radio and television emissions to increase public awareness. Women's groups, churches, and other organisations could be used to inform the population about the seriousness of the condition. The Ghana medical association could also serve as an advocacy group and mention the issue of fistula in their campaigns to improve maternal health. During ANC visits, providers might include information about the risks of developing fistula. The health education unit of GHS could design flyers on fistula to be posted at facilities across the country. The GHS should also ensure that fistula is recorded in logbooks so that statistics on prevalence can be more easily measured.

Highlight VVF in the national reproductive health service policy and standards

As previously pointed out, the ministry of health advocates for the full support of women seeking repair of VVF. Despite this fact, there are currently no standards in national policy that outline protocols and criteria for management of obstetric fistula. Obtaining political buy-in is the most essential first step, however inclusion of benchmarks and repair standards in national plans for reproductive health is critical.

Identify research needs to better understand the breadth of the problem

Data needs to be obtained on the prevalence of obstetric fistula, on how clients integrate into the community, and on **the number and extent of fistula following gynaecological surgery and infections, such as lympho granuloma venerium (LGV).**

Increase training possibilities for physicians, specialists, and nurses especially in the north

Most district hospitals have a basic theatre facility for VVF repair but their surgeons lack the expertise to perform the surgery. The two teaching hospitals in Accra and Kumasi have approximately **50 residents and several resources that are in place, which provides a dependable environment and skill pool to draw upon as a provision for training in fistula repair.** OB/GYNs who practise in regional hospitals and express an interest in fistula could be offered training either locally or at outside institutions. It might also be useful to create a short orientation course for nurses in gynaecological wards so that they know what to do when fistula clients arrive for treatment.

Link the Safe Motherhood Initiative to the raising of awareness about fistula

The Safe Motherhood Initiative emphasizes the need to avert maternal mortality, but places little stress on maternal disability and morbidity. Some of the efforts used to inform communities about the risks of maternal mortality could be used to educate the population about the prevention of fistula. TBAs should also be made more conscious of fistula in general and informed as well that delays in seeking treatment at a facility could result in complications.

Consider creating a fistula centre at Nalerigu Baptist Medical Centre or at Tamale Regional Hospital

The Baptist Medical Centre at Nalerigu is a structurally suitable facility to establish a fistula centre. It is in need of minimal upgrade in terms of equipment and hostel facilities, and in addition to possessing sufficient provider coverage to accommodate the needs of a training centre, the staff interviewed showed commitment to the issue. However, a vital disadvantage of this site selection is its geographic location: it is situated in the uppermost north-eastern part of the country and not easily accessible to all patients in that region. Although no full-time fistula repair is available at Nalerigu, visiting surgeons travel to the site twice a year from Korle-Bu to conduct repairs as needed. Tamale Regional Hospital, though not visited during the needs assessment, was also recommended as a practical locale to function as a fistula centre. Strategically located in the north, is a city that is accessible from other major facilities in this region. The Tamale Regional Hospital is now a teaching hospital, but employs only two OB/GYNs who do not repair VVF. In fact, no repairs are done anywhere north of Kumasi, a city in the southern central section of the country. A resident surgeon in Tamale could easily make periodic visits to many hospitals in the Tamale region to repair VVF. In addition, Tamale has inland flight service that would allow foreign surgeons to visit the centre and help with repairs.

FACT SHEETS

A. Korle-Bu Teaching Hospital, visited December 24, 2003

Size: This is the largest hospital in the country with 1,500 beds. The gynaecology unit has 114 beds and the maternity unit has 250 beds. There are two main operating theatres and one small one. At the time of the visit, the gynaecology theatre was undergoing renovation and expansion.

Medical staff: There are 19 consultant OB/GYNs and 20 residents. However, only six of the consultants do VVF repair and only three are actively involved in repairs. Two of these provide outreach service twice a year to the Baptist Medical Centre (BMC) at Nalerigu in the northern region of the country. The nurses have not had any special training in VVF.

Caseload: 14 repairs were done in 2003 (eight VVF, four RVF, and two for uretero-vaginal fistulae). If a client is completely continent and does not experience any residual stress incontinence, her treatment is considered successful. Using this definition, the hospital has achieved a 90% success rate. The surgeon has one operating day each week, depending on his schedule.

Population served/Provenance of clients: Most of the clients come from the northern part of the country and some from deprived areas in the south. Some clients come from as far as Mali and Burkina Faso.

Typical client profile: They are usually young women in their teens and typically of small stature. They develop the fistula during their first delivery, which usually takes place at home, and start leaking a few days after delivery. A few multiparous women have been seen with fistula and some have been incontinent for up to 10 years.

Assessment and screening process:

- Clients are seen at the gynaecology Outpatient Department (OPD).
- Examination and identification of fistula done at OPD.
- At times, examination under anaesthesia (EUA) is done and a dye test is used to identify fistula.
- Haemoglobin and sickling laboratory investigations
- An intravenous urogram (IVU) is conducted for clients with uretero-vaginal fistula.
- Clients are referred to the anaesthetic clinic for review
- Clients are asked to arrange for two units of blood, in case the surgery requires transfusion, though most do not.
- Bowel preparation is done for clients with RVF

Post-operative care:

- Intravenous fluids (IVF) are given for 24 hours.
- Parenteral antibiotics are given for 24 hours, followed by a week of oral antibiotics for a week; the drug administered is usually Septrin.

- A urethral catheter is used for continuous drainage for 14 days.
- Bladder training is done for 24 hours and if the client is dry, the catheter is completely removed.
- Ureteric catheters are removed after 10 days.
- Surgeons ensure continuous bladder drainage and review clients twice daily.
- Clients are advised to abstain for three months and that subsequent deliveries need to be C-sections.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures		x
7. Blood transfusions	x	
8. C-section	x	

* by injection or intravenous infusion

Rehabilitation/re-integration:

Clients are discharged home and seen two weeks after their operation. There is no formal rehabilitation and integration programme in place, because most clients come with their husbands or other family members and are not isolated.

Community outreach: None known.

Support at the policy level: Administrative support is lacking, as compared to the political commitment to the issue.

Estimated fully-loaded cost per procedure: The estimated fully loaded cost of repair, roughly \$200 USD, is usually a barrier for the clients and is more expensive than in the rural hospitals. A few cases are referred to the social welfare unit of the hospital, which arranges for either a waiver of the fees or a payment plan that spreads the fee over a period of several months.

Resources: Salaries of staff are paid regularly and on time. Clients pay for all items used during the surgery, but the fee for surgery is highly subsidized by the government. All facility staff has been trained in infection prevention (IP) and logistics are available for assurance of IP practices.

Barriers:

- There is limited training for postgraduate students and a number of residents graduate without having repaired a fistula.
- Residents were taken to the BMC when the Carnegie programme started, but the training in and access to capacity building in fistula repair was limited and is now nonexistent.
- Most clients are poor and cannot afford repairs. Furthermore, clients often do not know that repairs are available.
- Theatre space is limited.

Other facility observations:

The facility has 24-hour blood bank as well as X-ray and laboratory services. Physiotherapy is available for clients when necessary, such as for those with foot drop, a condition that may be a consequence of nerve damage sustained during a traumatic birth, resulting in difficulty walking. A hostel for VVF clients used to exist in the mother's hostel, but this space is now used for pediatric cases. Equipment is available for surgery, although old, as are the tables used for surgery. Positioning clients during procedures can pose problems. However, the light source is satisfactory and the hospital has a 24-hour source of electricity and a stand-by generator.

This hospital maintains a steady supply of surgical materials; however, certain instruments like special scissors, needle holders, small suction tubes and retractors are not available. An old cystoscope is available. The facility also has a regular supply of Foley catheters and urinary drainage bags, but colostomy bags are difficult to obtain. Ureteric catheters are not always available and providers improvise with pediatric feeding tubes.

There is a regular anaesthetic service in the hospital for VVF repairs. Most repairs are done under spinal anaesthesia, which further cuts down on the total cost to the client, as general anaesthesia is more expensive than spinal.

Finally, VVF clients share the same ward as other gynaecology cases, and they usually get their own beds.

B. Komfo Anokye Teaching Hospital, visited December 29, 2003

Size: This is the second largest hospital in the country with a bed capacity of 750. The OB/GYN unit has 170 beds including 40 in the gynaecology unit. All clients including fistula clients share these beds. There are two operating theatres, one shared by all clients, and another for emergency gynaecology purposes.

Medical staff: There are 12 specialists in the unit and 33 residents. At the time of the assessment, two faculty staff had some formal training in VVF repair, and three of the specialists were actively involved in fistula repair.

Caseload: Variable: five cases were repaired in 2003 and four in 2002. This number represents a decline from the late 1990s, when the caseload was much higher. The head

of the unit believes this drop in caseload is due to the small number of clients who present for repairs. Several women who have undergone repair have returned for delivery by C-section of subsequent pregnancies. However, the surgeon operates only once a week and clients have to compete with other gynaecological cases for theatre space.

Population served/Provenance of clients: The clients come from all over the country and also from neighbouring countries like Burkina Faso, Mali, and Côte d’Ivoire.

Typical client profile: The age of the clients varies from 17 to 50 years, but most are very young and primiparous. Some clients had developed fistula a few years earlier and others had been living with it for several years.

Assessment and screening process:

- The clients are seen at the OPD to give their medical history and undergo an examination
- Some need an EUA
- Tests are performed, including blood typing, haemoglobin, sickling and blood urea, electrolyte and creatinine (BUE&Cr)
- Blood donation is not required
- Cystoscopy is not done because of lack of equipment
- IVU is only done for clients with uretero-vaginal fistula
- Clients with excoriations are first treated and any anaemia is corrected before the surgery
- Bowel preparation is done for those with RVF

Post-operative care:

- Prophylactic antibiotics are given at the induction of anaesthesia.
- The catheter is retained for 14 days. Bladder training is done on the 14th day, before the client is released.
- If a ureteric catheter has been inserted, it is removed on the 10th day.
- Clients are closely monitored for continuous bladder drainage.
- Clients are advised to abstain for three months and to have C-sections for subsequent deliveries.
- No contraceptives are provided upon discharge.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	

6. Destructive vaginal procedures		x
7. Blood transfusions	x	
8. C-section	x – 17%	

* by injection or intravenous infusion

Rehabilitation/re-integration: Most women remain with their husbands. Although there is no formal integration programme in place, no barriers seem to be evident for women re-entering their communities.

Community outreach: There is no community outreach practice to identify cases or to follow-up on repaired cases. Very little information is given to the community about how fistula develops, how to prevent it, and how to receive treatment.

Support at the policy level: There is no administrative support for VVF work. Because Komfo is a Ministry of Health (MOH)/ GHS facility, most service fees are subsidized.

Estimated fully-loaded cost per procedure: \$200 USD. This fee is beyond the reach of most of these clients: many will not present for repair even if they are aware of the service.

Resources: None known.

Barriers:

- Supplies and consumables are a major problem. Ureteric catheters are not available, nor are special scissors, needles, and sutures. Drainage and colostomy bags are not available.
- Community awareness about the condition is very low.
- Poverty makes the cost of repair and transportation a significant barrier for the majority of potential clients, who often have to travel long distances for the surgery.
- A lack of committed providers. Doctors cannot rely on fistula repair to supplement their income. Hysterectomies, for instance, are far more remunerative.
- Theatre space is limited, as is the availability of special instruments and materials required for repairs.

Other facility observations: The facility has 24-hour blood bank and laboratory service. There is a functioning physiotherapy unit, although VVF cases are rarely referred there. The unit does not have access to a cystoscope. The equipment seems to be in poor condition, but infection control is good. There is adequate anaesthetic cover and both nurse and doctor anaesthetists are available.

C. Battor Catholic Hospital, visited January 5, 2004

Size: There are 48 beds in the gynaecology unit. There are two operating theatres that are also shared by fistula clients.

Population served/Provenance of clients: The VVF cases come from northern parts of

the Volta region, Burkina Faso, Mali and la Côte d'Ivoire. The facility no longer sees cases from the locality.

Medical staff: Nine doctors serve at the site, including two gynaecologists. The only gynaecologist available for repairs is a nun who has been working at the site for 30 years. The site also has access to outreach service from expatriate urologists twice a year. They come to consult on general urology cases as well as to repair complex fistulae, including ureteric implantations.

Caseload: The number of fistula cases is on the decline, which is mainly due to improved ANC coverage as well as increase in the supervised delivery rate. The site repairs 30 VVF annually but repaired only 13 in 2003 because the team of urologists was not available.

Typical client profile: The clients are typically of small stature, young, and primiparous.

Assessment and screening process:

- A medical history is taken and an examination is done at the OPD.
- Pre-op testing, including haemoglobin, sickling and blood typing.
- An intravenous urogram (IVU) is conducted only for those with uretero-vaginal fistula.
- Cystoscopy is also done occasionally for some clients.
- Clients with excoriations are treated with zinc oxide cream.
- Some women arrive malnourished and need nutritional support before surgery.

Post-operative care:

- Clients are given antibiotics at induction and must have continuous bladder drainage for four days, but in complex cases drainage must be done for three weeks.
- Bladder training is done for 24 hours after which the catheter is removed.
- Clients are discharged and reviewed after four weeks for any leakage.
- Clients are advised to abstain for three months.

Level of essential obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures		x
7. Blood transfusions	x	
8. C-section	x – 11%	

* by injection or intravenous infusion

Rehabilitation/re-integration: The clients are well accepted by family and community members when they are dry.

Community outreach: An outreach service has helped reduce the number of cases in the surrounding villages. There is an emphasis on reduction of maternal mortality, but not on the prevention and treatment of fistula.

Support at the policy level: The MOH/GHS pays staff salaries.

Estimated fully-loaded cost per procedure: The estimated cost of repair varies from one client to another and ranges from \$35 to \$120 USD. A number of clients are not able to pay for the cost of repair, especially when laparotomy is necessary as part of the procedure.

Resources: The centre relies on the Catholic Church for subsidy. The clients pay user fees.

Barriers:

- Most of the clients are poor and the cost of repair is a deterrent.
- Some clients fear that their condition was caused by traditional or cultural acts and may be too ashamed to seek treatment.
- Lack of hostel facilities for the clients who travel from far away places. VVF clients waiting for repair linger at the hospital and because of the nature of the disability, they find it difficult to mix with other people.
- Geographic and financial inaccessibility.

Other facility observations: The operating theatres are well equipped and possess a good lighting system. In addition, the operating tables are in satisfactory condition and an autoclave is available for sterilization. A generator can provide back-up electricity. A cystoscope is available and the hospital has full anaesthetic services.

D. Eikwe St. Martin De Pores Hospital, visited January 6, 2004

Size: The hospital has 175 beds overall, 35 of which are reserved for the gynaecological unit.

Medical staff: Eikwe employs a full time nun who is also a gynaecologist. There are 2 medical officers who are not trained in surgical procedures.

Caseload: No fistulae are repaired at the site; at the time of this visit, all fistula cases were being referred to the sister hospital, Battor. The gynaecologist saw two fistula cases in 1999, both of which healed spontaneously with continuous bladder drainage. The centre sees approximately 1,680 normal deliveries per year.

Population served/Provenance of clients: N/A.

Typical client profile: N/A.

Assessment and screening process: N/A.

Post-operative care: N/A.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures		x
7. Blood transfusions	x	
8. C-section	x- 20%	

* by injection or intravenous infusion

Rehabilitation/re-integration: N/A.

Community outreach: N/A.

Support at the policy level: N/A.

Estimated fully-loaded cost per procedure: N/A.

Resources: N/A.

Barriers: N/A.

E. Effia Nkwanta Hospital, visited January 7, 2004

Size: The urology unit has 30 beds, which are shared by clients who have undergone obstetric surgery. There are two operating theatres shared by all clients.

Medical staff: The site has 28 doctors including two OB/GYN specialists but until recently, no one at this facility repairs fistula. At the time of the visit, an urologist had recently been posted and was repairing VVF. There are no trained nurses and the majority of post-operative care depends on the surgeon.

Caseload: The urologist repaired 12 cases during the last half of 200, including two

RVF, two cases that developed immediately following C-sections, and two uretero-vaginal fistulae.

Population served/Provenance of clients: Most come from the locality.

Typical client profile: The clients are typically very poor. In one case, a woman could not afford a Foley catheter. Clients are generally primiparous.

Assessment and screening process:

- A medical history is taken and an examination is performed at the OPD.
- Occasionally, a cystoscopy is performed.
- IVU is done for clients with uretero-vaginal fistula.
- Tests taken include haemoglobin, sickling, and blood typing.

Post-operative care:

- Clients are seen at least twice a day.
- Catheters are kept in for 14 days.
- Xpen is used as prophylactic antibiotic.
- Bladder training is done on the 14th day and, if the client is dry, the catheter removed.
- Clients are advised to abstain for three months, and to return for C-section for future deliveries.
- No contraceptives are given.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures		x
7. Blood transfusions	x	
8. C-section	x – 20%	

* by injection or intravenous infusion

Rehabilitation/re-integration: Reintegration back into the community is not difficult as clients come with members of their family or with their husbands.

Community outreach: The urologist visited the public health unit (PHU) of the region to find out about fistula. No data was available for the region; however, the doctor learned that ongoing efforts in the community are working to raise awareness about fistula prevention and treatment.

Support at the policy level: The centre is a GHS facility and gets all its support from the government. User fees are the client's responsibility. The urologist has arranged with the administration to charge the barest minimum for fistula clients.

Estimated fully-loaded cost per procedure: The estimated fully-loaded cost of the procedure is about \$50 USD. Resources are limited and the urologist generally uses his personal catheters and other consumables for repair.

Resources: None.

Barriers:

- Geographical accessibility-the region is large and some of the areas are not easily accessible
- Poverty
- Ignorance as to the course of the condition

Other facility observations: The centre appears to be a good candidate for expansion. The surgeon is enthusiastic about offering more services and is arranging to acquire other instruments to improve his facility. He is likely to remain there for several years. The facility has a blood bank, x-ray, laboratory, and physiotherapy units. However, in general, the equipment is very old. The lighting is good and there is an autoclave in the theatre for sterilization. There is a constant supply of electricity from the national grid. Special sutures are not always available, but urine bags are stocked. Infection control is satisfactory (the site has benefited from EngenderHealth training in infection prevention). There is good anaesthetic cover and most fistula repairs are conducted with spinal anaesthesia. There is no hostel facility for the clients.

F. Nalerigu Baptist Medical Centre, visited January 12, 2004

Size: The site has 113 beds, 30 of which are reserved for female clients. There are two operating theatres, which have basic facilities.

Medical staff: There are three medical officers, all of whom are expatriates from the United States. None of them, however, repairs fistula. Throughout the year, Nalerigu is visited by various groups of surgeons. When the local OB/GYN is available, he performs repairs. Otherwise, fistula clients are sent home and are notified before a visiting surgical team arrives.

Caseload: 25 cases were repaired in 2003: the visiting team performed 16 of those during an outreach visit. The caseload varies from year to year and the high number of cases in 2003 was due to the fact that two American OB/GYNs, part of the visiting team, paid the fees for all the fistulae that were repaired. Most of these were VVF and two were uretero-vaginal fistulae, which had ureteric implantation. There was one RVF. Ten cases were repaired in 2002. The total number of normal deliveries in 2003 was 553.

Population served/Provenance of clients: This is the only centre visited that offers fistula repair in the part of the country north of Kumasi. Clients come from all over the country, but most often from the north. Some clients also come from Burkina Faso, Mali, Togo and Côte d'Ivoire.

Typical client profile: The clients are mostly poor, young, and primiparous, but there were several women whose ages ranged from 17 to 45. These clients may have been living with fistula for several years.

Assessment and screening process:

- A medical history is taken and an examination is done at the OPD.
- In a few cases, clients are sent to the theatre for a methylene blue dye test.
- No EUA is done before surgery.
- Tests taken include haemoglobin, sickling and blood typing.

Post-operative care:

- Prophylactic antibiotics administered at induction of anaesthesia.
- Septrin or Amoxicillin is taken for seven days.
- Continuous bladder drainage occurs for 14 days. The repair team is unable to stay through this time, which can make assessment of success difficult. However, the team leaves clear instructions and communicates with the centre to be learn about procedures that may need to be repeated.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures		x
7. Blood transfusions	x	
8. C-section	x – 32.4%	

* by injection or intravenous infusion

Rehabilitation/re-integration: N/A.

Community outreach: N/A.

Support at the policy level: The centre is supported by the Baptist mission with some support from central government. There is no special treatment or exemption for fistula clients. The fees paid here are highly subsidized. However, financial support from the

Baptist mission is dwindling and user fees will have to be adjusted to compensate for the loss of resources.

Estimated fully-loaded cost per procedure: Between \$25 and \$40 USD.

Resources: N/A.

Barriers:

- Most clients cannot afford the surgery fees and often stay home with the condition for several years
- All the surgeons who visit Nalerigu do so as volunteers. They have no definite schedule, which makes it challenging to tell clients when to come for repairs. It should be noted that an attempt is being made at creating a longer-term schedule.
- The hospital feeds and accommodates the visiting surgeons, further draining limited funds.

Other facility observations: The hospital has a laboratory and x-ray facility, but no blood bank nor physiotherapy unit. The laboratory is able to take blood donations when blood is required. Efforts are being made to set up a blood bank. In terms of equipment, a generator is available for emergency power outages. A good operating light is in use and there is an autoclave for sterilization. Ureteric catheters are donated and generally available.

The hospital has no anaesthetist. The surgeons now provide their own anaesthesia. Surgical procedures are conducted under spinal anaesthesia, using ketamine as needed. Attempts are being made to get a nurse trained to use the pulse oximeter, but this endeavour could take about three years. No hostel is available for fistula clients.

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RWANDA

Background

One of the world's most densely inhabited countries, **Rwanda supports 321 residents per square kilometer and has a population that increases at 2.8% per year^{vii}**. These striking statistics are important to see within the context of the political turmoil of 1994, which resulted in, among other consequences, soaring inflation and a weakened economy. The majority of Rwandans in rural areas now live in poverty and have trouble providing themselves with basic nutrition. In addition, 48% of the population is under 15. Meeting the needs of these citizens has proved a daunting challenge to Rwanda's healthcare providers, especially since the conflict forced many doctors and nurses to flee and damaged many facilities. These sobering circumstances have had their influence as well on the state of the country's reproductive health. **With a total fertility rate of nearly 5.8 and a modern contraceptive prevalence rate of 3%, Rwandan women appear to face some significant risks to safe motherhood.** Perhaps of even greater concern is **the increase in the maternal mortality ratio.** Before 1994, **the number stood at 600; it is now at 1,071 deaths per live 100,000 births, which constitutes an increase of 75% since 1990^{viii}**. Although this last number is lower than the figures available immediately following 1994, such a ratio still raises concerns for the reproductive well-being of Rwandan women.

Although 92% of pregnant women seek at least one antenatal consultation, most women fail to return for follow-up visits. It also appears that the quality of the visits is often deficient. **Furthermore, only 31% of births are assisted by trained health providers^{ix}**, and warning signs for obstetric emergencies are not well known, creating the potential for complicated labours and deliveries. **With only 51% of Rwandan women able to read^x, practices such as family planning and birth spacing are virtually unknown and not often practiced.**

However, since 1994, efforts have been underway to improve healthcare across the country. In 1995, officials decided to reform the administration of healthcare districts across the country and base their management on the three principles of equity, integration of services, and improvement of access to services. In 2000, national policy was re-defined to include a focus on reproductive health, specifically the issues of safe motherhood, family planning, prevention and management of sexually transmitted infections, adolescent reproductive health, prevention and management of sexual violence, and social reform to increase decision-making power among women.^{xi} Although there is no emphasis at a national level on fistula as a problem, the government recognizes the need to conduct a broader, quantitative study to measure the breadth of the problem on a community level. There are also some attempts on the part of local NGOs to integrate repair issues into policies.

Issues and Challenges

The needs assessment team had the opportunity to visit with representatives from the Reproductive Health Division of the MOH staff, from the FEMME project of CARE Rwanda, UNFPA country staff, and the office of United States Agency for International Development (USAID) in Kigali. In addition, staff from five clinical facilities were visited and interviewed, including one mission hospital and one district facility. Facilities included the University Hospital of Kigali, Butare University Teaching Hospital, Gihundwe District Hospital in Cyangugu, Kabgayi Mission Hospital in Gitarama, and Ruhengeri.

Of particular note was **the stark deficit of specialists around the country**, one of the unfortunate consequences of the conflict of 1994 when providers were either killed or forced to leave, which left understandable gaps in the quality and availability of clinical services. Although coverage at health facilities now seems to be adequate -- one provider noted that most facilities are accessible on foot within two hours--the rural areas, where 92% of the population resides^{xii}, may be at a disadvantage when it comes to quality of care. **For a population of 8.1 million^{xiii}, Rwanda has only 14 OB/GYNs and two urologists**, one of whom is a professor at the National University in Butare and is unable to commit fully to clinical work. This situation no doubt contributes significantly to the low rate of certain clinical procedures, such as the rate of C-section, which is estimated to vary between .52% and .89%^{xiv}, and is an intervention that can prevent obstetric fistula. Although the majority of facilities visited were, in theory, considered to be comprehensive entities capable of offering standard levels of obstetric care, in many cases, **the shortage of providers trained in appropriate specialties could well have a negative impact on safe motherhood.**

As in many countries throughout Sub-Saharan Africa, the desire to deliver at home is widespread in Rwanda. **Of nearly 300,000 annual deliveries, 75% to 80% are home births^{xv}**, for an array of socio-cultural and financial reasons. As noted above, 92% of women seek out at least one antenatal visit, but they are often disappointed by the care they receive and assume it to be the standard. **Many factors compound a woman's desire not to deliver in a facility:** some women fear of being seen during labour; many may lack the funds for transport to a facility and the other costs linked to labour and delivery; others have the belief that they will not be able to give birth in the position that they choose; and some desire the security of working with a TBA. One provider reported that he had repaired a client with fistula who was then eager to get pregnant again. When told she would need to return to the facility for a C-section, she said she had no funds for the trip. He gave her enough to cover transportation costs back to the facility, but when she returned many months later, she had delivered at home and her fistula had reopened.

Indeed, transportation is a significant impediment to receiving care. No policy is in place to help women get transport once they have been referred to a tertiary care facility for fistula repair. Providers also noted that given the problems with transport, women often cannot reach a facility to receive ANC, which leaves little opportunity to provide counselling or to explain the warning signs of labour complications.

One of the central features of the MOH national policy is safe motherhood and addressing the complications of pregnancy is noted as a priority. Integrating fistula repair into strategies for obstetric disability would clearly offer one opportunity for improvements in the maternal health of Rwandan women. **It is important to recognize, however, that although women with fistula exist in the country, not much is known about the actual prevalence and the rate of new cases that develop.** Little documentation of women admitted and repaired for fistula was observed at the facilities visited. It appears that many women with the condition are either cognizant that repair possibilities are slim or are unaware that they are living with a problem, much less one that could possibly be repaired. One provider in Kigali told the team that on more than one occasion he has seen women at a facility for an unrelated emergency only to be told by the doctor that she has also been living with a fistula.

Recommendations and Critical Needs

Increase training for general practitioners, so that skills in fistula repair are not limited to specialists.

Training in fistula repair and treatment should begin while students are still completing medical school and in-service training should be offered as well to less experienced doctors. Specialized services, such handling complex gynaecological complications are very challenging to offer if there are no senior-level providers able to train lower level providers. The MOH has recognized that this lack of capacity is a severe problem and is willing to intervene. In addition to training more specialists, training centres might be set up in four different regions of the country. These centres could serve as training areas for other hospitals until they have acquired trained personnel for their own facilities.

Improve awareness of the need for ANC and the quality of the care itself.

Once women are repaired, they need to be better informed about how to handle family planning as well as the pregnancy and delivery of any other children they are having. Contraceptives are available, but there is a clear need for increased counselling to ensure safe motherhood. Furthermore, at the health centre level, not enough providers are trained to recognize pregnancy complications. A medical student at Butare University conducted a research project in the region and found that more than 50% of women did not have their blood pressure taken during antenatal exams and were not given any warnings about the size of their pelvis, a finding that seems to indicate the quality of ANC could stand some improvement.

Develop a system to recognize and address the risks for fistula specific to Rwanda.

Since the average age of marriage is about 20 years old for women and very few women get married or pregnant before that, one provider felt that primiparity was more of a root cause of fistula than early age of marriage. However, the development of fistula is also linked to malnutrition and a low standard of living. It is also clear the women are at more risk for the condition when they deliver at home and need access to quality ANC, especially during the crucial third trimester of pregnancy. Warning signs, such as

cephalo-pelvic disproportion, are generally more perceptible during this period. Learning about the risks to a baby because of a mother's small pelvis could also increase awareness about the possibility of labour complications, and might encourage women at risk to seek out a facility for delivery. The Ministry of Health and UNFPA has completed a community-based study to research the reasons that women deliver at home, and addressing the findings from this study might be useful as a way to preventing fistula. At the time of the visit, data analysis had not yet been completed.

Create a plan within communities that addresses the need to share costs of expensive procedures.

Hospitals should devise cost-sharing frameworks to increase sustainability and plan ways to subsidize transportation as well as the cost for the repair procedure. However, because transport to a facility usually poses significant obstacles, communities should be targeted to help subsidize these types of costs. A community-based study might help to address methods for making these plans feasible. It was also noted that there should be an insurance programme set up at the national level, specifically for pregnant women.

Design and conduct a study to assess the extent of fistula across Rwanda.

A study that took into consideration both the prevalence and the sociological conditions that provoke fistula would be very helpful in designing better strategic interventions and give policy makers a clearer sense of where and how to allocate resources.

FACT SHEETS

A. Centre Hospitalier Universitaire de Kigali (CHK), visited September 15, 2003

Size: With four operating theatres, this hospital might be able to create a ward designated specifically for fistula cases.

Population served/Provenance of clients: CHK serves a population of less than one million, mainly the population around Kigali city. Yet even in the far corners of the country, women are still referred to CHK for fistula repair. For example, 300 km away in Cyangugu, a doctor might say he cannot operate on a woman and then refer her to Kigali. But because there is no government subsidy to help her reach CHK, she does not come and continues to live with fistula.

Medical staff: One urologist; one OB/GYN; several nurses; and clinical staff.

Caseload: Three to four are seen cases per week in the urology unit: the women have for the most part been living with fistula for several years. In addition two cases (recently developed fistulae) are seen each month in the gynaecology unit and then sent to urology. From 1997 to 2001, Dr. Hategekimana operated on more than 120 VVF and RVFs. This number does not include operations done by other doctors before he began to handle the caseload. He has had a success rate of approximately 70% on first attempt procedures, and 80% after a maximum of three operations. At CHK, 13% of deliveries are C-sections (roughly 100 each month).

Typical client profile: The average age of women repaired at CHK is about 27. Most come alone or with their mothers, if they are coming from the hills. Development of the condition is linked to poor standards of living and malnutrition. On average, women come to CHK after living with fistula for about a year. Thirty percent have lived with fistula for less than 10 years. Almost all are very poor, and many have what is known as a “carte d’indigence” or certificate of poverty, which they have received from local authorities, proving that they cannot pay for health services.

Assessment and screening process:

- Average waiting time to receive repair is about three weeks to one month.
- During the waiting period, doctors look for sores, infection, and bladder stones.
- Infections are treated and cystoscopy is performed. If the provider suspects bladder stones, IVP, and urine analysis and culture are done. The perineal is then treated.
- Provider measures the diameter of the fistula to determine its complexity.

Post-operative care:

- Clients are hospitalized for three weeks.
- During the healing phase, a catheter is maintained for at least seven days to promote healing of the tissue.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures	x	
7. Blood transfusions	x	
8. C-section	x	

* by injection or intravenous infusion

Rehabilitation/re-integration: If clients do not return for follow-up after the surgery, the doctors assume that they are recovering well. In some cases, Dr. Hategekimana has seen clients pregnant six months after repair, indicating that they have reintegrated their communities. Dr. Hategekimana reported that since 1997, fifty cases returned to the hospital with no further obstetric complications. Ten of those 50 returned pregnant. Apart from this information, no data is available on community reintegration.

Community outreach: None known.

Support at the policy level: The Rwandan government recognizes that fistula is a problem, but prevalence rates are not known and still need to be studied.

Estimated fully-loaded cost per procedure: The normal cost of delivery is 5,000 francs rwandais (Frw), which is approximately \$12 USD. A C-section costs roughly \$24 USD; fistula surgery is generally about \$96 USD; this sum includes the operation, hospitalization, medication, and supplies.

Resources/strengths:

- CHK has the necessary personnel to enable it to be a centre for fistula repair. There are currently four OB/GYNs and 5 general practitioners, all of whom are qualified and competent in obstetric surgeries. Three gynaecologists available to repair fistula would meet with the demand. The urologist now handling fistulae could train two or three doctors in two months in simple fistula repair.
- CHK is outfitted with adequate equipment, materials and supplies, including operating theatres, tables, lights, and resources necessary for anaesthesiology, radiology, and echography.
- There are many clients and a high caseload: the doctors currently operate on approximately two fistulae per month, which satisfies the need for potential training.

Barriers:

- Surgeries are currently scheduled only intermittently
- No financial resources are available from sources outside the government.
- Every local authority has a budget to cover services for people with a “carte d’indigence”; however, CHK is often forced to assume these costs because it seldom receives reimbursement.

B. Butare University Teaching Hospital, visited September 16, 2003

Size: There are 72 beds in the OB/GYN unit. Residents are interested in learning how to repair fistula, but no opportunities exist for training. Butare has two operating theatres for obstetrics and gynaecology. Each month, they supervise about 800 normal deliveries.

Population served/ Provenance of clients: Rwandans from all over the country.

Medical staff: Many senior doctors died or fled during the upheaval of 1994. There are currently no full-time OB/GYNs, nor urologists on staff at Butare. At one time there was a full-time urologist on staff but he was transferred to the university. There are four OB/GYN residents, and none in urology. A French urologist comes occasionally from Ruhengeri to operate on a variety of urological cases. He comes intermittently and is scheduled to stay for two to three weeks for general surgery in urology. During his visits, he also repairs fistulae.

Caseload: This hospital sees approximately one to two cases of fistula per month. In five years, the staff has seen only one case of complicated fistula. At the time of the assessment, there was one client with RVF undergoing a colonoscopy, one client with VVF, and three others who had recently been sent home because their fistulae were too complex for staff at Butare to repair.

Typical client profile: Usually under 25, from rural areas, not literate, and poor. Ninety percent are primiparous. Many women seek care soon after noticing the fistula develops because their husbands complain about the smell. If they suffer prolonged labour at home, they may first go to a health centre, where they are referred to a district hospital to receive a C-section. However, after visiting the district hospital, they may find no staff available to deliver a C-section, so they proceed to Butare, still in labour, only to deliver a stillborn baby by C-section. For the most part, this is the typical scenario that portrays women who come to Butare for fistula treatment. Those who deliver at home often do not come, unless they have to come to the hospital for another, more life-threatening complication (such as a ruptured uterus or a retained placenta). Only then do they discover that they have incurred a fistula.

Assessment and screening process:

- Ultrasounds are performed as a pre-operative procedure.
- Urine cultures and methylene blue dye assessment are standard practices.

Post-operative care:

- Clients remain at least one month in the hospital.
- Clients are counseled not to lift any heavy objects and to abstain for at least one month after they have been released from the hospital. The doctors said, however, that they are sure these guidelines are not followed. Most of the time the women are primigravidus, and as soon as the fistula is repaired, they are very eager to then get pregnant as having children is seen as a central priority. The doctors give them contraceptives, but the women do not want them.
- If a client has delivered a stillborn baby in the facility and a fistula has developed, she is instructed to return to the hospital three months after the delivery so that she can undergo surgery. Most women do not return for repair, but many actually come back pregnant, indicating that despite having fistula, they are still involved sexually with their husband.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures	x (every 1-2 months)	
7. Blood transfusions	x	
8. C-section	x	

* by injection or intravenous infusion

Rehabilitation/re-integration: None known.

Community outreach: None known.

Support at the policy level: None specifically for fistula.

Estimated fully-loaded cost per procedure: At Butare, a normal delivery costs 3,500 Frw and a total of 6,000 Frw with medicines and hospitalization (\$6.50 USD and \$11 USD, respectively). A C-section costs about \$55 USD fully loaded: sutures are very expensive. The few women who present with fistula generally pay for services themselves. The cost can be as much as 25,000 Frw (\$45 USD), and increases based on the duration of post-op recovery. A subsidy is available for very poor women. The staff does not advertise this resource and offer it only in desperate circumstances.

Resources: The hospital receives all of its funding from the MOH.

Barriers:

- Lack of equipment
- Insufficient staff trained in fistula repair
- The operating theatre is in need of an upgrade
- No investigative modality training for fistula repair

C. Gihundwe District Hospital in Cyangugu, visited September 17, 2003

Size: One operating theatre with two beds. There is also one post-op ward with two beds but nothing designated for fistula clients. There are 30 beds in the maternity ward.

Population served/Provenance of clients: The hospital serves a population of 114, 000. They generally receive referrals from two of the four district facilities in the region. There are four health centres run by nurses linked to this hospital. Four to six nurses work in each health centre, and in general they rotate from centre to centre. They cannot perform blood transfusions or C-sections, but they can give intravenous antibiotics. They can also provide anticonvulsants and then refer clients to the proper level of care. Oxytocics can be administered by injection at health centres. Some nurses in these facilities perform manual removal of the placenta, but it is not clear if this procedure is sanctioned by the government. Nor is it clear if the nurses have actually received training in this technique.

Medical staff: One OB/GYN, who is an expatriate from the Democratic Republic of Congo (DRC); several nurses and other medical staff.

Caseload: The facility performs about 50 to 70 deliveries each month. In July 2003, they performed 10 C-sections and a total of 60 deliveries. In August, they performed nine C-sections and a total of 77 deliveries. The fistula caseload was not reported, as there have been virtually no repairs performed in the past five years.

Typical client profile: The average age of fistula clients seen at Gihundwe is 26, and they are generally poor with low-level education.

Assessment and screening process:

- Speculum exam
- Blood test
- Urine analysis and culture

Post-operative care:

- A ureteral catheter is inserted and maintained for two weeks
- Antibiotics are administered

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures		x
7. Blood transfusions	x	
8. C-section	x	

* by injection or intravenous infusion

Rehabilitation/re-integration: None known.

Community outreach: General community outreach for obstetric care.

Support at the policy level: See ‘community outreach’.

Estimated fully-loaded cost per procedure: A normal delivery costs about \$3.50 USD, a C-section costs roughly \$7.00 USD. The hospital determines these costs.

Resources: Cost-sharing is the hospital’s primary funding source. They receive funding from a Norwegian NGO for service delivery; salaries and vehicles are covered by the Rwandan government. A Dutch NGO known as Memisa allows the hospital to buy equipment, but this arrangement is a contractual one: Memisa pays according to how well the hospital performs. The United Nations Children’s Fund (UNICEF) supports Preventing Mother to Child Transmission (PMTCT) programmes.

Barriers:

- No long term doctors available to care for fistula clients. The doctor interviewed during the visit is an expatriate OB/GYN from DRC. He is in the third year of his five year contract. There are no local specialists at this facility.

Other facility observations: There is no one trained to do cystoscopy at Gihundwe. There is one generator, and an ample stock of operating supplies. Physiotherapy is also available as needed. The facility has a functioning laboratory that is used on a regular basis.

D. Kabgayi Mission Hospital in Gitarama, visited September 17, 2003

Size: Two operating theatres; a functional laboratory; equipment for kinesthesiology.

Some of the equipment used is provided by CARE. The maternity ward holds 92 beds; when these are all full some admitted patients have nowhere to sleep.

Medical staff: At Gitarama, no specialist is available to repair fistula. From 1995 to 1996, a Belgian doctor working with a religious organization operated whenever possible, however such procedures were not part of his normal portfolio of services. There are four anaesthesiologists, two of whom have been trained on the job and one of whom who was trained at the Kigali Institution. Night duty staff includes three nurses and one lab technician.

Caseload: In August, 191 supervised deliveries took place. Between 1996 and September 2003, nine women were admitted with obstetric fistula. From 1999 to 2001, thirteen women were seen but not admitted – they were referred to other facilities because none of the on-site providers were qualified to conduct repair surgery.

Population served/Provenance of clients: Women come from all different provinces, even from the northern region. Some hospitals in the district refer clients to Kabgayi for infusion and echography. Before the census of 2002, about 600,000 people were reported to be living in the district, which has 22 health centres (although for zoning purposes, some centres are shifted from one zone to another to ensure that adequate health coverage is provided). People come from other districts to receive blood transfusions.

Typical client profile: Most are poor, have delivered in their home village, are primiparous, and between 20 and 30 years old.

Assessment and screening process:

- A catheter is placed and the site of leakage is determined.
- Blue methylene dye is administered to determine the path of leakage.
- Urine analysis and culture

Post-operative care:

- Counselling is provided on condom use and for Human-Immuno Virus (HIV) prevention, however the staff does not provide contraceptives such as condoms because of religious beliefs. Family planning information is not available.

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive delivery	x	

7. Blood transfusions	X	
8. C-section	X	

* by injection or intravenous infusion

Rehabilitation/re-integration: N/A

Community outreach: N/A

Support at the policy level: N/A

Estimated fully-loaded cost per procedure:

Fees for services: For normal delivery, a night in the hospital costs \$0.40 USD. A C-section costs approximately \$2.75 USD. Women must generally purchase medication and supplies for their procedures from the pharmacy. They are also responsible for some surgical materials including catheters and surgical gloves.

Resources: Before 1998, the main source of support for the facility was the Catholic church. Now some cost-sharing is in place with CARE. The hospital has special contracts with Belgian doctors who come twice a year to provide support for procedures other than fistula repair. When these visiting doctors are able to perform fistula surgery, the local medical staff observes. However it is difficult for these last to gain experience as repair procedures occur rather infrequently.

Barriers:

- Lack of knowledge about the surgical process of repairing fistula
- Insufficient infrastructure and space
- Lack of qualified staff
- Inadequate equipment to conduct repair procedures
- A culture that encourages home births despite support from some husbands to seek facility care.

E. Ruhengéri Hospital, visited September 18, 2003

Size: 100 beds, 60 of which are designated for the maternity ward.

Medical staff: There are 8 doctors employed at Ruhengéri, two of whom are expatriates; one trained midwife; four nursing aides; eight general nurses; and three auxiliary nurses in the maternity ward. There is a French urologist who has a four-year contract at Ruhengéri. He sometimes gives courses in urology at Butare University Hospital and includes fistula repair training, schedule permitting. He has been at Ruhengéri for a year. There is also a French doctor working at the mission hospital in the neighbouring district of Nemba: this physician visits from time to time to help with the fistula caseload. There are no permanent or local doctors available to receive training and the interns from Butare come to be trained on a temporary and irregular basis.

Caseload: The French urologists repair about three fistulae per month. Ruhengéri

supervises approximately 10 deliveries per day and about 30 C-sections every month. In August 2003, the facility recorded 45 C-sections. Records of fistulae repaired were not available at the time of the assessment.

Provenance of clients: Most women are referred from other health centres, districts, and neighbouring countries, including DRC. Four district hospitals refer to Ruhengéri. There are a total of 12 health centres in the province that also refer.

Population served: The population served by Ruhengéri is about one million people.

Typical client profile: The majority of women who come with fistula are less than 30 years old. Many women seek treatment here because they have experienced failed attempts at fistula repair elsewhere. Most fistula clients have endured psychological issues, and Ruhengéri therefore provides psychological intervention/assessment in combination with the physical assessment and screening.

Assessment and screening process:

- Speculum exam
- Blood test
- Urine analysis and culture

Post-operative care:

- Catheter maintained for two weeks, antibiotics administered

Level of comprehensive emergency obstetric care offered:

<i>Check Yes or No for each of the following items</i>		
Were the following services performed at least once during the last 3 months?	Yes	No
1. Parenteral* antibiotics	x	
2. Parenteral* oxytocic drugs	x	
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and eclampsia	x	
4. Manual removal of placenta	x	
5. Safe removal of retained POCs	x	
6. Destructive vaginal procedures	x (1 every 3 months)	
7. Blood transfusions	x	
8. C- section	x	

* by injection or intravenous infusion

Rehabilitation/re-integration: None known.

Community outreach: None known. Local health agents do not seem to raise awareness significantly in the community about reproductive health issues.

Support at the policy level: The government assists with provision of medications, mattresses, and other facility supplies.

Estimated fully-loaded cost per procedure: Fistula surgery generally costs about 3,000 to 5,000 Frw (\$5.50 to \$9 USD) for the operation alone, a fee that does not include medications nor hospitalization. Before the operation, a woman is usually hospitalized and monitored for two days; sometimes for up to one month. She pays roughly 30,000 Frw (\$55 USD) for the complete repair process. A C-section costs approximately 15,000 Frw (\$27 USD) – the operation alone costs 3,000 Frw (\$5.50 USD).

Resources: Until 2002, a French organization subsidized the hospital, including costs associated with the laboratory, pharmacy, and operating units. No support has been available since then, but it is possible that this type of assistance may resurface in 2004. The facility also receives support from Doctors Without Borders. Doctors of the World in Belgium supports the maternity ward.

Barriers:

- Because Ruhengéri is a “village” hospital, doctors generally work hard and earn little^{xvi}. For that reason, doctors completing medical school have no motivation to work there (young doctors in Kigali can make more money).
- No hardship allowance is supplied by the government. Such support would provide incentive to increasing provider coverage in the district.

KEY CONTACTS

The needs assessment team is deeply grateful to the following individuals in Rwanda for their assistance with this project:

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APPENDIX A

QUESTIONNAIRE /MAPPING EXERCISE ON OBSTETRIC FISTULA

Introduction

Obstetric fistula (which includes both vesico-vaginal and recto-vaginal fistula) is a critically important and largely neglected issue in the field of reproductive health. The World Health Organization estimates that at least two million girls and women currently live with fistula and an additional 50-100,000 are affected each year.^{xvii} For the vast majority of these girls and women, services to repair their conditions are out of reach for a number of reasons: their lack of knowledge that such a condition can be repaired; the distance women must travel to get to a facility that provides repairs; the likelihood that, if they can get to a facility, it actually offers fistula repairs in its portfolio of services; the small number of surgeons with the skills to provide repairs; and the backlog facilities that do provide repairs currently have.

Purpose

In order to begin to understand how best to address the universe of possible strategic interventions, it is important to understand what facilities exist, how they operate, and whether they are well positioned to improve and/or expand their services. The purpose of this mapping exercise, therefore, is to begin to answer these questions.

This tool is designed to be used for rapid assessment. It should help to outline a basic picture of obstetric fistula and services in a setting, probe for strategic issues in service delivery, as well as flag sites that warrant follow up visits to gather additional information or that emerge as good candidates for strategic interventions.

Questions

1. **Briefly describe the current state of the issue in the country in terms of awareness, data on prevalence, interest among public health managers, professional associations, NGOs, donors.** Note whether obstetric fistula is considered an important issue and the kinds of resources available, if any are, to address it. Because it is such a sensitive issue, this initial probing may require a series of conversations with a variety of local providers to begin to find those who are knowledgeable.

2. **Are specific health facilities specialized in treatment and rehabilitation of obstetric fistula patients?**

If yes, assess for the following at each facility:

- stand-alone centre or hospital ward
- number of fistula repairs per year (percentage considered “successful,” define success)
- geographic provenance of patients
- number/training/ “success” record of surgeons
- number/training of nurses
- number/training of post op staff

- routine monitoring and supervision for clinical services staff by on-site supervisors (and possibly off-site experts)
- availability of repairs “full time” (probe for what “full time” means)
- potential for improvement, expansion of services (note whether facility might show promise to become a national/regional training centre)

3. What are the current sources of funding for these health facilities? Probe for public sector support such as MOH/government, private institution, external assistance, user fees, etc. If there are user fees, probe to see if they are considered reasonable or are perceived by potential clients as a deterrent.

4. For all facilities visited, assess the following:

- infrastructure (blood bank, x-ray, laboratory, physiotherapy)
- hostel for patients pre- and post-operation
- equipment (table, lights, sterilization, generator)
- supplies/consumables (e.g. cystoscope, catheters, drainage bags, special sutures)
- training needs for surgeons, nurses, midwives, providers of post-op care
- management issues, including salaries, maintenance costs, consumables, fees, infection control...
- anesthetic services
- number of operating theatres (are they shared with other services ?)
- ward accommodation

5. What are the kinds of community and social needs that exist for helping women to know about services and helping them to re-enter society after receiving services? Probe for information and education about prevention in communities, counselling or other services available.

6. If a new centre were to be established, briefly describe the rationale, advantages and assess the needs. See questions 2 and 4 for issues to analyze.

7. What are the needs in terms of advocacy for policymakers, providers, professional associations, and the general public?

8. What is the level of comprehensive emergency obstetric care offered at this facility? In question number 8 below, probe for information about the number of C-sections performed, and what percentage these are of total births in the facility.

Other probes about available services:

<i>Check Yes or No for each of the following items</i>		
<i>Were the following services performed at least once during the last 3 months?</i>	<i>Yes</i>	<i>No</i>
1. Parenteral* antibiotics		
2. Parenteral* oxytocic drugs		
3. Parenteral* sedatives/anticonvulsants for pre-eclampsia and		

eclampsia		
4. Manual removal of placenta		
5. Safe removal of retained POCs		
6. Destructive vaginal procedures		
7. Blood transfusions		
8. C- section		

* by injection or intravenous infusion

9. **Can you recommend 2 to 4 names of national experts, both from medical and socio-cultural standpoints?** Probe for whether they have national-regional expertise, and who, if anyone, could be considered a national trainer.
10. **Can you describe the training needs that you perceive to exist in this country?** Probe for the presence of local surgeons, how many would need to be trained.
11. **Identify research needs in terms of data collection, socio-cultural aspects.** Analyze what additional information is needed in order to determine whether facility would be an appropriate site for strategic intervention.

From the Ministry of Health, retrieve information, if available, about the following:

- *Is there at least one comprehensive EOC facility per district or province?*
- *The proportion of all births in basic or comprehensive facilities.*
- *C- sections as a percentage of all births (at a national level).*
- *How many births occur in facilities?*

APPENDIX B

NOTES

ⁱ Murray C and Lopez A (1998) Health Dimensions of Sex and Reproduction, World Health Organization, Geneva, Switzerland.

ⁱⁱ See Appendix for tool used

ⁱⁱⁱ Ghana Maternal and Child Health Annual Report, 2002

^{iv} Ghana Statistical Service and Macro Inc. Ghana Demographic and Health Survey 1998. Accra, Ghana and Calverton, MD. 1999.

^v Ghana Maternal and Child Health Annual Report, 2002

^{vi} Ibid

^{vii} République du Rwanda, Ministère de la Santé. Politique Nationale de Santé de la Reproduction. Imprimerie Select Graph. Rwanda, 2003.

^{viii} Ibid

^{ix} Ibid

^x Recensement Général de la Population et de l'Habitat (RGPH). 2002. [General Population and Residential Census]

^{xi} Ibid

^{xii}

<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20013790~menuPK:34466~pagePK:64003015~piPK:64003012~theSitePK:4607,00.html>. Website accessed 12/15/03

^{xiii} UNFPA State of The World Population 2002

^{xiv} Rwanda Ministry of Health and UNFPA. Etude Sur le Nombre Et Les Indications Des Césariennes Dans Le Zone Du Projet. Draft 1. Kigali, 1999.

^{xv} Personal communication, Dr. Théoblad Hategekimana, September 15, 2003

^{xvi} Personal communication, Dr. Gervais Birihanze Maniragaba, September 18, 2003

^{xvii} Murray C and Lopez A. Health Dimensions of Sex and Reproduction, World Health Organization, Geneva, Switzerland. 1998.