

MINISTRY OF HEALTH
DIVISION OF REPRODUCTIVE HEALTH
AND
UNFPA KENYA
NEEDS ASSESSMENT OF OBSTETRIC
FISTULA IN KENYA

FINAL REPORT

February 2004



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Abbreviations

ANC	Ante-natal care
AMREF	African Medical Research Foundation
BMI	Body Mass Index
BCC	Behaviour Change Communication
BEOC	Basic Emergency Obstetric care
CBO	Community Based Organization
CEOC	Comprehensive Emergency Obstetric care
CPD	Cephalo Pelvic Disproportion
C/S	Caeserian Section
DANIDA	Danish International Development agency
DFID	Department for International Development
DH	District Hospital
DMO	District Medical Officer of Health
DPHN	District Public Health Nurse
DRH	Division of Reproductive Health
EmOC	Emergency Obstetric Care
FGM	Female Genital Mutilation
FGD	Focus Group Discussion
FCI	Family Care International
FP	family Planning
GoK	Government of Kenya
GTZ	German Technical Cooperation
HC	Health Center
IEC	Information Education and Communication
KDHS	Kenya Demographic and Health Survey
KNH	Kenyatta National Hospital
MO	Medical Officer
MOH	Ministry of Health
NGO	Non-Governmental Organization
Obs/Gyn	Obstetrician/Gynaecologist
OF	Obstetric Fistula
PGH	Provincial General Hospital
PHT	Public Health Nurse
RVF	Recto-vaginal Fistula
SDH	Sub-District Hospital
SMIs	Safe Motherhood Initiatives
TBA	Traditional Birth Attendants
TFR	Total Fertility Rate
U5MR	Under-five Mortality Rate
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Fund
VVF	Vesico-vaginal Fistula
WHO	World Health Organization

1.0 EXECUTIVE SUMMARY

Introduction

Although Kenya has made great progress in addressing maternal health since the inauguration of Safe Motherhood Initiative in Nairobi in 1987, maternal health indicators have shown a deteriorating trend as evidenced by the maternal mortality ratio which has increased from 365 maternal deaths/100,000 live births in 1993 to 590/100,000 in 1998.

About 90% of pregnant women in Kenya are seen by professional health providers at least once through Antenatal Care clinics but only half of them receive professional skilled attendance at birth, the majority delivering at home under unskilled attendance, usually the TBA. Obstetric Fistula (OF) occur as a result of the 3 classic delays in getting the appropriate Emergency Obstetric Care (EmOC).

For maternal health services to be effective, women need to be provided with a continuum of care through pregnancy, delivery, care for obstetric complications and postnatal care. It is particularly crucial that women are provided with effective emergency care given that complications may affect up to 40% of women during pregnancy, delivery or in the immediate postpartum period and up to 15% of women may get life threatening complications.

Although the possible obstetric complications are known, they have not all been addressed adequately in the existing maternal health programmes. This is particularly so with respect to obstetric fistula. It is with this realization that the Ministry of Health, with financial support from UNFPA, commissioned the current needs assessment on the obstetric fistula situation in selected districts in the country where the condition is suspected to be most prevalent. This exercise set out to establish the magnitude of obstetric fistula and contextual factors related to OF such as community understanding of the problem in terms of causes, prevention and treatment, availability of services, care seeking behaviour and constraints in four selected districts in Kenya. Specifically the objectives of the survey entailed assessing:

- Socio-cultural factors contributing to fistula incidence
- Health seeking behavior in relation to obstetric fistula
- Availability and utilization of essential obstetric services
- And to make recommendations on prevention and management of obstetric fistula

The assessment spanned four districts in four provinces namely Kwale in the Coast, Mwingi in Eastern, West Pokot in North Rift and Homa Bay in Nyanza. In all, a total of four district hospitals, one sub-district hospital, one mission hospital, two health centers and two dispensaries in the four districts were visited. Both qualitative and quantitative methods were used to elicit relevant information in the community and health facilities.

Key Findings

The findings indicate that although the magnitude could not be established for a variety of reasons this is nevertheless an existing problem that has to date received very little attention. Across the board, the rugged physical and expansive landscape, harmful cultural practices and poverty in the four study sites interact synergistically to precipitate obstetric fistula. Early, marriage, early sexual debut means that girls who are not yet physically developed get pregnant prematurely at a time when they are not yet ready to cope with the demands of pregnancy and childbearing. The preference to deliver with TBAs, long distances to health facilities are a recipe for prolonged labour; a major precursor of obstetric fistula.

As a preamble to the discussion on obstetric fistula general issues of reproductive health and in particular safe motherhood were raised. Although obstetric fistula did not evoke as much attention initially as other reproductive health problems and in particular those arising from safe motherhood, at the end of the discussions either at policy level or community level, this was characterized as a neglected area of Safe Motherhood. At the community level it was evidently clear that whereas the problem exists, there is very little understanding of the issue and the factors that may contribute to it. At most it was considered an unfortunate incident that comes with childbirth for which very little can be done. An attitude of fatalism often becomes a coping mechanism. This has been accentuated by the fact that health providers have not utilized the opportunity during ANC visits to provide information on obstetric fistula.

The question of stigma was not prominent in Kwale, Mwingi and Homa Bay. While such women would be regarded with sympathy, the women, out of embarrassment tended to isolate themselves. However in West Pokot, it was evident that OF is stigmatizing and the need for a concerted social support system to facilitate reintegration into the community after repair is essential. SETAT, a CBO was observed to have played a key role in community sensitization on OF, recruitment and referral of OF clients for repair and social reintegration. Reintegration was not seen as an issue in the other three districts.

Experience with fistula repair was very varied across the districts but the common feature is that all the districts had seen more cases than they had repaired and that the number of cases recorded was only the tip of the ice-berg. Although West Pokot was the most active in terms of repairs only so many clients could be repaired at a time (every six months) due to limitations of resources, skills and time available. Whereas potential for repair of fistula exist at the district hospitals, capacity building through training is an important initial step. The capacity needs to be distributed across the regions/provinces to improve access for the already socially and economically marginalized victims.

Safe motherhood life saving skills among midwives are essential for prevention of obstetric fistula. Although some nurses have received the skills, monitoring of labour with partographs is not widely practiced with the attendant risk of late intervention in case of obstructed labour – the major cause of obstetric fistula. The situation is further complicated by an acute shortage of nursing staff and inadequate support supervision.

The referral system needs to be strengthened. Appropriate referral is tied to the issue of a working communication system that links the health facilities. UNFPA has started installing radios in Kwale and Mwingi (and additionally DANIDA is doing the same in Kwale) to address issues of second delay in referral. Most health centers and sub-district hospitals are in dire need of motor vehicles to evacuate emergencies.

In spite of the castigation of TBAs, in the eyes of community members they play a key role in childbearing. From the perspective of service providers the role of TBAs remains ambivalent even as they conduct the highest proportion of deliveries. Traditional birth attendants (TBAs) are conducting over 70% of the total deliveries in the study districts and most of the cases of prolonged/obstructed labour and subsequent obstetric fistula are attributed to their patronage. However, there is no clear policy on whether TBAs should continue conducting deliveries or not, as a result of which some districts have discontinued training them while others are still training and even allowing communities to construct maternity units in dispensaries to be run by the TBAs. The latter was evident in Mwingi and Kwale districts.

Issue of poverty and cultural practices that resonated in the discussions point to the realization that in each of the sites visited the context within which fistula occurs go beyond the health sector. Partnering with relevant government departments, donor agencies, NGOs and CBOs will be essential in addressing the issue of prevention and management of fistula.

Way Forward

Short-term recommendations

Training in fistula surgery

- As a first step, the Fistula Task Force need to mobilize existing fistula surgeons at KNH, Amref and other health institutions to plan for regional/provincial trainings. The existing two-week training curriculum used for the Machakos fistula training should be reviewed and adapted for the trainings. The courses should focus on secondary prevention of obstetric fistulas and training on assessment, repair of simple cases and referral of more difficult fistula cases to KNH or other centers of excellence.
- In each district and provincial hospital, DRH should identify a fistula core team for training made up of a doctor (obstetrician/gynaecologist, surgeon or medical officer in that order of preference, depending on availability and interest) and a theatre or female ward nurse. The core team will be responsible for spearheading fistula repairs and on-the-job training of respective cadres in their hospitals.
- Trainings should be held at provincial hospitals to maximize skills and technology transfer to the regions and subsequently improve access to repair services. Each

training lasting two weeks could be made up of 10 doctor/nurse teams (20 participants).

- Assuming 70% of the districts have a functional theatre, about 40 district teams and 7 provincial teams (approximately 50 teams) would need to be trained in 5 courses. If the course is held quarterly, the training would be complete in just over a year.
- Each district should recruit fistula cases for repair during the training course by creating awareness on obstetric fistula in the communities through microteaching sessions in health facilities and using appropriate CBOs and TBAs to identify and mobilize fistula cases for repair. The mass media, particularly the national and regional radio stations should be used to create awareness on the problem and possibilities for repair.
- The Machakos fistula course can form the basis for costing the provincial courses

Subsidize fistula surgery in provincial and district hospitals

- A fistula repair kit and an initial stock of fistula surgery consumables should be provided to every hospital where a fistula team has been trained. Additionally, some district hospitals will need to acquire an appropriate theatre table and operating lights to facilitate fistula surgery.
- User fees can be a limitation to accessing fistula repair services because the victims are usually the poor in society. MOH/UNFPA should consider waiving in-patient and theatre fees for fistula surgery. To do this the hospitals will require subsidies on a per capita basis to offset the cost incurred in managing the fistula cases to guarantee that fistula surgery is given the necessary priority.

Prevention of obstetric fistula

- While fistula surgery will reduce the number of existing cases, it is necessary to concurrently institute preventive measures to reduce the incidence of obstetric fistula. Life Saving Skills training, currently ongoing in some districts, should therefore be extended to all midwives in the UNFPA supported districts.
- Acquisition of life saving skills did not automatically lead to appropriate midwifery practices. The system of supportive supervision for safe motherhood initiatives should be strengthened to ensure that midwives make appropriate use of skills gained in the basic and on-the-job trainings. The regional Reproductive Health Training and Supervision Teams should provide this supervision.
- The DPHN and PHTs should mobilize relevant CBOs that can initiate BCC components within the community to address negative cultural practices that contribute to obstetric fistula.

Medium to long-term recommendations

Policy – MOH takes the lead in OF and Redefines the role of TBAs and Dispensaries

- It is imperative that the MOH takes the leading and coordinating role in capacity building for fistula repair and positioning of fistula prevention within SMIs.
- As a matter of urgency, the MOH needs to come up with a clear policy on the role of TBAs in pregnancy and labour and their relationship with government health facilities.
- MOH should further explore avenues that TBAs could be used as change agents within the community for safe motherhood. The overtures made by TBAs in some districts such as Kwale and Mwingi where they are evidently working closely with dispensaries indicate that there are possibilities of having them working under close supervision of nurses thereby reducing the risks of OF.
- The official function of dispensaries is provision of curative, preventive and promotive out-patient services. This position has in part promoted the use of TBAs for deliveries while professional mid-wives are available in these facilities. The MOH should therefore review the role of dispensaries to allow and facilitate them to conduct deliveries, noting that they are more professionally qualified than TBAs.

Programme – Integration and visibility of obstetric fistula within SMIs

- The answer to the problems of fistula seems to lie in addressing safe motherhood comprehensively, bearing in mind the central role of prevention: if they are not caused there will be no need to repair them.
- More than 90% of pregnant women attend ANC clinics at least once. As part of birth preparedness that is discussed with mothers during focused ANC, the subject of obstetric fistula should be added to the discussion points to highlight the dangers of home/TBA delivery. This may be what mothers need to know to influence their choice of place of delivery.
- In situations where physical access to maternal health services is problematic such as West Pokot and Mwingi the district health managers should be encouraged to provide accommodation facilities in the hospitals to expectant mothers near term in line with the “Kirap” model in Ortum mission hospital.

Training – capacity building: viable approaches

- Obstetricians/gynaecologists are not sufficiently exposed during their training to enable them conduct fistula repairs. The MOH needs to work closely with the

University of Nairobi and Amref to ensure that the Obs/Gyn registrars get adequate skills during the elective rotation.

- As the good old adage goes: “prevention is better than cure”. The MOH should in collaboration with relevant agencies expand the safe motherhood life saving skills training to cover all nurses starting with districts with the worst maternal and perinatal statistics such as the ones in this study.

Institutional Preparedness – quality of care and referral

- The staffing situation particularly with respect to nursing staff is bad and can be a real limitation to any meaningful fistula prevention or repair intervention. The MOH should review the nurses and doctors staffing situation in the districts as part of improvement in safe motherhood.
- Use of partographs for monitoring labour should be institutionalized as a means of improving quality of obstetric care in health facilities. While availability of partographs was not an issue, mid-wives need support supervision after training to ensure that they are applying the skills competently.
- Provider attitude need to be addressed more aggressively during supportive supervision if we are to draw clients towards professional care in health facilities
- Enhancing the communication system between peripheral and referral health facilities should strengthen the referral system. This is already underway in districts such as Mwingi and Kwale where radio connections are being installed by UNFPA and DANIDA. Additionally, health centers and sub-district hospitals need to have motor vehicles to evacuate emergencies or better still, upgrade the sub-district hospitals to CEOC facilities.
- As a long term measure, the MOH needs to ensure that all health centres offer basic essential obstetric services (BEOC) and all hospitals offer comprehensive essential obstetric services (CEOOC).

Information and advocacy at community level using appropriate structures

- Advocate in the community that OF is not only a medical problem but also one that is closely linked to cultural practices such as early marriage and teenage pregnancy. While the government strives to avail repair it is also within the power of the community to prevent OF.
- The MOH, through the DPHN and PHTs should identify and work with CBOs that already have active health components for IEC to which they can graft obstetric fistula and where stigma is an issue, support affected women and facilitate their re-integration back into society.

- In districts where sexual activity starts early – such as Mwingi and Homa Bay – IEC and FP service delivery, in the form of youth or youth friendly reproductive health programs should be stepped up in the context of the Youth Reproductive Health policy.
- Through participatory approaches, Behaviour Change Communication (BCC) strategies will need to be worked out with communities focusing on early marriage and FGM as cultural practices that precipitate harm in the form of OF.

Enhancing partnerships

- The MOH should seek/strengthen partnerships with other government departments and NGOs that are working against traditional practices such as female genital mutilation that have a contribution to the development of fistula in districts such as West Pokot.
- The MOH need to network with relevant organizations that have an interest in girl child education programmes in Kwale and West Pokot districts in a bid to keep the girls longer in school so as to avert early marriage.
- Taking into account comparative advantage, the MOH should collaborate with and coordinate the Safe Motherhood activities of donor agencies and NGOs to enhance efficiency and effectiveness, and to avoid duplication of effort. Some of the donor agencies implementing safe motherhood interventions in low resource settings include UNFPA (nine districts including Kwale and Mwingi), UNICEF (North Eastern Province), DFID (Western Kenya), and FCI (Homa Bay). In the area of fistula repair, Amref is by far the most active and resourceful Non-Governmental Organisation in the country. World Vision is active in fighting FGM in West Pokot. Local CBOs are important partners for IEC and community mobilization as demonstrated by the SETAT women group of West Pokot.

2.0 INTRODUCTION

Kenya has made great progress in addressing maternal health and with the inauguration of Safe Motherhood Initiative in Nairobi in 1987 specific programmes to reduce maternal mortality and improve maternal health were established. These developments have been made against a backdrop of demographic milestones such as the increase in population from 9 million in 1969 to 31.5 million in 2002. Of significance is the fact that 43% of this population is below 15 years of age. Equally a significant number of young women enter childbearing and this is evidenced by the data from the KDHS 1993 and 1998 where 44% and 55% of girls aged 19 years respectively had already begun childbearing. Maternal mortality ratio has increased from 365/100,000 live births in 1993 to 590/100,000 in 1998.

Globally, an estimated 600,000 women die every year due to pregnancy related complications, 99% of them in the developing countries and for every maternal death, 30% or more women suffer disabling and humiliating injuries including obstetric fistulae. While it is a global problem, it appears to be particularly common in Africa - a low resource setting. Unrelieved obstructed labour, which has social, nutritional and health care dimensions, is the main cause of obstetric fistula. Studies in Africa have shown that 58-80% of women with obstetric fistulae are under the age of 20, with the youngest patient only 12 or 13 years of age. Waaldijk (1994) working in Northern Nigeria found that 73% of the patients he attended between 1984 and 1988 were under 21 years. Tahzib's 1983 study showed that 5.5% of VVF sufferers were under 13 years of age. He also established that 33% of patients who attended Ahmadu Bello University Hospital in Nigeria between 1969 and 1990 were aged 16 years and under and 83% were under 30 years of age. A study of the patients at the fistula center in Kano and Katsina, Nigeria, showed that most of them (70%) were age 20 when fistula developed. Around 40% were under 16 years. The vulnerability of young girls to the development of OF is closely related to their physical immaturity and the less developed pelvis. In this context the need to raise the age at marriage and avoid teenage pregnancy is key in preventing development of OF.

Obstetric fistula is one of the most serious and disabling complications of child birth which has virtually been eliminated in developed countries but is still prevalent in the developing world. While 92.2% of VVFs in Kenya are due to obstetric trauma, only 12.3% of such fistulas in the UK are due to this cause compared to 70% from surgery (Mbanji, 1996). Obstetric fistulas usually follows prolonged obstructed labour – commonly arising from Cephalo Pelvic Disproportion (CPD) and poor obstetric care. Specifically it is due to necrosis of the anterior and sometimes posterior vaginal wall, bladder, urethra and rectum which has been compressed between the foetal head and the maternal pubis. Incontinence arises when the dead tissue slough off, usually between the 4th and 14th day post partum.

Obstetric fistula is a preventable and treatable condition arising from an interplay of biological, social, cultural and economic factors which predispose young women to early sex, marriage and child bearing while limiting their access to preventive information and

services as well as emergency obstetric care for complications during child birth. The very young and the very poor are disproportionately affected. Most women are either unaware that treatment is available or cannot afford it. Conversely Fistulae has been eradicated in areas such as Europe and North America through improved obstetric care:

It is acknowledged that most pregnancy related deaths occur around the time of delivery or at postpartum, presenting themselves as emergencies. In the KDHS 1993 and 1998 it was observed that although 90% of pregnant women had been seen by a professional provider at least once, a low proportion 45% and 44% respectively were attended at birth by a professional provider. Poor access and referral systems due to long distances are some of the reasons why women deliver at home under unprofessional care. Obstructed labour is a common outcome of home deliveries.

It is an established fact that about 15% of all pregnancies result in complications that require emergency obstetric care. Fistulas occur as a result of the 3 classic delays in getting the appropriate Emergency Obstetric Care (EmOC): delay in deciding to seek medical attention, delay in reaching a health care facility, and delay in receiving EmOC at the facility.

In a study undertaken in nine African countries (UNFPA/EngenderHealth, 2003) it was noted that obstetric fistula is a pregnancy related disability affecting an estimated 50,000-100,000 women each year. The factors that precipitate this are crosscutting and include:

- Malnutrition and possibly repeated infections
- Insufficient access to emergency obstetric care
- Preference to deliver at home with TBAs (often unskilled attendance)
- Poorly managed C-Sections at health facilities

This health problem is aggravated by poverty, women's poor status in society and lack of education, preventing them from getting services to avert or cure the condition. In spite of these, in the countries studied it was observed that: fistula is not acknowledged as a critical issue, there are inadequate facilities and a poor referral system, skilled staff to handle fistula are few, awareness of the problem at community level is low and cultural practices such as early marriage are rampant.

2.1 Magnitude of Obstetric Fistula In Kenya

A review of existing literature indicate that in Kenya, Obstetric Fistula is a big problem even though the actual prevalence and incidence remain unknown. According to the report on the Kenya Country Situation (presented at the 2nd Meeting of the Working Group of the Prevention and treatment of Obstetric fistula in Addis Ababa, Ethiopia (October-November., 2002), the number of VVF operations done annually during the ten years between 1992 and the year 2001 increased steadily from a low of 36 cases in 1992 to a high of 479 cases in 2001. AMREF conducts outreach fistula surgery in five site in Kenya namely KNH, Mutomo, Garissa, Ortum, and Mumias hospitals. The Amref fistula surgeon notes that there are areas in the country where the problem of obstetric fistula is

more pronounced particularly the pastoral regions of West Pokot, Turkana, Garissa and in South Nyanza.

Few studies on obstetric fistula have been done in Kenya. Between 1965 and 2003 only four studies have been conducted nationally. These include Mati (1968), Orwenyo (1984), Amoth (2001) and Mabeya (2003). Orwenyo (1984) found that in KNH 36.6% of the patients were primigravidas and they constituted the single largest group of patients who developed obstetric fistula. In the West Pokot study (Mabeya 2003), primigravidas constituted 62.7%. These studies underscored the need to address the causative factors of OF such as malnutrition, low literacy levels, early sexuality and access to EmOC while improving access to repair services.

The most current study in Kenya is that by Mabeya (2003) in West Pokot. The findings indicate that obstetric fistula is a common problem. All the 66 women studied were married and a majority (66.4%) was below 20 years and also primigravida. The youngest patient at the onset of fistula in this study was 14 years and the ages ranged from 14 to 38 years with a mean of 20.5 years. Amoth (2001) in his study at KNH found that 26.6% of the cases were 20 years and below and 81.3% were 30 years and below. According to Mabeya's (2003) study the main cause of fistula was obstructed labour. All the cases delivered at the health facility and the outcome in 67.7% of the cases was stillbirths. The duration of labour lasted four days in 81.8% of the patients and only one patient had elective caesarean section with subsequent development of VVF.

It is important to recognize that these studies are largely hospital based and therefore cannot be fully indicative of the magnitude of the problem. Current cases are a tip of an iceberg due to inadequate data and the fact that this problem has not been given due attention, making it difficult to come up with an accurate figure. AMREF suspects that there are many women with OF spread out in the country. Incidence is estimated at 3000 new cases every year (calculated at the rate of 1-2 cases per 1000 deliveries) with only 7.5% receiving treatment. At the time of this study there were 20 cases on the waiting list at KNH where an additional theatre day (a Friday once in a month) has been added to cope with the demand for repair. The incidence is however a gross underestimation of the magnitude of the problem because the statistical data on the full magnitude of the problem is very scanty.

2.2 Background

Since the year 2002, UNFPA has been working with partners on a global campaign to prevent and treat obstetric fistula with the aim of making fistula as rare in Africa and Asia as it is in the developed world. The first report to map out obstetric fistula in sub-Saharan Africa, *Obstetric Fistula Needs Assessment: Findings From Nine African Countries*, was launched by UNFPA and EngenderHealth on June 18, 2003. The report noted that the estimated two million women living with obstetric fistula are too few since they are based on women seeking treatment in medical facilities.

UNFPA Kenya submitted a project proposal to address the prevention as well as management of obstetric fistula in Kenya in April 2003 which was approved by the

UNFPA Headquarters under the special UNFPA programmatic initiative on the prevention and treatment of obstetric fistula (Inter-country Programme – INT/00/P22). Since prevention and treatment of obstetric fistula is one element of ensuring safe motherhood, it was decided that the Ministry of Health (MoH) would be a key partner and have a leading role.

A one-day stakeholders meeting with participants drawn from a cross-section of professionals was convened by MoH/DRH with financial support from UNFPA on June 26, 2003. One of the outcomes of the stakeholders meeting was the creation of a Task Force on obstetric fistula comprising of UNFPA Kenya and Kenyan counterparts (MoH, NGOs and Fistula experts). In its first meeting in August 28, 2003, the Task Force observed that data on the magnitude of obstetric fistula in Kenya was scanty and recommended a rapid needs assessment of the obstetric fistula situation in selected districts of Kenya. The assessment was to focus on the magnitude of the problem and socio-cultural factors contributing to fistula incidence and hampering health seeking behavior as well as medical aspects such as the availability of services and constraints to service provision and utilization.

2.3 Study Objectives

The objectives of the survey were to assess:

1. Socio-cultural factors contributing to fistula incidence
2. Health seeking behavior in relation to obstetric fistula
3. Availability and utilization of essential obstetric services
4. And to make recommendations on prevention and management of obstetric fistula

The ToR for this study are contained in appendix 6.

2.4 Methodology

Data collection for this study was conducted between November 20 and December 19, 2003 in Nairobi and four selected districts staggered across four provinces. The methodological approach was both qualitative and quantitative. In addition to review of background documents and site visits to the selected districts, it was critical to gather information from those providing obstetric services at various levels as well as the recipients of the service. This entailed gathering data from a purposive sample of various stakeholders including policy makers, service providers, community members CBOs and NGOs. Relevant information on fistula surgery training was collected through key informant interviews in the Medical school of the University of Nairobi and AMREF.

Qualitative Approaches

An assessment of socio-cultural factors contributing to obstetric fistula incidence and influencing health seeking behaviour were conducted through a variety of participatory rapid assessment procedures applied to community members at the community and health facility levels. These methodologies included; focus group discussions, in-depth interviews/narratives and key informant interviews as summarized below in table 1.

Quantitative approaches

Medical aspects of the survey addressed issues of availability, service provision and utilization of obstetric services. In each of the study sites two health facilities were visited; the district hospital as the referral and a health center or dispensary as the referring facility. In West Pokot an additional facility, Ortum Mission hospital was visited because of its specific role in repair of obstetric fistula. Existing records on EmOC and obstetric fistula in the sampled districts were reviewed to obtain trends and magnitude of the problem and to give an indication of the amount of resources used to manage obstetric fistula cases. The reports included but were not limited to periodic reports to the office of the District Medical officer of Health from all health care providers in the district, reports of the district registrar of births and deaths, and annual MOH reports in the study districts.

Table 1: Methodology Summary

District	Methodological Approaches					
	FGDS	Indepth/Narratives	Key Informants	Records Review	CBOs	Facility Survey
Kwale	1	-	4	Yes	2	2
Mwingi	2	1	7	Yes	1	2
West Pokot	1	-	5	Yes	1	3
Homa Bay	1	1	7	Yes	1	2
Nairobi	-	-	6	Yes	-	-

In all, a total of four district hospitals, one sub-district hospital, one mission hospital, two health centers and two dispensaries in the four districts were visited. A list of key informants interviewed is presented in appendix 1. Salient features of the study process are captured in photographs in appendix 6. Table 2 presents the health facilities visited.

Table 2: Health Facilities Visited

Type of facility	District	Name of facility
Hospitals	Kwale	Msambweni district hospital
	Mwingi	Mwingi district hospital
	West Pokot	Kapenguria district hospital
	Homa bay	Homabay district hospital
	Kwale	Kwale Sub- district hospital
	West Pokot	Ortum Mission hospital
Health centers	West Pokot	Kacheliba
	Homa bay	Ndhiwa
Dispensaries	Kwale	Mbuwani
	Mwingi	Waita

3.0 FINDINGS

3.1 Contextual Issues

3.1.1 Physical background

Geographically the selected study sites are marginal districts with low economic productivity. These are exceptionally large districts often with difficult terrain as is the case of West Pokot. For example, due to impassable roads and long distances, health facilities in Alale division in the northern part of West Pokot district refer patients to Amudat hospital in Uganda. Though not a comprehensive emergency obstetric care facility, it is able to transport the patients back to Kapenguria district hospital in Kenya because it has a motor vehicle and the road between the two health facilities is passable. The situation was not very different in Mwingi where some health facilities like Tseikuru sub-district hospital refer patients up to 140Kms away to the district hospital. The lake is the biggest challenge in Homa Bay as patients on the islands are at the mercy of good weather to access emergency obstetric care facilities on the mainland. Appendices 4 present a map of West Pokot. Infrastructure in the district is least developed contributing to poor accessibility to any form of service.

3.1.2 General Health problems

In all the districts malaria was cited as the leading cause of morbidity. Due to food scarcity malnutrition affects child and maternal health in Kwale, Mwingi and West Pokot. HIV/AIDS is also recognized as a major threat to the health of the community in all the study sites. Health seeking behaviour is gendered, often women delaying to seek care while men do so in private facilities. However there are specific disease conditions unique to given districts for example in Kwale district bilharzia affects both children and adults and was said to occur due to bathing in dirty water. Filariasis affects mainly adults and sometimes children. Tuberculosis, typhoid and skin conditions were prominently reported in Mwingi district.

In terms of reproductive health and specifically for women, the problem is either of early marriages in Kwale or as observed in the other three districts teenage pregnancy is rampant. Pregnancy and childbearing in these districts was reportedly clouded with a host of problems and complications. Although majority of the mothers attend ANC at least once, most of them deliver at home with the assistance of TBAs and relatives. From the FGDs it was reported that most women experience obstructed labour, excessive bleeding, retained placenta and tears (*sometimes inside*).

Given the general environment and health situation, these districts record the poorest demographic and health indicators often way below the national average levels. This is evident in table 3.

Table 3. Demographic and Health Indicators by District.

District	U5 MR	Life Exp.	Age at First Sex*	Age at first marriage for women *	TFR *	% of skilled attendance at Birth*	% women with BMI <18.5*
Kwale	149	53.0	17.8	18.3	5.0	33	14.9
Mwingi	127	60.7	16.7	19.8	4.7	49	15.4
Homa Bay	254	38.3	15.6	17.5	5.0	36	11.3
West Pokot	127	58.3	17.0	18.7	5.3	36	15.5
National	116	55.9	16.7	19.2	4.7	44.0	11.9

Re: KDHS 1998, Kenya Population and Housing Census 1999 (Analytical Report on Mortality, May 2002), KSPA 1999. *Provincial figures

3.2 Magnitude of Obstetric Fistula In Study Sites

Issues of magnitude were addressed by the DMOs as key informants and by community members. The findings are therefore necessarily presented by theme and where possible disaggregated by the study site. The MOH Mwingi indicated that VVF is very common: out of every 100 deliveries there are 2-3 cases based on his nine months experience in the district. The problem is one of poor recording of the cases in that they are not picked as VVF as this is not usually the primary diagnosis. According to the Matron, she had seen about five cases of obstetric fistula in the last 3 years while the theatre in-charge had witnessed two cases repaired by medical officers.

The MOH Kwale indicated that according to existing data, not many cases of OF are recorded. This may be because there has not been a specific focus on recording OF. But the Kwale district surgeon attests that OF is a problem in the district based on experience. For the three months he has been in the district, he has seen four cases of OF seeking care. He has already repaired one who had lived with the problem for 6 years and another 3 have come for the service but has not been repaired yet. One of them has had it for 10 years and the surgeon believes there are many more fistula within the district – more than he can cope with.

In Kwale the study team spent a whole morning trying to locate a case of OF within the community but in spite of all efforts the search was futile. It was disappointing to have traveled so far (nearly 100kms from Kwale town) and not locate her and get her story. The issue is that even with appropriate transport we were not able to locate Luvuno in her own village due to lack of an appropriate entry point. However, the lesson learned is that there may be more Luvunos and that it would take more than staff and transport to locate them. Additionally, the Luvunos that eventually make it to a health facility must be doing so with extreme effort.

Box 1: Case Finding: Sentinnelles' experience

The operations of Sentinnelles, an NGO and a partner of a local CBO, SETAT demonstrates that identifying an acceptable entry point is an important step. The organisation uses the chiefs' Barazas that are organised by Village Advocacy Members (VAM) to educate the community members about OF and ask them to refer any case of OF they know to SETAT. In some instances fathers, husbands and mothers refer the women to SETAT who in turn forward their names to Sentinnelles for surgery sponsorship at the Ortum mission hospital. It is only about 15% of all cases repaired in the hospital that have been referred from other health facilities.

The MOH for West Pokot was very explicit in his statement that OF is a major problem in the district whereby 2 to 3 cases are observed every month and referred to Eldoret or Ortum hospital for repair. This was confirmed by Alexander Nazaren, the coordinator of Sentinnelles who reported that over a period of 3 years their programme has sponsored 79 women for repair at Ortum hospital, using the surgeon from AMREF. It was conceded that the magnitude is difficult to establish but the number of those seeking care is on the increase, an indication that there are large numbers within the community. Although there were no cases of fistula at Kacheliba health centre, it was acknowledged that such cases go to Ortum and Kapenguria via Amudat. Amudat hospital is in Uganda and does not have the skills to handle fistula but it is the first choice for mothers to make a stop in that it has transport that finally facilitates referral.

Among the Pokot the difficulties women encounter in childbirth is graphically reflected or symbolized in the naming system that are indicative of the particular circumstances surrounding the birth. These maybe prolonged and obstructed labour, maternal death and occasionally facility delivery. Examples of these are listed in appendix 2.

In Homa Bay, the DMO who is also the surgeon acknowledged that the problem exists and observed that some patients had strayed into his surgery clinic hoping to be assisted; an indication that there is a problem and concomitant demand for the service. This was confirmed by the district gynaecologist who noted that this is a real issue and should be treated irrespective of numbers as he passionately explained “ ***even if it is one, it is grave. It is not a case of justifying numbers. To the patient it is a catastrophe and to the gynaecologist a nightmare***”. He has been in this district for 10 years within which he has witnessed 20 VVFs. He attempted to repair 10 but only 4 were successful – an outcome that has discouraged him. He does not know what happened to the other 10. His inclination is that women resolve to live with it. His last repair was in March/ April 2003. The failure rate has more to do with his skills of OF repair, which are limited.

Recording of OF cases is fraught with difficulties. The fact that the fistula occurs as a sequelae of obstructed labour masks the diagnosis. The fistula will be noted before the patient is discharged from the hospital but the only diagnosis that may enter the hospital records is that of the primary condition. The fistula has a second chance to enter the

records but that again is foiled by the limitation of the outpatient morbidity tally sheet, which categorizes the condition under “all other diseases”. Theatre registers are useful where the capacity for repairs exists as is the case with Ortum mission hospital. Much of the record on obstetric fistula is thus based on anecdotes and health workers with institutional memory. The fact that there are structural constraints to seeking care for fistulas does compound the problem.

3.3 Community Understanding of the problem of Obstetric Fistula and Health Seeking behaviour

According to health managers and service providers the community have very little understanding of Obstetric Fistula at the community level and this may largely be attributed to lack of awareness. It is plausible that TBAs may out of ignorance, tend to under-rate its consequences. The Homa Bay district gynecologist was convinced that by keeping women for too long - two days plus, TBAs inadvertently create OFs and transfer them to the health facility. It is further suspected that once it occurs the tendency is to hide and no medical attention is sought. If at all any action is taken this is often too late. A similar impression was evident in the discussions with the DMOs for Mwingi, Kwale and West Pokot pointing to the fact that communities have no understanding of OF per se and at most would not isolate it from other problems that may arise with childbirth. In Pokot where the problem is more common, this is not linked to complications of childbirth but rather that “*she is not woman enough*”. This is an ironic twist to the reality given the fact that the women are often under age anyway.

It is also important to note that this may be compounded by the fact that health providers do not talk about the problem during microteaching and therefore information is not reaching clients or potential clients. Health facilities provide a captive audience for informing and educating people on OF. At the community level, advocacy can be done through established community mobilization structures and by snowball, using patients who have been repaired. It is plausible that many women are in communities with OF but unable to comprehend the problem and therefore do not do much about it. In this context OF is largely a problem of the poor whose health situation and decisions are governed by economic (structural) and cultural factors; often resigning themselves to their fate.

During the discussions with community members (women) it was apparent that from the onset obstetric fistula is not recognized upfront as a problem. It was only after probing that participants brought out the issues. For example in Kwale it was evident that some of the TBAs in the FGD had seen women who leak urine. The occurrence of this was rated at 1-2 for every 10 women who have delivered. On encountering such a person, she is advised to go to hospital. One participant who had encountered a mother with this problem advised her to go to hospital but was not aware if she was assisted. In her opinion, she thinks this problem occurs when the baby is big and so the woman gets extensive tears. In support of this explanation, other participants gave the illustration of a big truck passing through a narrow path and so it comes destroying anything on its way. Another case was given of a 14-year-old girl who had delivered at Msambweni District Hospital and the problem was not sorted out. The other was a woman, over 30 years of

age with the problem of leaking urine and was repaired at Coast PGH. Others explained that OF was likely to occur at a spot where the baby had pressed hard e.g. bladder causing injury to the area and is more common if the baby had an abnormal lie.

OF are more common in remote places where families are poor. Poverty, teenage pregnancy and early marriage contribute to the development of fistula. The concern with girl education is such that in Kwale, Waa girls school was specifically set up to salvage girls running away from early marriage. This problem is particularly rampant in Kubo, Samburu and Kinango divisions where “*Children bring other children for immunization*”.

In Mwingi the causes were varied ranging from adultery while pregnant to the issue of a big baby and malpresentation. FGD participants knew of three cases but believed there could be more in the community, hiding out of embarrassment. However, they did not know the cause of the problem but regarded it as a common illness, affecting women. They vaguely suspected that the bladder bursts.

In West Pokot it was explained in the group discussion that the girl child gets married off very early as the family is looking for wealth (cows). The explanation for occurrence of fistulae is misbehaviour by the girl/woman (promiscuity) or as a result of a "bad eye". The issue of promiscuity is ironical given that this community still perpetuates FGM with the aim of reducing women's libido and hence promiscuity.

3.3.1 Obstetric Fistulae and Stigma

Stigma is an elusive concept, but one that is increasingly recognized as a major component in the perception of the ill person. In Mwingi, Kwale and Homa Bay the issue of stigma is not so explicit. The general feeling was that their immediate families did not reject women with fistulas. However, the women, out of their own volition segregated themselves from others because of the embarrassment occasioned by the urine smell. This was extended from her own children to other community members. “*In this community, no woman has been divorced because of having fistulae*” reported a key informant in Mwingi. A similar impression was displayed in Kwale where in the words of a key informant:

Box 2: Fistula stigma

People with fistula have no confidence mixing with others. Some spouses leave their partners and this depends on the closeness that exists between them. The immediate family normally doesn't isolate them; it's the affected person who is normally not free to mingle with people so they give her space. Once treated in hospital they automatically resume normal interaction with others.

On the contrary, having a fistula among the Pokot creates social stigma in that the women cannot stay with others or even cook for the family when she has the urine smell or is menstruating. Worse still is the situation where husbands return wives to their fathers and demand refund of cows (bride price) especially if the woman gets a fistula in the process

of getting a first child. An example is a woman who has been living in seclusion for 18 years with RVF and VVF. She was finally assisted by SETAT and could not believe anyone could care about her and give her a new lease of life.

3.3.2 Factors At Community Level Associated With Obstetric Fistula

The factors associated with OF are both structural (community and individual level) and institutional. Whereas obstructed labour, a major cause of OF is a universal problem, the outcome of labour largely depends on the communities' response towards a pregnancy. In some districts, teenagers hardly attend ANC and do not deliver at health facilities for fear of being found out. Community and individual level factors influence health-seeking behavior. In some instances the expectation to have the first baby at home as proof of womanhood and bravery contributed to prolonged labour as is the case in West Pokot. This was reinforced by the cultural expectation that a woman is supposed to deliver in her husbands hut for legitimacy of the child. In this community Female Genital Mutilation (FGM) was also cited as one of the contributors to OF through crude incisions (episiotomies) using arrowheads to release scar tissue from infibulation, often injuring the bladder and/or the rectum.

Accessibility to skilled attendance at birth is poor. In West Pokot, low utilization of FP services is evidenced by high parity and a high crude birth rate (52.7/1000- higher than the national average). About 90% of the district is arid and semi-arid to the extent that high levels of poverty push parents to marry off young daughters to improve family livelihood. Early forced marriages among the Pokot and communities in Kwale were recognized by the community as contributing to the development of fistula. Although childhood malnutrition appears not to be a problem in West Pokot, maternal malnutrition is reported to be high as mothers deny themselves nourishment to provide for the children. This may explain why the percentage of women with BMI below 18.5 is higher than the national average in both districts as is evident in table 3.

First delay is a common feature in all the four districts. Women try labour at home with TBAs for up to three days and once a decision is made to seek skilled attendance in health facilities, long distances going up to 60 kilometers and lack of motorized transport increases the delay by up to another 24 hours. In Homa Bay it was stated that referrals from Mfangano Islands and Suba districts could delay for as long as the lake remains turbulent.

3.3.3 Prevention and Treatment of Obstetric Fistula At Community Level

Regarding prevention of fistulae, the consensus was that they can be prevented having understood that the problem is related to the delivery process. In Kwale it was believed that massaging helps to position the baby properly. This is usually done by TBAs weekly till delivery. This seems to bear a resemblance to *mulo* and *kuvindwa* (massage) conducted by TBAs in Homa Bay and Mwingi respectively. The justification for it is that if the TBA detects danger signs for example malpresentation of the baby, the mother will be referred promptly. In terms of treatment of OF very little was alluded to in the

discussion groups. There was reference to feeding and weight gain as a means of facilitating the close-in of the hole but if it persisted then one only had to live with it, hopefully time would do the trick. In Mwingi an attempt at treatment was made by giving the mother traditional herbal medicine to drink and wash with, and sometimes the hole would close.

3.4 Assessment of Emergency Obstetric Care Services

According to the GoK policy, each district is required to have a government hospital that should be able to offer comprehensive emergency obstetric care. This is in line with the WHO guidelines that indicate that for every 500,000 population, there should be one comprehensive and four basic emergency obstetric care facilities. In terms of numbers, all the four districts appear well endowed with health facilities since all of them meet the minimum requirements as presented in table 4. All the district hospitals and the mission hospital offer comprehensive emergency obstetric care but the Sub-district hospital and health centers visited were not able to offer the full range of basic emergency obstetric care. Indeed the two dispensaries visited were performing just as well as the Sub-district hospitals and health centers. Table 5 summarizes the sampled facilities' ability to provide emergency obstetric care.

Table 4: Number of health facilities in the district

DISTRICT	HOSPITALS		HEALTH CENTRES		DISPENSARIES		TOTAL
	GoK	NGO	GoK	NGO	GoK	NGO	
KWALE	3 (2 SDH)	1	5	0	42	6	57
MWINGI	1	0	9 (2 SDH)	2	32	8	52
W/POKOT	1	1	4	0	18	17	41
HOMA BAY	1	0	7 (1 SDH)	5	6	13	33

Table 5: Ability to provide EmOC

Name of HF	Category	BEOC						CEOC		OF Repair
		PA	PO	PC	MRP	MVA	AVD	C/S	BLD	
Msambweni	GoK D.Hosp	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kwale	GoK SDH	Y	Y	Y	Y	Y	N	N	N	N
Mbuwani	GoK Disp	Y	Y	Y	Y	N	N	N	N	N
Mwingi	GoK D.Hosp	Y	Y	Y	Y	Y	Y	Y	Y	N
Waita	GoK Disp	Y	Y	Y	Y	Y	N	N	N	N
Kapenguria	GoK D.Hosp	Y	Y	Y	Y	Y	N	Y	Y	N
Ortum	Mision Hosp	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kacheliba	GoK HC	N	Y	Y	N	N	N	N	N	N
Homa bay	GoK DH	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ndhiwa	GoK HC/SDH	Y	Y	Y	Y	Y	N	N	N	N

Key: PA – parenteral antibiotics, PO – parenteral oxytoxics, PC- parenteral anticonvulsants, MRP- manual removal of placenta, MVA- manual vacuum aspiration, AVD-assisted vaginal delivery, C/S- caesarian section, BLD- blood transfusion, Y – yes, N – no.

3.4.1 Proportion of Births occurring in Health Facilities

The proportion of all births occurring in health facilities ranged from a low of 8% in Kwale and Mwingi districts to a high of 13% in Homa bay. The difference may in part be explained by the quality of record keeping in the four districts. Reporting rates from peripheral health facilities were said to be as low as 50% in Mwingi while Homa bay had the most elaborate Health Information System. Most of the deliveries were therefore recorded in the district hospital, which was in any case the only comprehensive emergency obstetric care facility. The other wide disparity is between the number of all births (home and health facility) recorded by the district registrar of births and the number of expected births in the district. None of the districts had registered even half the number of expected births in the district, the situation being worse in West Pokot and Homa Bay. This information is summarized in table 6 and presented in figure 1.

It is expected that a minimum of 5% of all births in a population will involve complications that require caesarean sections and because of the potential for overuse of the procedure, a maximum level of 15% has been set. During the year 2002, the four districts recorded between 0.69% and 1.5% of all births as caesarean sections, representing a wide gap in life saving procedures as presented in table 6.

Table 6: Proportion of births in emergency obstetric care centers and C/S rates in 2002

District	Pop.	CBR	Expected births	Recorded births District	Recorded births HF	Recorded C/S	% deliv. in EmOC	% deliv. by C/S
KWALE	550,323	45.0	24,765	11,034	2,044	170	8.3	0.69
MWINGI	346,149	43.0	14,884	6,496	1,233	123	8.3	0.83
W/POKOT	355,865	52.7	18,754	2,905	2,124	281	11.3	1.50
HOMA BAY	320,987	50.8	16,396	3523	2,121	181	12.9	1.10

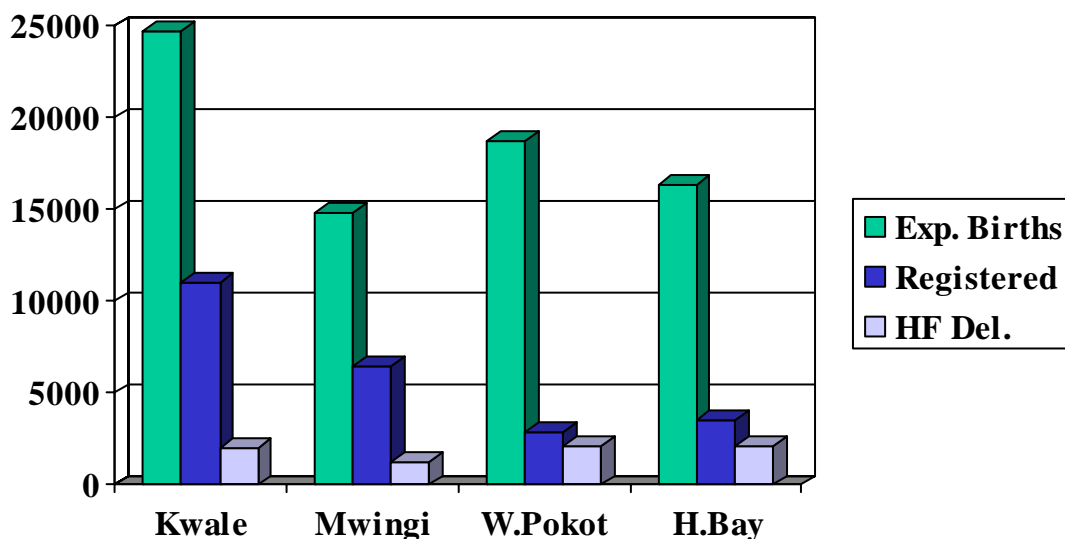


Figure 1: Proportion births registered and delivered in health facilities by district

It is estimated that 15% of pregnant women will develop complications that require emergency medical attention. Met need for EmOC is the proportion of women with obstetric complications who receive treatment at EmOC facilities. Due to the poor state of health records in Kwale and Mwingi districts, most of the obstetric complications were either not recorded or such records were missing. As such, the computed met need for the two districts is an underestimate. However, the met need, even for districts with a good health information system – like Homa Bay – is less than 50%, meaning that most women with direct obstetric complications are not treated, with the consequence that most of them will either die or live with severe disability such as obstetric fistula. With such poor records on obstetric complications and the difficulties of establishing a maternal death, computation of case fatality rate would be very imprecise. Table 7 presents the met need in the study districts.

Table 7: Met need for emergency obstetric care

District	Expected births '02	Expected # of direct obstetric Complications	Recorded # of direct obstetric Complications '02	Met need for EmOC (%)	Number of Maternal deaths
KWALE	24,765	3,715	64*	1.7	--
MWINGI	14,884	2,233	171**	7.7	24#
W/POKOT	18,754	2,813	774	27.5	13##
HOMA BAY	16,396	2,459	1132	46.0	17

* the latest in-patient morbidity and mortality summary sheets in the district medical records office were second quarter of 2002 for Kwale hospital, first quarter of 2003 for Msambweni hospital and none for Kinango hospital. The figure is an annualized total from available records.

** Compiling of in-patient morbidity and mortality summary sheets re-started in January 2003 after a three-year lapse. The figure is the annual projection from the 128 complications recorded in the district hospital in the first three quarters of 2003.

Annual projection from the six deaths in the last three months (Sep – Nov 2003)

Maternal deaths recorded in the district hospital are only those that occurred in theatre or shortly after delivery in hospital – 4 in the DH and 9 in Ortum Mission Hospital

3.4.2 Potential for Providing Fistula Repair Services

Physical facilities

There was at least one functional government theatre in each of the four districts visited. West Pokot had a second operational theatre in Ortum mission hospital but the second theatre in Kwale at Kinango Sub-district hospital was under renovation. All other sub-district hospitals did not have a theatre and are for practical purposes health centers offering basic emergency obstetric care services. The theatre in Mwingi hospital though functional is old, small and cannot guarantee sterility. Msambweni and Homa Bay district hospital theatres are busy with more than 180 major operations per quarter and C/S making up about a third of the caseload. The number of operations is lower for Mwingi and Kapenguria with C/S making up three-quarters of the caseload. Obstructed labor was the major indication for C/S. The difference in case loads can be explained by the presence of surgeons in Msambweni and Homa Bay and in the case of low case load at Kapenguria by the presence of a second (mission) theatre. Theatre facilities are not a

major limitation to fistula repair. However, since fistula repair is specialized and categorized as cold surgery it is often overtaken by emergency surgery. Table 8 summarizes the theatre caseload and indications for C/S.

Table 8: Theatre case load and Indications for C/S done during the three months preceding the survey

Complications	District							
	Msambweni DH		Mwingi DH		Kapenguria DH		Homa Bay DH	
	#	%	#	%	#	%	#	%
Obstructed labour	28	41.8	33	45.2	12	29.3	18	28.1
Maternal/Foetal distress	5	7.5	11	15.1	4	9.8	7	10.9
PET/ Eclamsia	6	9.0	3	4.1	0	0	0	0
Raptured uterus	4	6.0	6	8.2	0	0	3	4.7
Breech/Malpresentation	12	18.0	8	11.0	19	46.3	15	23.4
Others	8	11.9	15	20.5	6	14.6	21	32.8
Total C/S	67	36.4	73	74.5	41	80.3	64	34.6
Total Major Op.	184		98		51		185	

Theatre equipment and supplies was equally not a major hindrance to fistula repair in the districts. Each district hospital had already performed a few repairs with existing equipment and supplies. Nevertheless, proper equipment is essential for fistula repair. In terms of equipment, a proper light, theatre table that tilts to 45 degrees and has shoulder support is essential. Special surgical blades, long needle holders, long artery forceps, 90 degrees curved scissors and sharp aneurysm needle are essential to ensure quality surgery. Consumables include small free needles, catheters, sutures and urine bags. Use of spinal anaesthesia is recommended. The general state of supplies of selected indicative items in all the facilities visited was satisfactory as shown in table 9.

Table 9: Availability of essential supplies and equipment

Items	District									
	Kwale			Mwingi		West Pokot			Homa Bay	
	DH	SDH	DISP	DH	DISP	DH	Ortum	HC	DH	SDH
Antibiotics	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Antimalarials	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IV fluids	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Catheters	Y	Y	-	Y	N	Y	Y	N	Y	Y
Delivery couch	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Delivery packs	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Partographs	Y	Y	Y	Y	N	Y	Y	N	Y	Y
C/S sets	Y-10	N	NA	Y - 3	NA	Y - 2	Y - 2	NA	-	N
General sets	Y - 5	N	NA	Y - 1	NA	Y - 1	Y - 2	NA	-	N

Key: Y – yes, N – no, NA – not applicable

Fistula patients remain in the ward for three to four weeks after repair. While bed space may not be an issue at the current rate of repair in the district, it would certainly become an issue in Mwingi and Homa Bay if the number of repairs were increased. Successful

repairs would certainly create demand for services as was observed in Msambweni district hospital. Increasing bed capacity should therefore be part of the planning for fistula repair services where occupancy is already over-stretched. The bed capacity at the district hospitals is presented in table 10.

Table 10: Bed capacity in the district hospitals

	# of Beds	Occupancy (%)
Kwale	129	66.6
Mwingi	81	113
West Pokot	160	64
Homa Bay	214	91.9

3.4.3 Staffing and Skills

All the four districts were operating with half the establishment for nurses – a situation that is very precarious for safe motherhood. Mwingi and West Pokot do not have specialists in surgery or Obs/Gyn while the medical officers in all the districts are overstretched with administrative duties and handling of medical and surgical emergencies. The staffing situation is presented in table 11.

None of the key obstetric staff – obstetrician/gynaecologist, medical officers and nurses in government health facilities have received fistula surgery training. The obstetrician/gynaecologist in Homa bay relies on the skills he acquired as a registrar, which he admits are insufficient, while the surgeon in Kwale and most of the medical officers who have attempted repair learned by observing Dr. Raassen performing repairs. Nurses in Homa Bay are currently receiving life saving skills training through a capacity building project of the Family Care International. UNFPA has supported similar trainings in Kwale and Mwingi districts. No emergency obstetric care training was reported in West Pokot.

Table 11: Staffing situation in the four districts

	Surg/OBGYN	MOs	Anaesthetists	Nurses
Kwale	1	4	3	157
Mwingi	0	3	2	102
West Pokot	0	4*	2	126
Homa Bay	2	2	2	178

* there are two doctors in the district hospital and two in the mission hospital.

3.4.4 Experience with Obstetric Fistula repair

Experience with obstetric fistula was varied from one district to another. West Pokot had the biggest experience with 79 cases seen and all repaired at Ortum mission hospital by an AMREF surgeon in the last three years. Only one case was repaired at the district hospital. Success rate in this district was reported to be about 90%. In Homa Bay the gynaecologist has repaired half the cases he has seen over the years but at a success rate of 40%.The level of skills of the surgeons can explain the difference in success rates. Kwale and Mwingi has had two repairs each done by medical officers but the surgeon in

Kwale who is newly posted is motivated and has already done one repair. Successfully repaired patients are a pulling factor for care seeking. In the case of West Pokot there is an active case finding by SETAT, a local CBO while in the other three districts cases are self-referral, usually on the recommendation from a satisfied client. Table 12 presents the districts' experience in obstetric fistula.

Table 12: Obstetric fistula experience in the four districts

District	OF cases	
	# Reported	# Repaired
Kwale	9	2
Mwingi	4	2
West Pokot	80	80
Homa Bay	20	10

3.4.5 Quality of obstetric care

Monitoring of labour

Generally in most facilities visited the health providers have received training and updates on EmOC. However the application of these skills is sometimes hampered by staff shortage. All the sites visited are operating at 50% or less the required capacity. It is for this reason that an important tool such as the partograph was not used as was evident in the records reviewed. The partograph serves as an “early warning system” that assists in monitoring the progress of a woman in labour, including the foetal and maternal condition. In addition, it is used as a management tool in the prevention of prolonged labour. Hence, it assists in early decision making on transfer, augmentation and any other action related to management of labour. It also increases the quality and regularity of important observations on the progress of labour and early detection of problems. Its effect in reducing the rate of prolonged labour, its augmentation, caesarean section and perinatal morbidity and mortality has been proven. (Ndavi et.al 2003)

In Kacheliba the Clinical Officer in charge of the health facility was very honest in reporting that apart from the fact that most mothers come in the second stage of labour, plotting of the partograph was not done consistently due to lack of time. In Homa Bay district hospital, the partograph was attached to the case notes but more than half had not been filled. Nurses found it easier to write notes rather than to chart the partograph. In Ndhiwa health center, partographs are available but are never used. Progress of labour is recorded in exercise books brought by patients, which they take home on discharge. The average duration of labour could only be computed for hospitals because they maintain delivery records, which was within reasonable range but not for health centers. Table 13 presents the quality of monitoring labour in the hospitals and health centers while figure 2 compares usage and correct charting of partographs. A partograph was said to be satisfactorily charted if contractions, cervical dilatation and head descent were charted.

Table 13: Monitoring of labour

District	Health facility	Deliveries with partograph		Satisfactory Charting		Av. Duration of active labour (Hours)
		#	%	#	%	
Kwale	DH	14/33	42.4	9/14	64.3	4
	SDH	20/20	100.0	13/20	65.0	7.5
Mwingi	DH	9/19	47.4	5/9	55.6	4.5
West Pokot	DH	29/30	96.7	20/29	69.0	5.0
	Mission H	12/26	46.2	12/12	100.0	4.0
	HC	0/13	0	0	0	0
Homa bay	DH	30/30	100.0	7/12	58	5.0
	HC/SDH	0/22	0	0	0	0

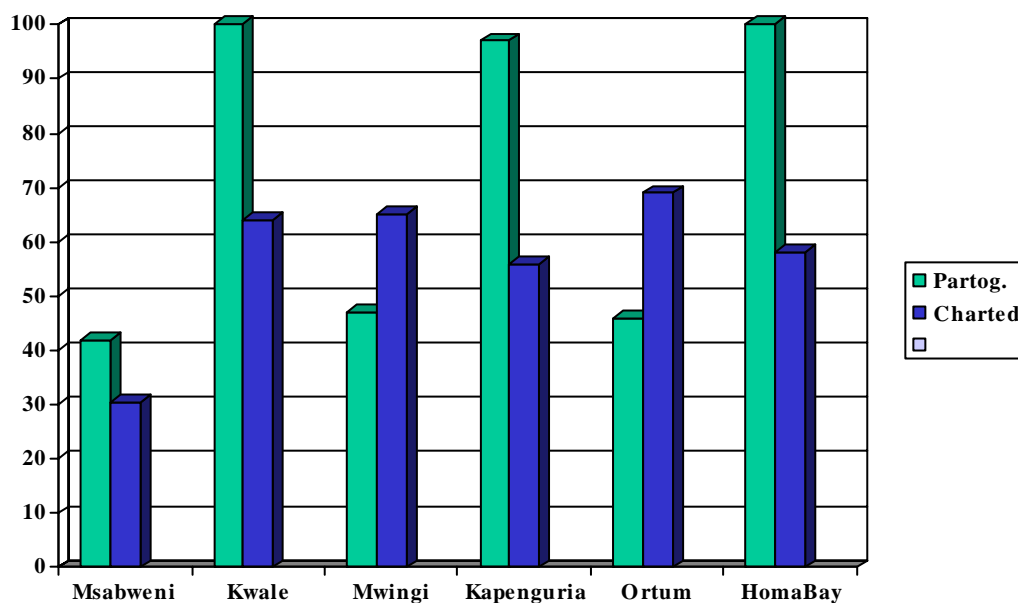


Figure 2: Use of partographs and correct charting

Staffing Level

In all the districts visited there was acute staff shortage often operating under less than 50 per cent. For example Homa Bay District hospital has 200 nurses but requires one hundred more. The situation is even worse in health centers, some of which are operated by one nurse. Some dispensaries have none and are either closed or are used as outreach posts in that nurses can only be sent there every so often to provide services.

In Mwingi nurses are not enough in the district as there are about 100 nurses against a staff establishment of 200 nurses. The district is operating at 50% and this is worse at rural facilities, some of which have 1 nurse instead of 4-5 nurses. This is also one district where health facilities are closed while in others the nurses have not gone for leave in seven years! In Kwale over and above shortage of staff, there is dire need for specialized services of an Obs/Gyn in Msambweni district hospital.

Staff attitude

According to the discussion with DRH manager, SETAT and the acting MOH Homa Bay, provider attitude remains a hindrance to accessing services. In the words of the medical superintendent in Homa Bay “A prominent member in society whose wife is a secondary school teacher and lives in the vicinity of the district hospital took the wife to the TBA to deliver”. He wondered “Why do people avoid us and come to us with complications?- ---We need to reexamine ourselves to see where we go wrong as health providers--- the results of management by TBAs are disastrous due to the delays.... Because they stay too long, do not know where to start and do not even know where to stop”. What is perplexing in this instance is that the issue of cost and access does not arise noting that the patient has not only economic means but also lives behind the district hospital but the preferred choice of delivery is still the TBA. Sentinelle who refer clients to Kapenguria district hospital decry the manner in which the clients are treated due to poor staff attitude.

3.5 The Role of Traditional Birth Attendants

In all the four sites the place of TBAs is prominent; conducting 70% to 80% of the deliveries in the district. A majority of the TBAs have also been trained by MOH, GTZ and AMREF. It was not possible to establish the number of TBAs within each study sites but it was presumed that most pregnant mothers had ample access to TBAs. The issue of both social and physical access was acknowledged and partly accounted for the skewed use of services towards the TBA. With reference to West Pokot the MOH acknowledged that TBA assisted delivery is the most common and it is not possible in the short term, to reverse this trend in the district. The Pokot prefer TBAs because they are cheaper and are more accessible. Given the poor road network and lack of reliable vehicles, preference is for the TBA who lives in the community and who can be accessed at any time. Deliveries by male health providers (doctor / nurse) discourage the women from delivering in hospital. It is also not logistically possible to have all deliveries in hospital given that the bed capacity is not adequate to cater for the whole district

In all the sites the average TBA delivers about 10 mothers in a month with charges ranging from Ksh. 200 – 400. Even then the charges are largely dependant on the TBA’s judgment of the ability of the client to pay. The mode of payment may also be phased, an arrangement that is more acceptable in poor communities.

TBAs interviewed acknowledged that OF exists and its cause was perceived to be big baby. In the case of Mwingi witchcraft and possible promiscuity during pregnancy was cited as a possible cause of OF. However, there was no direct association with prolonged labour. In some instances TBAs reported the ability to manipulate malpresentations and achieve a normal delivery. Although they claimed not to deliver primigravidas the cultural expectation, for instance among the Pokot that a first-born be delivered at home negates this. TBAs in this instance were merely regurgitating their training; stressing identification of danger signs during labour and referral and not what they actually do.

TBAs reported that the mothers preferred delivering under their care and go to the facility only because of complications. From the standpoint of TBAs the negative provider attitude at health facilities in itself gives TBAs an edge over other health providers. They noted that at the hospitals, mothers have been beaten, and nurses are either reading newspapers or knitting. The staff at the hospital tells the mothers to wait and not to push. To affirm their popularity, the TBAs said that they have been on the job for a long time and have even assisted daughters of the women they themselves delivered.

TBAs have a problem with supplies e.g. gloves and so improvise using polythene bags. Sometimes, TBAs buy their stock of drugs and use them when called to see a client. They then request the client to pay for the gloves though some of them refuse or genuinely are poor. Where they have no foetoscope, they use the tissue paper roll holder even though this doesn't enable them to listen clearly to the foetal heart. In case of complications, some TBAs accompany the women to the health facilities while others only accompany if the woman has no relatives or if they suspect she will deliver on the way.

3.6 Relationship between TBAs and Health facilities

In the study sites, TBAs related with the adjacent health facility at various levels. In Kwale the TBAs have established cooperation with dispensary in recognition of the fact that health facilities are effective in reducing deaths. The community is constructing a maternity at Mbuwani dispensary to be operated by TBAs under the supervision of the nurse 'daktari' who will be at hand to assist in the event of a complication. Similarly in Mwingi the TBAs interviewed have a good working relationship with the health provider at Waita dispensary where they refer the mothers with complications. The community is constructing a Maternity where TBAs will be referring the complicated cases.

In Homa Bay, TBAs tended to operate with minimal reference to the health facility. The use of traditional herbs is predominant in this district for various conditions and may have negative health implications. The TBAs claimed that they have a lot of experience in herbs that help the women especially when the head of the baby has refused to engage. Some of the herbs used by TBAs were said to help women to avoid going for C/S even if they have a previous scar. It was postulated that the herbs make the head smaller so that it is able to pass through the pelvis with ease. In addition, the TBAs have herbs that increase the contractions and others that help in the expulsion of the placenta. It was further stated that there is a herb that helps in opening of the cervix in cases of cervical dystocia. In the case of tight vaginas the TBAs indicated that they use a jelly to help the head slip out but do not give an episiotomy. They also use the jelly to massage the woman's abdomen in case of placental retention until it is expelled.

3.7 Constraints To Seeking EOC – Referral And The Three Delays

Data from various sources show that most of the deaths in Kenya occur outside health facilities. This is also true for maternal deaths, currently estimated at 590 per 100,000 live births. In an attempt to address maternal health, the 3-delays model was developed. The

first delay is occasioned by a complex decision-making process, (including whether or not to seek care and if so, where) that most times involves many different players. Once a decision to seek care has been reached, the second delay is caused by a number of factors including unavailability of means of transport, long distances and/or the poor state of the road network to reach the referral site. The third delay is purely institutional in terms of the degree of emergency preparedness and availability of appropriate staff for emergency obstetric care at the referral centers.

The first delay leads to maternal deaths due to the fact that most deliveries take place at home. That majority of maternal deaths occur at home justifies the need to pay attention to basic essential obstetric care (BEOC) at community level. Lack of a clear policy on the role of dispensaries has been translated into denial of BEOC services to those in dire need within public dispensaries. This has meant that any woman who turns up at a dispensary for delivery is referred to a health center. This is one of the important factors that have enhanced the role of TBAs in offering delivery services in some districts.

Where obstetric complications arise, readily available means of transport to the nearest facility becomes crucial for the mother to access professional assistance. Given the prevailing high levels of poverty in most of rural Kenya, most households whose members develop obstetric complications cannot afford to hire a vehicle. In all the districts access is a major problem. Referral remains a big problem in the study sites due to poor road networks and long distances to be covered by patients. Communication and transport remains the greatest challenge and some health facilities are inaccessible even with a four-wheel drive vehicle. In such areas women are taken to health facilities on wheelbarrows and bicycles but may still fail to get transport to the designated health facility. In each of the study sites visited we had a narration of harrowing experiences around transport and the various attempts made to reach a health facility. In some areas as in Kwale viable alternatives have worked while in others it remains difficult.

TBAs reported advising mothers to save some money even three months in advance, which can be used at the time of referral. The men also assist at the time of referral as they help to look for transport, provide security at night and even pay for the transport costs. On realization that some mothers have died while looking for faster means of referral other than the use of a cart, the community has identified vehicle owners who can be called upon at the time of referral and charge a reasonable amount.

In Mwingi, delays occur earlier on right from home as some mother's labour up to 3 days. From the peripheral health facilities, referral takes long due to transport problems. The roads are pathetic and only Migwani Sub District Hospital and Ngomeni health centre have ambulances. Health facilities that have no ambulance have to call for one from Mwingi District Hospital or use vehicles from other Government departments. Not all facilities have telephones and plans to install radio communication are underway. In the very remote areas, vehicles are only available on Wednesdays (market day) and alternative means of transport include using a wheelbarrow to get to the main road for distances of about 10 kilometres.

West Pokot is a special case in that women in labour have to walk an average of 50 kilometers while some (in the northern part of the district) cover as much as a 100 kilometers to reach a health facility. Although pregnant mothers in the four study sites prefer home deliveries, there are instances when they need to access skilled attendance; often when a complication arises. It is at this point of need that the constraints come to the fore. In the remote parts of the districts this was more acute. In West Pokot areas such as Kacheliba, Sook, Lomut and Sigor were given as examples that produce women with fistulas. In such areas prolonged labor and stillbirths is a common outcome.

Box 3: A case of first delay

Because of the cultural requirement to deliver the first baby at home Chepchumba (not her real name) aged 14 years labored at home with the TBA but surrendered after two days. They walked from Kuyao to Kacheliba taking another two days. At this point they got transport to Kapenguria District hospital, delivered a stillbirth and subsequently developed puerperal sepsis and a VVF.

In West Pokot late referrals are often from the lowlands where facilities are very few. A majority of patients find it easier to cross into Uganda to Amudat Hospital but since this does not conduct C/S they are referred back to Kapenguria, which is 100 kilometers away, but taking advantage of the transport in Amudat.

From the furthest subdistrict hospital (such as Tseikuru) in Mwingi district, it can take even 12 hours to refer the patient to the district hospital, contributing to second delay in accessing services as is illustrated below.

Box 4: A victim of second Delay: Maria's Story

Maria was 18 years old when she got married in the year 2000. She became pregnant and carried it to term. She delivered at home with the assistance of the mother and unfortunately the outcome was a stillbirth. In 2003 she was pregnant again and this time she attended ANC five times, carrying the pregnancy to term. The chronology of events is as follows:

- 1. On the 1st of November she reported at the health facility with what was then false labour and was sent back home*
- 2. On 2nd of November she went back to the health facility and this time she was admitted in labour*
- 3. On 4th November she was transferred to Mwingi district Hospital where she had a C/S done immediately. Unfortunately the baby was long dead and she had developed a VVF.*

At the time of the study, Maria had been in the hospital for the last 38 days nursing the wound as she copes with the continuous flow of urine; unable to comprehend it all. The case notes indicated that she was referred from Tseikuru Sub-District hospital at noon on 4/11/03 with a diagnosis of obstructed labor and intrauterine foetal death. At operation she was found to have a full bladder up to the umbilicus, a ruptured uterus extending through the vagina, a posterior tear of the bladder and a macerated stillbirth. At 36 days postoperatively the wound was still septic and the patient was still in the ward

Mrs. Maria's story depicts a classic interaction of poverty at the individual level and delays at the health facility level. Maria is of small stature with a height of 140cm indicative of lifelong stunting. Her current economic status of unemployment and limited sources of income only compounds the problem. However, responding to her past history of pregnancy loss she had done her best to reach the health facility on time. Her experience at the first level facility is one of neglect, with little information provided even as she asked to know the progress of labour. However she appreciates the speed with which she was handled at Mwingi district hospital even though it was already too late to save the baby. She is now faced with a double tragedy of losing the second baby and developing a VVF. Although she has been told why she has the current problem she is yet to be told whether it can be treated or not.

At the district level there is little delay although a facility such as Mwingi district hospital has a problem of preparedness. It takes an hour for the nurse to prepare the patient given that being the only one in the maternity; she may be delivering a mother at the time. In this particular setting the problem is a combination of staffing levels and the theatre space.

All the referral hospitals visited had a functional motor vehicle cum ambulance. In Kwale, both the district hospital and the two sub-district hospitals had transport. Only one health center had a vehicle. The situation was similar in Mwingi and West Pokot where only the district hospital and one sub-district hospitals/ health center had a vehicle. In West Pokot, two additional vehicles – one for a health center and another for the mission hospital were expected from MOH, Nairobi. In Homa Bay, only the district hospital had a vehicle.

3.8 Institutions Involved In Training And Repair:

It is important to recognize that although OF is a national health problem to date it has not been treated as such. This is evidenced by the near lack of investment in skills for repair in public health facilities. Much of the efforts to address the problem have been spearheaded by NGOs. In Kenya AMREF has taken the lead, operating in both mission and public hospitals. Kenyatta National Hospital is the only training institutions involved in fistula surgery training in the country. In terms of funding UNFPA is spearheading the process by supporting DRH. A related project, Averting Maternal Disability and Death (AMDD) in Kenya and Uganda funded by Bill Bates and coordinated by AMREF could complement activities of OF in Kenya.

AMREF

AMREF is involved in data collection and service provision. As Flying Doctor Service, this invariably took them to remote areas of Kenya where they encountered VVF in the field and started to address the issue. In 1991 Tom Raassen, a general surgeon took training in Addis Ababa and started repairs under the auspices of AMREF. As part of capacity building, AMREF has spearheaded sponsorship of training surgeons in Nigeria and Addis ababa. In addition AMREF has facilitated repair activities in KNH, Garissa,

Mutomo, Mumias and Ortum hospitals. There are plans to close down Mumias and establish a repair centre in Kisumu PGH where there is an Obs/Gyn and similarly focus on Garissa where the presence of refugees and fistulae are both high.

Sentinelles

Sentinelles was founded in 1980 by Edmund Kaiser and takes care of the needs of the destitute, hopeless and abandoned members of the society. In West Pokot District, Sentinelles works in partnership with SETAT Women Group. Partnering with a local group has facilitated interaction with the community and reduced resistance given that they are dealing with cultural issues that are deeply engrained in the community. To date it has assisted the community to address issues of early marriage, FGM and obstetric fistulae. So far, SETAT has settled 139 girls. It carries out advocacy among parents with the aim of reducing early marriage and discouraging the practice of FGM.

Regarding assistance on obstetric fistulae, 79 women have been repaired, 75% of which are VVFs and 25 % are RVFs. Some women had both VVF and VVF. Most of the cases of fistulae come from Kacheliba, Sook, Cheptulei and Chepareria. Others are from Baringo (East Pokot) and Amudat in Uganda. Early 2004, there are plans to repair 15 more cases. These repairs are done by an AMREF doctor at Ortum hospital at a cost of Ksh. 20,000. The cost of the repair is met by Sentinelle who after the procedure, follow up the women to ensure proper healing and give advice on how to avoid future occurrence of the problem. Some mothers require 2 or 3 operations depending on the extent of the damage. After the first operation, the cost of subsequent operations is shared on a 50% basis by Sentinelles and Ortum hospital.

4.0 EMERGING ISSUES

Awareness of OF problem

Awareness of the OF problem is low among health workers and community members. Although health workers know what an OF is and how it is caused, they are not aware of the extent of the problem in the community. As such the problem ranks low on the MOH priority list of reproductive health problems. At the community level people know that the problem exists but do not understand why it occurs. Different communities have different explanation on what causes the fistula, much of it pointing to infidelity on the part of the woman or witchcraft. TBAs have an idea that it has something to do with big babies but do not know the mechanism. TBAs and community members are therefore shy to talk about the subject. It is therefore important to highlight the problem by sensitizing women and with this knowledge they might make a deliberate choice to deliver at the health facility with a professional. Conversely, it may be that if TBAs knew that they are part of the cause of OF through delay in referral they might act promptly with regard to referral.

FGM

Although in the discussions with obstetricians FGM was delinked from the formation of obstetric fistulae the evidence among the Pokot suggests a link to the development of fistula (Mabeya 2003). The Pokot perform type three of female circumcision (infibulation), which leaves a very small opening that sometimes seals completely. At delivery TBAs use arrowheads to perform bilateral upper episiotomies, which sometimes inadvertently extend to the bladder or to the rectum creating a fistula. In such situations where TBAs overestimate their skills causing fistulae they have to run away to Uganda to escape the wrath of the girl's father who has to take in his rejected daughter and painfully return the bride wealth. This cut is similar to the "gishiri" cut, a form of female genital mutilation, commonly practiced in Nigeria amongst the Hausa people. This traditional practice, performed by TBAs is a cut made in the anterior wall of the vagina with an unsterilised sharp instrument, if the cut is made too deep, a hole is created between the bladder and the vagina resulting in VVF. In Nigeria about 15% of VVF cases are caused by the harmful practice of female genital mutilation (Forward.dircon.co.uk/vesico.htm). Examining the literature on FGM one of the resultant complications listed among others is difficulty delivery, especially obstructed labour (Brady 1999 Baker et al 1993, Dirie 1991). It would therefore be plausible to argue that FGM, and particularly infibulation is a secondary cause of OF.

Quality of care

Conceptualization of quality of care encompasses both objective and subjective components. In the past, quality of care has been discussed in terms of the objective components (medical supplies, functional equipment, cleanliness), specifically quality control or "medical" quality. Using the Bruce-Jain¹ framework, quality of care

¹ Bruce, J. 1990. Fundamental Elements of Quality of care: A simple Framework. In Studies in Family

encompasses information to the client, technical competence, interpersonal relations, a constellation of services and mechanisms for continued use. For the purposes of this needs assessment, staffing levels, staff skills, equipment and supplies were the main components considered, staffing and skills were identified as major constraints to implementation of safe motherhood initiatives and fistula repair even though the state of equipment was found to be satisfactory. Health care provider attitude remains a hindrance to accessing essential obstetric care services.

Training In Fistula Surgery

Training in fistula surgery is a critical component to the prevention and management of obstetric fistula. Based on discussions at the national level including the University of Nairobi, the current curriculum for training doctors covers only theoretical aspects at undergraduate level and minimal skills in obstetric fistula surgery at postgraduate level. As such neither the Medical officer nor the specialist surgeon and Obstetrician/Gynaecologist are sufficiently exposed to fistula repair by the time they graduate. Recently a few Obstetrician/Gynaecologists have been trained in fistula surgery in Nigeria and at the Addis Fistula Hospital but they are all deployed in Nairobi. Based on a recent WHO criteria for fistula specialization, the team is yet to qualify as OF experts. According to these criteria, for one to qualify as a trainer one ought to have conducted 400-500 repairs; at least 150 cases annually and for a facility to qualify as training center, it ought to have conducted 200-300 repairs. Using these criteria those who have been trained still fall short of these achievements – though they are making steady progress - and few centers would qualify as training centers in Kenya (Personal communication with Dr. Raassen, AMREF). However, alongside Dr. Raassen, the local fistula surgeons constitute a critical mass of potential trainers who can be harnessed to conduct a training course for fellow specialist surgeons and Obstetrician/Gynaecologists at provincial and district levels. This would improve access to fistula repair services in rural Kenya where most of the fistula occur.

In terms of who should be trained a majority of those interviewed stated that this need not be limited to specialists noting that in some instances much of it seems to stem from interest as indicated by the surgeon in Msabweni and the DMO in Mwingi. With practice one is able to perfect the skill. It is for this reason that a case has been suggested in support of training interested MOs in deserving district hospitals. This may be at variance with the forthcoming WHO OF experts recommendations that has preference for training specialists only as fistula surgeons. However, responding to the dictates of the environment, particularly the available staffing resources versus the problem at hand, often requiring exemptions to the rule, MOs are primary candidates for training.

Arguments for training of MOs were based on the notion that in spite of the fact that they are mobile they are also the ones that are likely to be available in any given district. In three of the four districts visited (Kwale, Mwingi and West Pokot), MOs had conducted fistula repairs out of interest after assisting in the operation. Both the specialists and MOs

interviewed expressed interest in fistula surgery training. Availability of repair services at Provincial and District level would avert the suffering women with fistula occasioned by referral.

Whereas very little training is needed by practicing surgeons and gynaecologists – a week of hands-on was said to be adequate, while MOs require much more unless they are good in general surgery. For MOs a minimum of two weeks to a month hands-on training was suggested. Nurses can be trained as part of a team to support pre- and post- operative care. They can also be trained in the preventive aspects to avert development of fistula i.e catheterization. At postgraduate level, registrars could be required to rotate in fistula surgery for six weeks during their elective. But we have to bear in mind that fistulae repair is not a lucrative business and therefore only attracts those who are really interested in helping poor women.

Besides training in fistula repair, it is very important to train health care providers particularly doctors, midwives and nurses on secondary prevention emphasizing the key areas health providers need to pay attention to in cases of obstructed labor. These include:

- Fix catheter and leave it in for 4-6 weeks
- Advice mother to drink five or more litres of water per day
- Advice on Sitz Baths
- Do a speculum examination within the first week and clear any debris

With these four interventions, 15-20% of fistula can heal spontaneously. However, should a fistula develop it can be operated within six weeks of delivery (as opposed to the usual 3 months) to prevent the woman becoming an outcast. The benefit of secondary prevention is that in the event that a fistula develops, repair can be done during the same admission without having to send the woman away and asking her to come back. Early repairs are known to have better results (95% closure rate) compared to 90-92% when the repair is done after three months.

Institutional Preparedness and Referral

Beyond enhancing staff skills, upgrading rural health facilities to be able to provide BEOC and sub-district hospitals to provide CEOC would go a long way in preventing obstetric fistulae. At the district hospitals, where fistula surgery is expected to happen, there will be need to avail specialized equipment and supplies to ensure quality surgery and high success rates.

The cost of fistula repair is likely to be a constraint to the health facility and the patient alike. Sentinelles, a partner of SETAT operating in West Pokot is already planning to change the approach of dealing with the repairs and the idea is to see this service being offered at the District hospital, because it is cheaper. The last batch of the repairs is the one planned for early 2004. On comparing costs between some public facilities and Ortum hospitals, public hospitals were cheaper. The organisation pays Kshs 20,000 for every case done in Ortum mission although there is no cost to the patient. In comparison, at Kitale District Hospital, the user fees is Ksh. 3,500 while in Kajiado it is Ksh.2,000.

Services in government hospitals are subsidised although the user fees is usually high enough to keep deserving patients away from the services.

Addressing The Three Delays

The biggest delay is still at the community level based on beliefs and compounded by issues of transport. Although the facility/population ratio in the four districts was found to be satisfactory, the facilities are not evenly distributed in the respective districts and therefore camouflage the issue of access. However, delay at the facility level is minimal. In some of the rural health facilities, nurses have been trained in Life Saving Skills to enable them to assess and make decisions about referral quickly in the event of obstetric emergencies. UNFPA (together with DANIDA at the Coast) is installing radio communication in Mwingi and Kwale among other districts under its support. Health facilities like Tseikuru, a sub-district hospital in Mwingi, should benefit from the UNFPA LSS training and radio communication. Currently this facility does not have a vehicle, no theatre and health workers have not been trained in BEOC

The study team came across an innovative idea that seems to address delays appropriately. At Ortum hospital a shelter (Kirap) has been constructed at which point expectant mothers come to stay but prepare their own food in a kitchen specifically set aside for them. Some may come a month before the expected date of delivery and stay on, having access to ANC services at the health facility on a daily basis. The idea is they are close enough to skilled staff and if there is any complication referral to the next level is simplified. In a region where access is an issue such that women in labour take up to 4 days to reach a referral facility any measures that are taken to ensure that labour finds her in a health facility is worth the effort. The large number of women who were already at the shelter is also indicative of the fact that women would be willing to deliver at health facilities and that their apparent preference for TBAs is not only a cultural but also a structural issue. The positive attitude with which they have been received at the health facility contributes to their willingness to come and stay on.

The TBA Dilemma

In the 1970s several NGOs operating in Kenya, recognized the apparent potential value of traditional birth attendants (TBAs) in the light of geographical diversity, poor communication systems, inadequate health facilities, and the trust the general population placed in them. In an attempt to reduce maternal mortality, these organizations sought to improve the quality of care offered by the TBAs through systematic training, to enhance their skill on issues of general hygiene and handling of maternal complications. By the end of that decade, the Ministry of Health had realized the diversity of the curricula used by various players and the need to unify the training of TBAs. In the 1980s a national TBA training curriculum was put in place through the efforts of MOH and other key partners. This curriculum was last revised in 2001.

Despite these and other efforts to improve the quality of care, and for a number of reasons, maternal mortality increased from 230 per 100,000 live births in 1993 to 590 per 100,000 in 1998. Although TBAs had been trained to fill gaps where there were insufficient skilled midwives, in many instances even the available midwives stopped attending to deliveries completely. In Western Kenya, for example, nurses from rural health facilities were observed referring mothers to TBAs in the villages to conduct the deliveries, especially mothers who remained in labour when the nurses' time of going off duty approached (MOH/Population Council 2002).

In many areas women continue to seek the services of TBAs, for many reasons. Health facilities may be too far to reach when labour starts, fees are too high and the health care provider may treat her too harshly. It is therefore not surprising that women continue to use the service of the TBA, where their cultural and social needs are met, they are treated with dignity and respect, and following delivery they are able to bathe in warm water and be given a hot drink.

The downside of this in many instances is that TBAs keep mothers in difficult labour longer than necessary. This action contributes significantly to high maternal and perinatal mortality and morbidity. Thus, over time it has been proven that TBAs do not reduce maternal mortality as had been envisaged. Instead, women are dying because of TBA malpractice and delay. Evidence from the Safe Motherhood Demonstration Project (SMDP) baseline report suggests that only 21 percent of the TBAs advised mothers on pregnancy risks. (MOH/Population Council 2002)

Records about TBAs operating within a given administrative or health care jurisdiction were not available, even though most TBAs are or were trained by local health workers. This discrepancy, along with other observations, demonstrates that in general TBAs function without the supervision of skilled health personnel.

It is a fact that TBAs with or without training conduct a high proportion of the deliveries in communities in Kenya. The study sites uniformly attest to this. Over the years TBAs have received mixed signals. Training and updates under the MOH or NGOs often signify acceptance. In the same breathe there seems to be indications that TBAs need not be trained as their services are more often than not detrimental to women's health. This is

based on the observation that they have not made a difference in maternal mortality in the past 20 years. When the idea of banning TBAs deliveries was put to a nurse who at the time was training TBAs at Ortum hospital, her response was that: “many more women would die”. The issue here is that in as much as TBAs leave a lot to be desired in their wake, their very presence is a demonstration of the lack of skilled services - a gap, which they fill. Riddance of TBAs becomes a systems issue that requires programmatic intervention. Until then, TBAs will continue to have a field day to the detriment of maternal health. The question is given TBAs status in the community and without jeopardizing this, how can they be used as change agents; for instance in motivating women to attend ANC and sensitizing women on the risks of OF.

Building partnerships at National and community levels.

The potential to strengthen partnerships exists as exemplified by the teamwork between AMREF and MOH particularly in providing service to remote areas. The formation of the Fistula Task Force that in-cooperates funding agencies like UNFPA among other stakeholders is a viable starting point. This needs to be expanded to training institutions especially in terms of curriculum development and producing manpower appropriately. The University of Nairobi, Medical school should be involved in producing the critical mass of manpower required at all levels of service provision; particularly strengthening the manpower resource base at the district level, a critical referral point.

The MOH can support training through strengthening pre-service training by improving on the curriculum. For example the DRH in conjunction with training partners as stakeholders have drafted a RH curriculum spelling out the basic minimum skills. Each institution (Universities and schools of nursing) will have to adapt the curriculum to the appropriate level. There are donor agencies, NGOs and CBOs already working in the area of Reproductive Health in the study sites that the MoH can partner with to address the issue of obstetric fistula.

Local level mobilization and advocacy are important in the prevention and management of fistula. During the discussion with key informants and community members it was evident that awareness of the prevalence was either unknown or that where it was acknowledged to exist there was no knowledge that it is treatable. Initial activities would therefore require providing information on the nature of the problem, identifying the causes, identifying community structures as entry points for interventions and working out prevention measures with the community. At the national level, a tailored Radio programme could be run to inform the public about OF and the possibilities for repair. Given the geographic and cultural differences the approaches may be region specific. Examples of such community structures encountered during this study include: SETAT women’s group in West Pokot, Papparazzi Youth group and Matuga women group in Kwale, Mituki women group in Mwingi and TBAs in Homa bay as CBOs.

5.0 CONCLUSIONS

This exercise set out to establish the magnitude of obstetric fistula in Kenya. In addition contextual factors regarding OF such as community understanding of the problem in terms of causes, prevention and treatment, availability of services, care seeking behaviour and constraints were sought. Across the board, the rugged physical and expansive landscape, harmful cultural practices and poverty in the four study sites interact synergistically to precipitate obstetric fistula. Early marriage, early sexual debut, the preference to deliver with TBAs, long distances to health facilities are a recipe for prolonged labour; a major precursor of obstetric fistula.

Although Obstetric fistula did not evoke as much attention initially as other reproductive health problems and in particular those arising from safe motherhood, at the end of the discussions either at policy level or community level, this was characterized as a neglected area of Safe Motherhood. At the community level it was evidently clear that whereas the problem exists, there is very little understanding of the issue and the factors that may contribute to it. At most it was considered an unfortunate incident that comes with childbirth for which very little can be done. This has been accentuated by the fact that health providers have not utilized the opportunity during ANC to provide information on OF.

The question of stigma was not prominent in Kwale, Mwingi and Homa Bay. While such women would be regarded with sympathy, the women, out of embarrassment tended to isolate themselves. However in West Pokot, it was evident that OF is stigmatizing and the need for a concerted social support system to facilitate reintegration into the community after repair is essential. SETAT, a CBO was already playing this role effectively. Reintegration was not an issue in the other three districts.

Looking at experience with fistula repair, anecdotal evidence indicates that this falls far below demand. Although West Pokot was the most active in terms of repairs only so many clients could be taken in based on the resources, skill and time available. Whereas potential for repair of fistula exist, capacity building through training is an important initial step. The ideal is that, rather than has centers of excellence, every province should have a surgeon or obstetrician already in place trained in OF repair. KNH can then remain as the national referral for difficult cases and centre of excellence. This is in recognition of the fact that the further you are away from the center the greater the need for surgery.

Provision of equipment and supplies in the health facilities, particularly district hospital is key to meeting the demands of referral. Appropriate referral is further tied to the issue of a working communication system that links the health facilities. The work already underway through UNFPA in Kwale and Mwingi, installing radios will work towards addressing issues of first and second delay in referral.

In spite of the castigation of TBAs, in the eyes of community members they play a key role in childbearing, From the perspective of service providers the role of TBAs remains

ambivalent even as they conduct the highest proportion of deliveries. Traditional birth attendants (TBAs) are conducting over 70% of the total deliveries in the study districts and most of the cases of prolonged/obstructed labour and subsequent obstetric fistula are attributed to their patronage. However, there is no clear policy on whether TBAs should continue conducting deliveries or not, as a result of which some districts have discontinued training them while others are still training and even allowing communities to construct maternity units in dispensaries to be run by the TBAs.

Issue of poverty and cultural practices that resonated in the discussions point to the realization that in each of the sites visited the context within which fistula occurs go beyond the health sector. Partnering with relevant sectors will be essential in addressing the issue of prevention and management of fistula.

8.1 WAY FORWARD : RECOMMENDATIONS

Short-term recommendations

Training in fistula surgery

- As a first step, the Fistula Task Force need to mobilize existing fistula surgeons at KNH, Amref and other health institutions to plan for regional/provincial trainings. The existing two-week training curriculum used for the Machakos fistula training should be reviewed and adapted for the trainings. The courses should focus on secondary prevention of obstetric fistulas and training on assessment, repair of simple cases and referral of more difficult fistula cases to KNH or other centers of excellence.
- In each district and provincial hospital, DRH should identify a fistula core team for training made up of a doctor (obstetrician/gynaecologist, surgeon or medical officer in that order of preference, depending on availability and interest) and a theatre or female ward nurse. The core team will be responsible for spearheading fistula repairs and on-the-job training of respective cadres in their hospitals.
- Trainings should be held at provincial hospitals to maximize skills and technology transfer to the regions and subsequently improve access to repair services. Each training lasting two weeks could be made up of 10 doctor/nurse teams (20 participants).
- Assuming 70% of the districts have a functional theatre, about 40 district teams and 7 provincial teams (approximately 50 teams) would need to be trained in 5 courses. If the course is held quarterly, the training would be complete in just over a year.
- Each district should recruit fistula cases for repair during the training course by creating awareness on obstetric fistula in the communities through microteaching sessions in health facilities and using appropriate CBOs and TBAs to identify and mobilize fistula cases for repair. The mass media, particularly the national and regional radio station should be used to create awareness on the problem and possibilities for repair.
- The Machakos fistula course can form the basis for costing the provincial courses

Subsidize fistula surgery in provincial and district hospitals

- A fistula repair kit and an initial stock of fistula surgery consumables should be provided to every hospital where a fistula team has been trained. Additionally, some district hospitals will need to acquire an appropriate theatre table and operating lights to facilitate fistula surgery.

- User fees can be a limitation to accessing fistula repair services because the victims are usually the poor in society. MOH/UNFPA should consider waiving in-patient and theatre fees for fistula surgery. To do this the hospitals will require subsidies on a per capita basis to offset the cost incurred in managing the fistula cases to guarantee that fistula surgery is given the necessary priority.

Prevention of obstetric fistula

- While fistula surgery will reduce the number of existing cases, it is necessary to concurrently institute preventive measures to reduce the incidence of obstetric fistula. Life Saving Skills training, currently ongoing in some districts, should therefore be extended to all midwives in the UNFPA supported districts.
- Acquisition of life saving skills did not automatically lead to appropriate midwifery practices. The system of supportive supervision for safe motherhood initiatives should be strengthened to ensure that midwives make appropriate use of skills gained in the basic and on-the-job training. The regional Reproductive Health Training and Supervision Teams should provide this supervision.
- The DPHN and PHTs should mobilize relevant CBOs that can initiate BCC components within the community to address negative cultural practices that contribute to obstetric fistula.

Medium to long-term recommendations

Policy – MOH takes the lead in OF and Redefines role of TBAs and Dispensaries

- It is imperative that the MOH takes the leading and coordinating role in capacity building for fistula repair and positioning of fistula prevention within SMIs.
- As a matter of urgency, the MOH needs to come up with a clear policy on the role of TBAs in pregnancy and labour and their relationship with government health facilities.
- MOH should further explore avenues that TBAs could be used as change agents within the community for safe motherhood. The overtures made by TBAs in some districts such as Kwale and Mwingi where they are evidently working closely with dispensaries indicate that there are possibilities of having them working under close supervision of nurses thereby reducing the risks of OF.
- The official function of dispensaries is provision of curative, preventive and promotive out-patient services. This position has in part promoted the use of TBAs for deliveries while professional mid-wives are available in these facilities. The MOH should therefore review the role of dispensaries to allow and facilitate

them to conduct deliveries, noting that they are more professionally qualified than TBAs.

Programme – Integration and visibility of obstetric fistula within SMIs

- The answer to the problems of fistula seems to lie in addressing safe motherhood comprehensively, bearing in mind the central role of prevention: if they are not caused there will be no need to repair them.
- More than 90% of pregnant women attend ANC clinics at least once. As part of birth preparedness that is discussed with mothers during focused ANC, the subject of obstetric fistula should be added to the discussion points to highlight the dangers of home/TBA delivery. This may be what mothers need to know to influence their choice of place of delivery.
- In situations where physical access to maternal health services is problematic such as West Pokot and Mwingi the district health managers should be encouraged to provide accommodation facilities in the hospitals to expectant mothers near term in line with the “Kirap” model in Ortum mission hospital.

Training – capacity building: viable approaches

- Obstetricians/gynaecologists are not sufficiently exposed during their training to enable them conduct fistula repairs. The MOH needs to work closely with the University of Nairobi and AMREF to ensure that the Obs/Gyn registrars get adequate skills during the elective rotation.
- As the good old adage goes: “prevention is better than cure”. The MOH should in collaboration with relevant agencies expand the safe motherhood life saving skills training to cover all nurses starting with districts with the worst maternal and perinatal statistics such as the ones in this study.

Institutional Preparedness – quality of care and referral

- The staffing situation particularly with respect to nursing staff is bad and can be a real limitation to any meaningful fistula prevention or repair intervention. The MOH should review the nurses and doctors staffing situation in the districts as part of improvement in safe motherhood.
- Use of partographs for monitoring labour should be institutionalized as a means of improving quality of obstetric care in health facilities. While availability of partographs was not an issue, mid-wives need support supervision after training to ensure that they are applying the skills competently.
- Provider attitude need to be addressed more aggressively during supportive supervision if we are to draw clients towards professional care in health facilities

- Enhancing the communication system between peripheral and referral health facilities should strengthen the referral system. This is already underway in districts such as Mwingi and Kwale where radio connections are being installed by UNFPA and DANIDA. Additionally, health centers and sub-district hospitals need to have motor vehicles to evacuate emergencies or better still, upgrade the sub-district hospitals to CEOC facilities.
- As a long term measure the MOH need to ensure that all health centres offer basic essential obstetric services (BEOC) and all hospitals offer comprehensive essential obstetric services (CEOC).

Information and advocacy at community level using appropriate structures

- Advocate in the community that OF is not only a medical problem but also one that is closely linked to cultural practices such as early marriage and teenage pregnancy. While the government strives to avail repair services, it is also within the power of the community to prevent OF.
- The MOH, through the DPHN and PHTs should identify and work with CBOs that already have active health components for IEC to which they can graft obstetric fistula and where stigma is an issue, to support affected women and facilitate their re-integration back into society.
- In districts where sexual activity starts early – such as Mwingi and Homa Bay – IEC and FP service delivery, in the form of youth friendly reproductive health programs should be stepped up in the context of the Youth Reproductive Health policy.
- Through participatory approaches, Behaviour Change Communication (BCC) strategies will need to be worked out with communities focusing on early marriage and FGM as cultural practices that precipitate harm in the form of OF.

Enhancing partnerships

- The MOH should seek/strengthen partnerships with other government departments and NGOs that are working against traditional practices such as female genital mutilation that have a contribution to the development of fistula in districts such as West Pokot.
- The MOH need to network with relevant organizations that have an interest in girl child education programmes in Kwale and West Pokot districts in a bid to keep the girls longer in school so as to avert early marriage.
- Taking into account comparative advantage, the MOH should collaborate with and coordinate the Safe Motherhood activities of donor agencies and NGOs to

enhance efficiency and effectiveness, and to avoid duplication of effort. Some of the donor agencies implementing Safe Motherhood interventions in low resource settings include UNFPA (nine districts including Kwale and Mwingi), UNICEF (North Eastern Province), DFID (Western Kenya), and FCI (Homa Bay). In the area of fistula repair, AMREF is by far the most active and resourceful Non-Governmental Organisation in the country. World Vision is active in fighting FGM in West Pokot. Local CBOs are important partners for IEC and community mobilization as demonstrated by the SETAT women group of West Pokot.

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APPENDICES

Appendix 1.

People Interviewed (Key Informants)

Name	Title	Contact Address
National		
Dr. Josephine Kibaru	DRH Manager	DRH/MOH
Dr. Joseph Karanja	Obs/Gyn	UON, Obs/Gyn
Dr. Qureshi	Obs/Gyn	UON, Obs/Gyn
Dr. Kiiru	Obs/Gyn	Pumwani Mat.
Dr. Ilako	Programme Manager	AMREF
Dr. Tom Raassen	Fistula Surgeon	AMREF
Kwale District		
Dr. Muthoka	DMOH	Kwale District
Dr. Mwaura	Surgeon	Msambweni Hospital
Victoria M. Saidi	Matron	Msambweni Hospital
Samson Nyam	Records Officer	Kwale district
Tobias Onyango	Theatre Nurse	Msambweni Hospital
Saidi Hassan Kuremo	Nurse I/C	Mbuwani dispensary
Ali Mondo	CBO Coordinator	Parparazzi, Kwale
Meraha Mohammed	Deputy Chair	Matuga Women Organization
Mwingi District		
Dr. Kioko	DMOH	Mwingi Distict Hospital
Mrs. Munyua	Matron	Mwingi Distict Hospital
Anne Njeru	Nursing Officer – Mat.	Mwingi Distict Hospital
Simon Kioko Kavisi	Records Officer	Mwingi Distict Hospital
Pauline Wanja	Records Officer	Mwingi Distict Hospital
NN	Nurse In-charge	Waita Dispensary
West Pokot		
Dr. Kiprono	DMOH	Kapenguria District Hospital
Thomas Oluoch	Records Officer	Kapenguria District Hospital
Alexander Nazaren	Coordinator	SETAT
Lawrence Plapan	In-charge	Kacheliba Health Centre
Miriam Petakwang	Nurse	Ortum Mission Hospital

Homa Bay

Dr. Ojwang Lusi	Med.Supt./ Ag MOH	Homa Bay District Hospital
Dr. Ojwang Ayoma	Obs/ Gyn	Homa Bay District Hospital
Mrs Okello	Nursing Officer	Mat. Homa Bay DH
Webster Muraro	Records Officer	Homa Bay District Hospital
May Owour	DPHN	Homa Bay
Asman Zubedi	Records Officer	Homa Bay
Josephine Muga	Nurse-In-Charge	Ndhiwa Health Centre
Ciprin Ojwang	ECN/Nutritionist	Ndhiwa Health Centre
Sarah Atieno Ouma	TBA	Ndhiwa
Dan Ochieng	Project Officer	Family Care International

Appendix 2.

Naming and RH Connotation among the Pokot

Psinen	- Abnormal Delivery(Breach)
Poriot	- Difficult labour.i.e C/S
Chepkech	- Twin Delivery
Moto	- Left behind/abandoned: Mother delivers and dies
Mstoo	- Did not cry immediately after birth
Sista	- (female): delivered in a health facility due to complicated labour
Lokitari	- (male): delivered in a health facility due to complicated labour

Appendix 3

NGOs By District

NAME OF NGO

Mwingi

1. World vision
2. Genesis
3. CCF
4. TIDA
5. FAME
6. CanDO
7. C.D.K
8. MAP
9. Kenya Red Cross
10. ADA (Ambassadeur Development Agency)
11. OSCAD

Homa Bay

Family Care International
Amref
MSF
CMAD
Kenya Acon

West Pokot

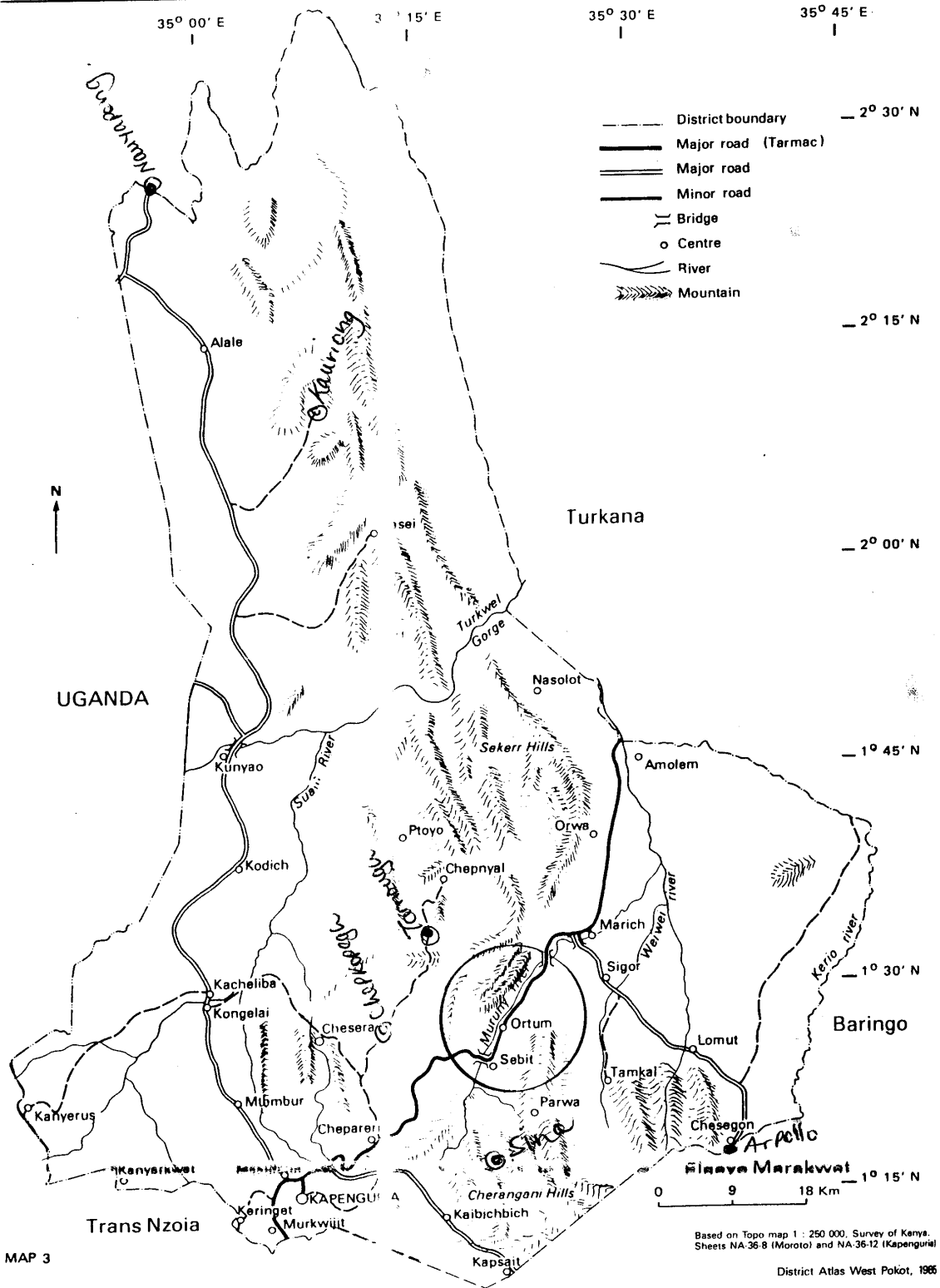
World Vision
Sentinelles
NGOs that do outreach:
 AIC Makutano
 AIC Alale
 Ortum Mission Hospital
 Amakariat Catholic mission
 Kacheliba mission
 Kabichbich mission
 Psigor mission
 Chester Lutheran

Kwale

UNFPA
DANIDA
AMKENI
PLAN International

Appendix 4

West Pokot District topography



MAP 3