Annex 3.

Maternal and Newborn Health Strategy Kibilizi District

August 2004

ACKNOWLEDGEMENT

The Report would like to acknowledge all the hard work and efforts of all the team members in the successful development of a MNH for Kibilizi district.

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Acronyms

ANC	Antenatal Care
BCC	Behavior Change Communications
CDK	Clean Delivery Kit
CSP	Child Survival Project
DH	District Hospital
DHMT	District Health Management Team
DHS	Demographic and Health Survey
DIP	Detailed Implementation Plan
EPI	Expanded Program for Immunizations
EOC	Essential Obstetric Care
EmOC	Emergency Obstetric Care
FP	Family Planning
HF	Health Center
KPC	Knowledge, Practice and over
LQAS	Lot Quality Assurance Survey
MOH	Ministry of Health
MNH	Maternal and Newborn Health
MTR	Mid-Term Review
NBC	Newborn Care
PMTCT	Prevention of Mother to Child Transmission
PPC	Post-partum Care
PLA	Participatory Learning in Action
TBA	Traditional Birth Attendant
VCT	Voluntary Counseling and Testing

Executive Summary

Maternal and newborn mortality levels found in Rwanda are among the highest in the world. The national maternal mortality ratio is 1,071 per 100,000 live births and the newborn mortality rate is 43.9 per 1,000 live births (DHS 2000). The challenge of reducing these formidable levels of death requires strategies based on empirical evidence and proven interventions targeting mortality reflective of the local context.

In April 2004, a Midterm Term Review (MTR) of found that there is further opportunity to address the referral systems and the quality of care provided at the seven HF serving the population. The MTR found that the strategy for the MNH component was incomplete and unlikely to achieve project objectives of improving health status. Further, it found a need to incorporate recent developments articulated in the National Reproductive Health Policy (2003). The MTR recommended that CSP should assist the district to develop: 1) an updated MNH strategy; 2) a revised training curriculum for TBAs; 3) a MNH training curriculum for health personnel; and 4) a behavior change communication strategy.

A 15-person Assessment Team consisting on international and national experts as well as representatives of Kibilizi Health District and CSP staff, conducted an assessment of the current MNH situation in Kibilizi District in August 2004. The Team had six external consultants; two obstetricians experienced in MNH clinical services; an obstetrician/trainer experienced in training TBAs; a nurse experienced in MNH clinical services and curriculum development; a Nurse-Midwife Trainer experienced in developing and facilitating trainings for health providers and TBAs in MNH and globally recognized expert in maternal and newborn care programs.

The Team used both qualitative and quantitative methods to solicit a broad understanding of the MNH strengths and weaknesses which included: 1) a review of HFs' abilities and performance; 2) community perceptions of the heath staff; and 3) knowledge and practices of men, women and TBAs in terms of MNH. A one-day preparation meeting was conducted on August 16, 2004 with the Assessment Team to: 1) review the assessment approach; 2) solicit input on the assessment tools; and 3) finalize the schedule. The Field work took place from Aug 17-20, 2004. Data collected included interviews and record review of health centers, interviews with trained traditional birth attendants and focus group discussions with both men and women in 6 villages

The summarized data were presented at a 2-day meeting (August 23-24, 2004) with the district and health center staff. The purpose of this meeting was five-fold, to:1) share the data and findings with the health staff; 2)provide an opportunity for staff to confirm or recommend changes in understanding the data implications(reality check); 3) reach agreement on the key weaknesses that the district should address in the MNH strategy;4) solicit input from CS staff on appropriate interventions to address the key weaknesses; and 5) foster ownership of the data, the key weaknesses and the overall MNH strategy.

The key findings of the assessment team were the following:

- low knowledge, identification, stabilization and transfer of most maternal and newborn danger signs/complications among HF staff;
- low knowledge of key service protocols, particularly use of partograph and protocols for post-partum and newborn care;
- limited availability of basic equipment and supplies to provide high quality services;
- limited access to FP services;
- low knowledge and lack of clear BCC messages/materials to educate men and women about all MNH services and danger signs
- women prefer to deliver at home with female relatives, often time without a TBA.
- TBAs have minimal knowledge of maternal and newborn danger signs
- low knowledge and involvement of men in key MNH Issues, including FP
- cost of health services, particularly if they are not in a mutelle, is a major barrier to use of services. limited use of data for decision-making processes to improve services

Table 1

Recommendation		Parties Involved
Increase demand for MNH Services	Build on the Behavior Change Strategy work (April 2004) to elaborate key behavior change messages and develop appropriate materials for men and women covering key areas	
Increase male involvement	Develop a specific strategy to reach men : where to reach them; how they will be reached and key messages and materials	CONCERN, University of Buatre, Provincial MOH
Build capacity of HF staff to provide quality ANC, labor and deliver, post-partum & newborn care services	Develop a training curriculum to improve knowledge & skills of the HF staff to provide quality services. These training materials will be consistent with the National RH Policy and Service Protocols as appropriate. This should be both theoretical and include a prac ticum at Butare University Hospital	CONCERN, University of Buatre, Provincial MOH
	Develop a District Resource Center of key technical references for district and HF staff .	District/Province /National MOH/CONCERN
	Facilitate discussions within the MOH on key international standards (e.g. provision of all services, post-partum visits within the first week, use of Mg sulfate and antihypertensives)	The District/Province /National MOH/CONCERN
	Ensure that there is regular supply of clean delivery kits. The first step is to ensure supply; a consultation is needed to develop a sustainability plan for the clean delivery kits.	CONCERN/District Consultant
	Identify/develop job aids (e.g. services for each ANC visit,)	District/CONCERN, Provincial/National MOH
	Conduct a training for supervisors (e.g , updated checklist, review of data and use for management of health services).	CONCERN, University of Buatre, the Provincial MOH
	Developing a strategy to integrate post-partum follow-up and newborn care (EPI)	District/Province/
Ensure availability of equipment/ supplies	Coordinate efforts to ensure that facilities are appropriately equipped.	District/partners
	Develop a maintenance plan to ensure that currently available remains functional.	
Increase capacity of TBAs to act as referral agents.	Develop a training curriculum to improve knowledge and skills TBAs.	
	Develop BCC materials and training TBAs on their use to enhance their ability to provide key messages to mother's	
Increase participation in the Mutelle's	Consider securing a bank loan to pay for the mutelle initiation fee for vulnerable families and clarify/plan for emergency ambulatory services and hospital costs	District
	Conduct training mutuelle committee how to mange the fund	
Increase access to FP Services	relevant partners to should assist the district to conduct a family planning training for all health centers	CONCERN, Butare University Provincie
	Develop a district wide strategy to increase access to FP services through to combine EPI and FP outreach services.	District
Use of Data for Decision-Making	CONCERN should assist the district to identify the needs of the district to better utilize existing data	

I. Background

A. Overview of the Maternal and Newborn Health Situation in Rwanda

Maternal and newborn mortality levels found in Rwanda are among the highest in the world. The national maternal mortality ratio is 1,071 per 100,000 live births and the newborn mortality rate is 43.9 per 1,000 live births (DHS 2000). The challenge of reducing these formidable levels of death requires strategies based on empirical evidence and proven interventions targeting mortality reflective of the local context.

As the end of the Safe Motherhood Decade neared in 1998, a considerable amount of international reflection on what works and what does not was undertaken. As a result of this work, shifts in conceptual models and subsequent best practices were made. Some of these changes radically challenged traditional maternal and newborn health (MNH) interventions. Many of these changes have yet to be fully translated into national reproductive and child health strategies nor applied by programme managers and implementers. A key framework encourages policy-makers to analyze and address MNH problems by understanding "the four delays model" which highlights the many barriers to accessing quality services. The four delays include:

- delays in recognizing the problem (e.g., danger signs);
- delays in making a decision to seek care;
- delays in accessing services (e.g, transportation, distance, cost); and
- delays in receiving of quality emergency obstetric care (EmOC) upon arriving at the health facility.

The Government of Rwanda released a new reproductive health (RH) policy in January 2004 which largely embraces these global directions. However, specific strategies on how to address the four delays in line with the national policy at the district level are still under-development. As optimal interventions and strategies designed to best protect pregnant women and their babies are contextual. The Rwanda MOH has very clear and detailed MNH Service Protocols. They were written in 1993; some of the information needs to be updated but in general they are quite good. However, most of the staff did not seem to be very familiar with these protocols. *(See Annex C for Summary of Service Protocols).*

Concern Worldwide has been operating a Child Survival & Health Program (CSP) in partnership with the Kibilizi Health District in Butare Province, Rwanda since October 2001. The project's broad goal is to **contribute to a sustainable reduction in maternal and child mortality and morbidity, and increased life expectancy for 75,000 women of reproductive age and children under-five years**. Specifically, the program purpose is to improve the health status of the population of Kibilizi District through capacity building for high quality and sustainable health services, and by empowering communities for better health with locally available resources. Four focal interventions are HIV/AIDS, malaria, nutrition and maternal & newborn care are applied to address the leading causes of mortality.

B. Overview of Kibilizi Health District

Kibilizi Health District has a catchment area that covers about 168,784 people. Health services are provided by 7 health centers (HFs); 4 CS are operated by Catholic missions and 3 are MOH facilities. The Kibilizi district hospital is currently under construction; it is expected to be completed by December 2004. The District Health Management Team (DHMT) consists of the District Medical Officer, a District Supervisor and a District Administrator. Table 2 provides an overview of the MNH services provided but the 6 HFs that were reviewed by the Team.

Table 2:
Overview of Kibilizi Health District MNH Services, 2004

	Population (1)	Total Number of Pregnancy per Year(2)
Kiblizi	15,884	778
Gikore	22,250	1090
Kansi	26,529	1300
Kigemebe	32,052	1571
Kibayi	24,138	1183
Mugombwa	24,101	1181

(1): Based on data collected by the assessment team; (2) based on 4.9% of the population

Although there are no MOH staffing standards, each of the HFs were staffed with between 2-5 (A2) level nurses. An A2 level nurse receives 3 year of pre-service training after completing 3 years of secondary school. The HF in-charges' were (A1) level nurses or medical assistants. (A1) level nurses receive 3 years of additional education at the Kigali Institute.

II. Introduction of the MNH Assessment

A. Background

In the first few years CSP focused on: 1) strengthening linkages between traditional birth attendants (TBAs) and health facilities; 2) building life-saving and communication skills of TBAs; 3) informing men and women about danger signs of MNH complications; 4) distributing clean delivery supplies to be used during deliveries at the facility and community levels.

B. Purpose

In April 2004, a Midterm Term Review (MTR) of found that there is further opportunity to address the referral systems and the quality of care provided at the seven HF serving the population. The MTR found that the strategy for the MNH component was incomeplete and unlikely to achieve project objectives of improving health status. Further, it found a need to incorporate recent developments articulated in the National Reproductive Health Policy (2003). The MTR recommended that CSP should assist the district to develop: 1) an updated MNH strategy; 2) a revised training curriculum for TBAs; 3) a MNH training curriculum for health personnel; and 4) a behavior change communication (BCC) strategy.

C. Assessment Methodology

The Team reviewed relevant background materials including:

- CSP Detailed Implementation Plan (DIP)
- CSP Knowledge Attitude and Coverage (KPC) Survey, 2000
- CSP Gender Study Report, 2001
- CSP Lot Quality Assurance Survey (LQAS), 2004
- CSP Participatory Learning and Action (PLA) Report
- CSP Monitoring and Evaluation Plan.

A 15-person Assessment Team consisting on international and national experts as well as representatives of Kibilizi Health District and CSP staff, conducted an assessment of the current MNH situation in Kibilizi District in August 2004. The Team had six external consultants with the following skills:

- an expert obstetrician experienced in MNH clinical services (e.g., ANC, labor and delivery, post-partum care and newborn care)
- an obstetrician/trainer from University of Butare experienced in training TBAs
- an expert nurse experienced in MNH clinical services (e.g., ANC, labor and delivery, post-partum care and newborn care) and curriculum development
- a team leader who is a globally recognized expert in MNH programming strategies
- an expert obstetrician experienced developing and assessing district strategies to address the four delays and strengthen the quality of EMOC
- an expert Nurse-Midwife Trainer with significant experience developing and facilitating trainings for health providers and TBAs in MNH. *(See Annex A for the Terms of Reference)*

The Team used both qualitative and quantitative methods to solicit a broad understanding of the MNH strengths and weaknesses which included: 1) a review of HFs' abilities and performance; 2) community perceptions of the heath staff; and 3) knowledge and practices of men, women and TBAs in terms of MNH. ***(See Annex B for data collection forms)***

A one-day preparation meeting was conducted on August 16, 2004 with the Assessment Team to: 1) review the assessment approach; 2) solicit input on the assessment tools; and 3) finalize the schedule.

The Team was then divided into three sub-groups. Each sub-group assessed two HFs centers, both through interviews with staff and review of available drugs, equipment and information systems (e.g., Group 1: Kibilizi/Gikore HFs; Group 2: Kigembe/Kansi HFs; Group 3 Kibayi/Mugombwa HFs). Each sub-group also conducted interviews with trained TBAs; interviews held at Kiblizi, Kigemebe and Kibayi HFs.

The Team decided to select communities based on their distance from the HF; due to time constraints the Team choose one village that was far (1.5-2 hours) from the HF and another that was close (less than an hour) to the HF. The groups visited the relevant communities of the HFs that they had assessed (e.g., group 1 visited communities in Kibilizi and Gikore catchment areas). Each sub-group conducted male and female focus group discussions; 6 male groups and 6 female groups in total.

Data collection took place on August 17-19, 2004. On August 20th the three sub-groups reconvened to share the data, conduct preliminary analysis, and identify programmatic strengths and weaknesses, base on the findings.

The summarized data were presented at a 2-day meeting (August 23-24, 2004) with the district and health center staff. The purpose of this meeting was five-fold, to:

- share the data and findings with the health staff
- provide an opportunity for staff to confirm or recommend changes in understanding the data implications(reality check)
- reach agreement on the key weaknesses that the district should address in the MNH strategy
- solicit input from CS staff on appropriate interventions to address the key weaknesses
- foster ownership of the data, the key weaknesses and the overall MNH strategy.

While the Team had planned to share the District MNH Strategy with representatives from the national MOH and other NGOs, none were available to participate in a meeting the week of August 23, 2004. Thus, the team worked to finalize the draft MNH strategy and the consultants began to outline the content of the training curriculums. The Team discussed next steps with the District Team. It was suggested that the District would present the strategy to the Provincial Authorities who would in turn discuss any issues with the national MOH.

III. MATERNAL & NEWBORN HEALTH Approach

There were four key elements, described below, that the team incorporated to develop an overall programming framework for District MNH strategy.

- ***A Life-Cycle Approach***: Understanding that men and women have different needs throughout their life which implies that they will need access to a variety of information and services throughout their life.

- ***Mother-Baby Dyad***: A mother and baby are intrinsically linked; thus it is essential to think of the mother and baby as one unit (dyad) to provide the maximum benefits to both.

- ***Four Delays Model***: There are key barriers that inhibit women and their newborns from accessioning services; these are described in the four delay model.

- ***Programmatic Focus:*** The Team recognizes the need to ensure access to both essential obstetric care (EOC) and emergency obstetric care (EMOC) for those women who develop complications.

A. Lifecycle Approach

A life cycle approach to health highlights the fact that people have different health needs at various phases of the life cycle. It also recognizes that interventions have multiple effects throughout a person's life. For example, if a woman is malnourished she is more likely to have a small birth weight baby. We know that low birthweight babies (LBW) often have difficulty breastfeeding and are more prone to infection throughout their childhood. If the child continues to be underweight she could continue to develop into an adolescent girl who is stunted and/or anemic. She could become pregnant at an early age and we know that young mothers often deliver low weight babies for several reasons which continue the cycle. Thus, the effects of nutrition have a major influence throughout a person's life cycle—from the time there are in the womb throughout adulthood. So, while the purpose of the Assessment Team was to develop a focused MNH strategy, the team conducted this exercises with a great appreciation of the large context of a life cycle approach.

B. Mother-Baby Dyad

The magnitude of maternal and newborn deaths (globally) is a major cause of death, particularly in developing countries. Table 3 outlines the basis global statistics about maternal and newborn deaths.

Table 3:
Scope and Causes of Maternal and Newborn Mortality, Global

	Maternal Deaths	Newborn Deaths
Who?	Women	Newborns
What?	Death	Death
How many?	1,600 women die every day	4 million stillbirths
	585,000 women every year	4 million neonatal deaths
Where?	Most die at home (50-70%)	Most die at home(50-70%)
When?	24% women die during pregnancy	66% die in the first month
	16% women die during delivery	
	61% women die during the post-partum period--60% of these women die in 1st wk after delivery	of neonatal deaths most (65%) occur n the 1st week.
Why?	**Medical** Post-Partum Hemorrhage Pre-eclampsia/Eclampsia Obstructed Labor PP Sepsis Complications of abortion	**Medical** Asphyxia/Difficulty Breathing Difficulty Breastfeeding Hypo/Hyperthermia Jaundice Tetanus Infection

(1) Ross, SRR. 1999. Promoting Quality Maternal and Newborn Care: *A Reference Guide for Program Managers.* Atlanta, GA: CARE (2).Lawn, J; McCarthy, B; Ross, SR. 2001. The Healthy Newborn: *A Reference Guide for Program Managers.* Atlanta, GA: CARE and Centers for Disease Control.

Unfortunately in many programs there is often little integration between maternal and child health programs. Although the direct medical causes of maternal and neonatal deaths may differ, the underlying causes of these deaths are very similar. Globally, both maternal and newborn deaths result from a **combination of medical causes, social factors,** and health systems failures that vary by context and culture. In most settings, the common areas are the fact that:

- most of the births and deaths (maternal and newborn) occur at home
- most of the deaths occur during the in first week after delivery (early postpartum/neonatal period)
- many of the pregnancy-related complications that negatively affect the mother also put the newborn at risk (e.g., eclampsia, infection, obstructed labor)
- many births and deaths occur without a skilled provider present
- there are many delays in accessing to quality care
- both women and newborns have low social status in many cultures with high maternal/newborn mortality.

Therefore, it is vital that the mother and baby be thought of as one unit –a dyad

C. Four Delays Model to Accessing and Receiving Quality MNH Services

Once a woman is pregnant and experiences a complication or a newborn becomes ill there are four main delays that contribute to and/or cause mortality and/or morbidity: 1) problem recognition; 2) deciding to seek care; 3) accessing/reaching the health facility; and/or 4) in receiving treatment at the health facility.

➔ ***Delay #1: Problem Recognition:*** Unless a woman knows and can recognize when she or her newborn are experiencing a problem there is no reason for any action to be taken. Thus the first delay occurs with the woman /family members identifying a problem (danger signs).

While information on danger signs is important, the ultimate goal is to foster the adoption of healthy behaviors by women, households, communities, health personnel and institutions. Behavior change is a complex and evolutionary process. BCC strategies need to provide information to men and women on the recognition of danger signs, where women can go to receive services and how they can reach the health facility in time to have a favorable outcome.

➔ **Delay #2: Decision-Making:** Decision-making often involves a set of complex processes with many approvals required by various people before action can be taken. In many cultures women have a limited ability, if any, to influence the decision-making processes that influence health-seeking behaviors. Unfortunately men have often not been involved in MNH activities, so while they are key decision-makers they have little or inaccurate information to base their decision on. Thus, the time to make a decision to seek care (e.g, discussions with husband, other family members can delays access to service.)

Increasing make involvement in MNH issues is key; even when a woman has the ability to make a decision it is often difficult for her to do so when she is hemorrhaging or unconscious. With that said, it is also important to increase women's involvement in the decision-making process.

➔ **Delay #3: Accessing/Reaching to the Health Facility:** Community systems that support access to maternal/newborn health services need to be location specific and deal with the constraints that reduce access to health care services in that locale. There are three main barriers to accessing health services: 1) poor communication; 2) poor infrastructure/lack of transportation; and 3) lack of resources.

Delay # 4: Receiving Quality Treatment: There are many factors that can cause delays in women receiving quality services within the health facility including: 1) limited number of skilled staff; 2) poor counseling skills; 3) irregular supply of medicines, drugs and equipment; 4) poor physical infrastructure; 5) complex administrative systems, particularly for transfers and blood transfusions; and 6) inefficient managerial systems. Improving access to quality maternal health services needs to be a comprehensive effort.

These delays vary by setting and they do not have to occur sequentially. In some settings only one delay will be a barrier while in others several interventions may need to be undertaken to address all of the delays. The delays provide a useful framework to initially assess the social and systemic factors that contribute to maternal and neonatal mortality in a particular setting.

D. Programmatic Focuses

1. Essential Obstetric Care and Emergency Obstetric Care

Internationally there has been some confusion about these terms (EOC vs. EmOC) because they have not been used consistently. These approaches do not have to be mutually exclusive, but on needs to understand that the selection of interventions may differ depending on the overall objective (EOC or EMOC). Program planners need to have clear goals, so that appropriate interventions can be selected to achieve their objectives.

➔ ***Essential Obstetric Care (EOC)***: encompasses the range of services required to meet all pregnant women's needs (e.g., antenatal, normal delivery and post-partum care, as well as appropriate management of complications). These interventions focus on **promoting healthy women as well as reducing maternal mortality and morbidity. All pregnant women** need access to quality EOC services.

➔ ***Emergency Obstetric Care (EmOC***) is a sub-set EOC services for women who experience complications and focuses on **reducing maternal mortality and morbidity**. In general pregnancy is viewed as a normal condition; many women do not realize that pregnancy can be a potential risk to their health. While most (85%) deliveries proceed without difficulty, studies have shown that about 40% of pregnant women experience some form of pregnancy-related complication(s). More over, **15% of all pregnant women** (a year) will develop a life threatening complication(s) requiring EmOC services and 5% of all pregnant women will have complications requiring a C-Section. Thus, **at least 15% of women will need both EOC services and EMOC services**

2. Post-Partum Care Focus

For years, the international medical community recommended a post-partum visit six weeks after delivery, thus most programs are based on this recommendation. Traditionally, this visit is primarily for women to get information about family planning (FP) and begin their child's immunizations. However, most (61%) maternal deaths happen during the post-partum period. Studies have found that 45% of these deaths occur within the first 24 hours after delivery, and an additional 23% occur between the second and seventh day after delivery—**indicating that the majority of all maternal deaths occur in the first week after delivery**. Maternal deaths also occur, to a lesser extent, between days 5-7 after delivery due to post-partum infection/sepsis. These findings highlight the importance of the post-partum period and the urgent need for closely monitoring women in the first week after delivery.

IV. Assessment Team Findings: Health Centers

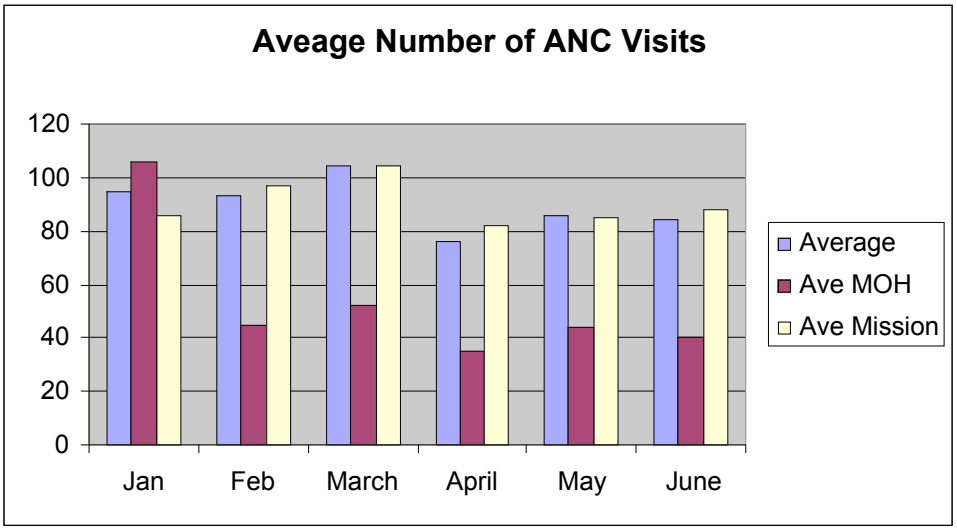
The Assessment Team reviewed the performance of 6 of the 7 health centers (HFs) operating in the district. Results are discussed below in 7 categories: 1) antenatal care (ANC); 2) normal deliveries; 3) management of complications; 4) post-partum (PPC) care; and 5) normal newborn care; 6) complicated newborn care; and 7) support systems. *(See Annex C for the Summary of the Assessment Team Findings)*

A. Antenatal Care (ANC)

ANC Situation: The Assessment Team found that that there were variations in use of ANC services. Figure 1 presents the:

- the average number of ANC visits per month for the district (blue bar)
- average number of ANC visits per month in MOH facilities including Kibilizi, Kansi, Mugombwa (maroon bar)
- average number of ANC visits per month in Mission facilities including, Gikore Kigembe, Kibayi (yellow bar).

Figure 1:
Antenatal Care Visits, Kibilizi District (Jan-June 2004)



There were not large differences between the MOH and Mission facilities in terms of provision of ANC services, but the monthly averages were lower in the MOH facilities. From January-June 2004, MOH facilities had provided 269 ANC visits while the Mission facilities had 271 visits. It should be noted that these figures are the numbers of ANC visits, not the number of women.

Upon questioning the staff, the Team was told that the reason ANC visits went up in April was probably due to the fact that there are many festivals after the harvest that lead to increased sexual activity. As a result, by April women are six months pregnant; the time when most women seek first antenatal check-up.

It was difficult for the Team to assess the number of ANC visits that a woman receives during her pregnancy because this information was not readily available from the registers. The 2001 KPC survey found that 17.1% of women received 1 ANC visit; 37.5% women had 2 ANC visits, and 45.3% received 3 or more ANC visits; thus 82% of women had 2 or more visits.

Table 4 outlines the number of women expected for ANC services, based on the HF's population and the actual numbers of women who came for ANC services.

Table 4:
Expected Numbers of Women for ANC Services compared with Actual ANC Attendance per month (Jan-June 2004)

Health Center	Number of Women Expected for ANC Services a Month (1)	Range of Women who received ANC Services between Jan –June 2004
Kibilizi	65	42-78
Gikore	91	33-62
Kansi	108	78-143
Kigembe	131	103-135
Kibabyi	99	81-132
Mugombwa	98	85-125
District Total	577	422-675 (avg 760)

(1) number of pregnant women divided by 12 months

In discussions with the HF staff as well as community men and women, they indicated that most women received 2-3 ANC visits. However, they said that most women did not begin their ANC visits before the 6th month. Women went for ANC services because they wanted to know if the baby was in a good position for a normal delivery. If the staff told them everything was fine (e.g. normal lie) then the woman deliver at home. The 2001 Participatory Learning in Action (PLA) study showed similar results; the main reasons that women went to ANC services were to confirm the pregnancy and to protect mother and unborn child. Key factors that inhibited women from seeking ANC services were lack of money, shyness, and the way they were treated by the HF staff (e.g., non- respectful manner, poor greeting, lack of trust).

The HF staff seemed fairly knowledge about basic ANC services (e.g. maternal height/ weight, basic vital signs, assessing uterine height, fetal heartbeat). However they did not seem to differentiate what services should be provided at each ANC visit and were not very knowledgeable about the MOH protocols. They said that they give 30 tablets of IFA in the 9th month while the protocols indicate 100 tablets over 3 months. The study found that some basic equipment (e.g. BP, thermometers) and paramedical tests (e.g., urine glucose, protein, ketones) were not available. Table 5 outlines the key equipment and supplies needed to provide quality ANC services. *(See Annex F for more information)*

Table 5:
Summary of Need Equipment/Supplies for ANC Services

	Kiblizi	Gikore	Kansi	Kigembe	Kibayi	Mugombwa	Needed
BP Cuff	3	3	4	4	No data	1	14
Stethoscope	2	2	1	4	No data	3	12
Scissors	7	8	10	8	No data	*+10*	33
Oral Thermometer	11	*+8*	11	11	No data	12	37
Disposable gloves (expected 100 month)	150	200	2	0	No data	6	Some Need
Sharps Container (expected 30/m)	100	50	2	1	No data	20	Some Need
Urine Glucose	No supply	No supply	No supply	No supply	No data	No supply	Needed
Urine Ketones	No supply	No supply	No supply	No supply	No data	No supply	Needed
Urine Protein	No supply	No supply	No supply	No supply	No data	No supply	Needed

Staff did not regularly screen women for malaria or hookworm. They said that they give quinine to pregnant women who have malaria. Rwanda has chloroquine resistance malaria and the national malaria program is determining whether to include presumptive treatment in standard of ANC.

Kansi provides prevention of mother to child transmission of HIV/AIDS (PMTCT) services including VCT, syphilis screening (RPR), and the administration of Niverapine to laboring mother and newborn). Kansi receives support from the national HIV/AIDS program to offer these services. Kibilizi HF provides VCT services while Kigemebe HF provides on site RPR screening. All facilities have VCT counseling but tests have to be sent to Kibilizi or Kansi on a weekly basis for analysis and results.

ANC Challenges

- Low knowledge among staff in many keys areas including counseling/interpersonal skills, identification of danger signs and confusion on some basic skills such as monitoring blood pressure.
- Provision of 30 tablets of IFA instead of 100 tablets which seems to be what the nurses have been trained on as the correct amount.
- Inadequately equipped facilities, particularly of basic materials such as BP cuffs and thermometers and paramedical tests *(See Annex).*
- Limited diagnostic ability (e.g. lack reagents for urine protein, glucose, RPR)

ANC Recommendations

- Understand why (the barriers) women do not seek ANC services before the 6 month and develop a strategy to address these factors.
- Build the capacity (knowledge/skills) of HF staff by reviewing/clarifying the ANC protocols, particularly what services are to be provided at each ANC visit.
- Ensure adequate numbers of basic equipment to provide quality ANC services.
- Ensure appropriate provision of IFA and continue to support TT immunization.
- Build the capacity (knowledge/skills) of HF staff to provide key messages to men and women and appropriately use BCC materials.
- Develop job aids to support HF staff to provide quality services.
- Expand diagnostic and treatment abilities of an additional 1-2 high use HFs to improve coverage and access including urine testing, RPR screening, malaria and PMTCT.

B. Normal Deliveries

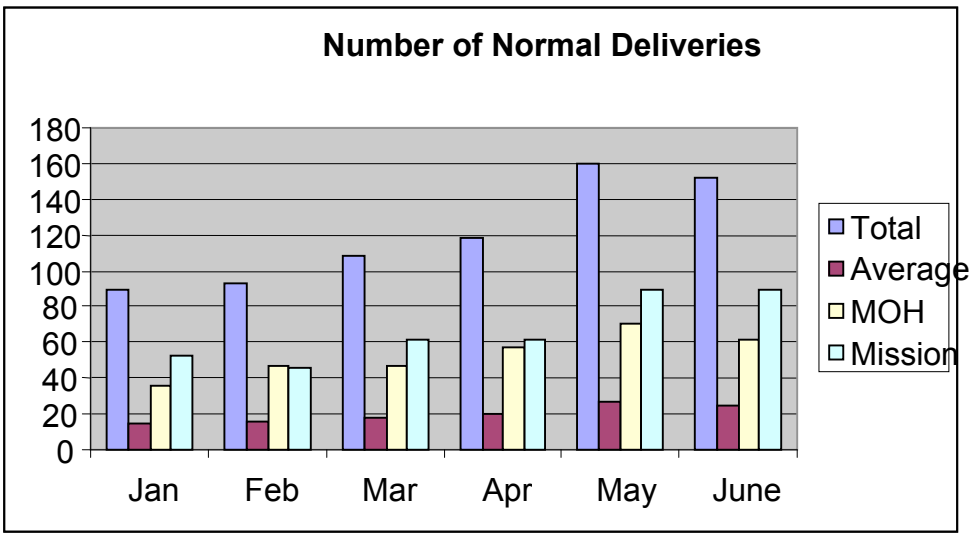
Normal Delivery Situation: Most women prefer to deliver at home. The 2001 KPC 2001 found that 80% of women delivered at home and 19% delivered in HFs. Of those who had home deliveries, 53% delivered at home with the assistance of parents/friends/self and 40% were assisted by a TBA.

Most of the facilities had one A1 level nurse or medical assistant and at least 2-3 (A2) nurses who could provide delivery services. Staffing was an issue for some HFs. The staff encouraged primiparas to deliver in the HFs. However, the Team did not have sufficient time to assess the proportion of primiparas deliveries that occur in the HF.

Figure 2 outlines the numbers of deliveries which includes:

- total number deliveries per month (blue bar)
- average number of deliveries per month(maroon bar)
- total number of deliveries in MOH facilities per month(yellow bar)
- total number of deliveries in Mission facilities per month (light blue bar).

Figure 2:
Delivery Coverage in Kibilizi Health District (Jan-June 2004)



These results show a slight upward trend in May and June which is probably a seasonal fluctuation. More women delivered within Mission facilities (402 or 66%) compared to MOH facilities (319 or 44%)

Not surprisingly, there were discrepancies between the number of women who receive ANC services and those who deliver in the HF as shown in Table 6. In most countries many more women receive ANC services than deliver in health facilities.

Table 6:
Comparison of ANC and Delivery Coverage in Kibilizi District (Jan-June 2004)

Health Center	Range: **Actual** Women who receive ANC per month (1)	Range: **Actual** Women who delivered in HF per month (1)	**Expected** deliveries in catchment area **per month** (2)	**Total Expected** deliveries in catchment area **from Jan-June** (3)	**Actual Total** deliveries in HF from **Jan –June (1)**	**Actual** % delivers in HF
Kibilizi	42-78	6-13	65	389	54	13%
Gikore	33-62	12-20	91	545	84	15%
Kansi	78-143	16-36	108	650	166	26%
Kigembe	103-135	18-35	131	785	160	20%
Kibayi	81-132	14-41	99	592	99	17%
Mugombwa	85-125	10-25	98	591	158	27%
	33-143	6-41	ave 95	3426	721	21%

(1) Figures from HF registers. (2) Number of pregnant women divided by 12months. (3) number of pregnant women divided by 2.

The overall District figures for institutional deliveries have ranged from:

- 19% found by the 2001 KPC survey
- 28% found by the 2004 LQAS
- 21% found by reviewing registers, 2004 Assessment Team

It is unclear if these changes are due to differences in research methodology, but there appears to be a slight upward trend. One area that may impact this is the number of referrals to Butare and if they are counted as a delivery in the HF.

Institutional deliveries (total deliveries divided by expected deliveries in catchment area) ranged from a low of 13% in Kiblizi and Gikore to a high of 27% in Mugombwa of expected deliveries. The only common factor across the HF seemed to be high cost if the family was not part of the mutelle. There were a few instances where it was mentioned that the staff did not maintain confidentiality.

In general the staff's knowledge on management was fair; none of the staff interviewed used or had been trained on partograph. Some of the staff was confused on the appropriate protocols of care (e.g. sequencing of appropriate management of normal delivery). The Rwandan MOH has not approved active management of third stage at the HF level so no oxytocics are given routinely for normal deliveries.

Active Management of the Third Stage

Active management of third stage of labor includes: 1) immediate provision of an oxytocic drug; 2) controlled cord traction and 3) uterine massage. It is recommended that within one minute after the delivery of the baby, and palpating the abdomen to rule out the presence of another baby, 10 units of oxytocin IM should be given. Oxytocin is preferred because it is: 1) effective in 2-3 minutes; 2) has minimal side effects and 3) can be used by all women. If oxytocin is not available Ergometrine 0.2mg IM or prostaglandins can be given. Women with high blood pressure, pre-eclampsia and Eclampsia ***should not be given*** *Ergometrine because it increases the risk of convulsions and strokes. (IMPAC Guidelines, WHO 2000)*

Several of the HFs said they did routine episiotomies for primiparas. The District and HF staff told the Team that this was preventive measure to avoid third and fourth degree (vaginal) tears While most staff knew that bleeding was a problem, most could not identify prolonged labor, pre-eclampsia/eclampsia, or sepsis. None of the HFs had oxygen or suction equipment. The staff did not use counter cord traction to facilitate delivery of the placenta. The process of checking the placenta for retained pieces and placenta disposal was quite good.

Most facilities sterilized equipment but very few performed decontamination. The staff's general knowledge about infection prevention concepts was quite poor. When asked about infection prevention practices, the staff mostly talked about giving prophylactic antibiotics to clients to prevent their infections. In some facilities lacked basic materials (e.g. adequate supply of gloves, cleaning materials). In one center there was an issue with inadequate space while others had lots of space but low utilization.

Table 7 outlines the key equipment and supplies needed to provide quality delivery services. *(See Annex F for more information*).

Table 7:
Summary of Needed Equipment/Supplies for Delivery Services

	Kiblizi	Gikore	Kansi	Kigembe	Kibayi	Mugombwa	Need
Plastic Sheeting	1	3	3	3	No data	7	Kiblizi, Kigemebe, Mugombwa need
Sutures	2	+175/11	+50	8	No data	5	Kanisi, Kigemebe, Mugombwa need
Surgical Gloves(50/m per month)	100	250	10	0	No data	8	Kiblizi, Kigemebe, Mugombwa need
Surgeon hand brush	5	1	5	0	No data	11	all need
Oxygen	2	2	2	2	No data	2	all need
Mouth Gag	ample	ample	need (5)	need (5)	No data	ample	Kansi, Kigemebe need
Manual Suction	1	1	1	1	No data	1	all need

In most instances women stayed in the delivery room between 20-50 minutes. No family members are allowed in the delivery room. In a few places they allowed the TBAs to come into the delivery room, but this was not the norm. All the facilities delivered the woman in stir-ups in a supine position. No special precautions to deal with HIV/AIDS, either in terms of protecting health staff. Several staff told us that they used soap and water to clean the beds. According to the inventory report, Kansi, Kigemebe and Mugombwa had very low supplies of gloves; there were no goggles or aprons available. As stated previously Kansi is able to provide PMTCT services.

Normal Delivery Challenges

- Low knowledge among staff in many keys areas including management of normal delivery and infection prevention practices.
- Limited monitoring of the woman during labor and delivery, no use of partograph.
- Inadequately equipped facilities, particularly oxygen cylinders and suction machines.

Normal Delivery Recommendations:

- Understand why women do not want to have normal deliveries in the HF.
- Build the capacity (knowledge/skills) of HF staff to clarify the labor and delivery protocols, particularly the use of partograph and infection practices.
- Ensure adequate number of basic equipment/supplies to provide quality services.
- Build the capacity (knowledge/skills) of HF staff to provide key messages to men and women and appropriately use BCC materials.
- Develop job aids to support health center staff to provide quality services.
- Supervision of partograph use.

C. Complicated Deliveries/Referrals

The Assessment Team found that that there were variations between HFs in terms of referrals. Unfortunately only three of the HFs recorded the reasons for complications; obstructed complications and bleeding were the most common. Staff told the Team that they did not get any feedback from the referral facility about the condition of the women referred. However there were no commonly agreed upon definitions to identify obstructed labor or "too much" bleeding.

Despite the fact that more women delivered within Mission facilities (402) compared to MOH facilities (319); the pattern for referrals was the opposite. Out of the total 106 referrals that were referred from Health Centers to Butare Hospital, 66% were referred from MOH facilities (44%). The Team did not collect enough information to understand why this is happening. It may be that the quality of care is better at the Mission facilities or that the poorer women, who have waited the longest, only go to seek assistance at the MOH facilities arriving in very poor condition so they need to be referred.

Table 8 shows that there is also a large range in the percentage of referrals from each health center. The distribution of all referrals is the following:

25% Kiblizi (27/106)
20% Kigembe (21/106)
09% Kibayi (10/106)
25% Mugombwa (26/106)
16% Kansi (17/106)
04% Gikore (27/106)

Table 8:
Percentage of Deliveries Referred from Health Centers

Mo		Kibilizi	Gikore	Kansi	Kigembe	Kibayi	Mugombwa	TOTAL
Jan	Deliveries	10	13	*16*	*26*	*14*	*10*	89
	Referrals	4	0	1	4	*0*	*1*	*10*
Feb	Deliveries	6	12	*27*	18	*16*	*14*	*93*
	Referrals	4	0	3	6	*4*	*7*	*20*
Mar	Deliveries	8	14	26	22	*25*	*13*	*108*
	Referrals	3	0	1	2	1	6	12
Apr	Deliveries	8	11	34	25	26	15	119
	Referrals	2	1	9	3	1	3	18
May	Deliveries	9	20	36	34	36	25	160
	Referrals	7	3	3	5	4	4	22
Jun	Deliveries	13	14	27	35	41	22	152
	Referrals	7	1	0	1	0	5	14
TOTAL	Deliveries	54	84	166	160	158	99	721
	Referrals	27	5	17	21	10	26	106
	Referrals to deliveries	50%	6%	10%	13%	6%	26%	14%
	Referrals per total	25%	5%	16%	20%	9%	25%	100%

Table 8 shows that there is also a large range in the percentage of referrals from each health center. The referrals as a propotion of deliveresi are:

50% Kiblizi	(27/54)	26% Mugombwa	(26/99)
13% Kigembe	(21/160)	10% Kansi	(17/166)
06% Kibayi	(10/158)	06% Gikore	(05/84)

As stated previously, the Team found that knowledge of danger signs and identification and management of complications was very low among the health center staff. Since none of the HF used partograph, there was not active management of labor. Most staff knew that bleeding was a problem, which was treated with trendlenberg and IV fluids. The in-charge (medical asisitants/A1nurse) performs manual removal of retained placenta pieces and give Ergometrine but not the A2 nurses. Some of the HF treated hemorrhage by packing the vagina.

Most of the staff could not identify prolonged labor, pre-eclampsia/eclampsia, or sepsis and many had never seen any of these conditions. Some of the HF had Magnesium Sulfate but they were not sure of its use. None of the HF antihypertensive; it is not part of the essential drug list for the HF level. All of the facilities had Ergometrine and most had Valium. None of the HFs has suction equipment, oxygen cylinders and any equipment for maternal resuscitation. As stated previously some of the HFs' had shortages of BP cuffs.

Three of the Catholic HFs had vehicles, two were available 24hrs a day and one was available during the day bun t at night. The District had an ambulance that the HFs could utilize; all but Kigemebe HF had a radio to inform the district. The cost of the ambulance was 5000F. Some of the mutelles covered he ambulance and others did not fully cover it. There did not seem to be a standard policy on this issue across the mutelles. Similar findings were pointed out n the MTR which recommended standardization of policies, like this example and a federation of mutelles to deal with people moving across the country.

Complicated Deliveries Challenges:

- Low knowledge among staff in many keys areas, particularly identification of danger signs and appropriate treatment regimens, or ways to estimation of blood loss
- Limited skills on stabilization and management of complications;
- Poor understanding and use of infection prevention practices
- Little "facility preparedness" for complications (e.g. room readiness, emergency drug kit, triage system)
- Limited monitoring of the woman during labor and delivery, no use of partograph.
- Inadequately equipped facilities, particularly oxygen cylinders and suction machines, resuscitation equipment
- Magnesium sulfate (4/6) and antihypertensives (0/6) not available in the HF
- Some HFs had issues with ensuring a prompt referral because of either access to a vehicle or cost to the client.

Complicated Normal Delivery Recommendations:

- Identify why women wait so long to come to HF when they are having a complication, develop a strategy to address these barriers and develop interventions to address these issues.
- Build the capacity (knowledge/skills) of health center staff to promptly identify danger signs, stabilize and/or manage complications and ensure prompt referral for the best maternal and newborn outcome.
- Develop transfer and payment guidelines for transfer (e.g, clear protocols of when a woman should be transferred, who should accompany her, contact with Butare Hospital so they are ready to receive the client, information that needs to accompany the woman, information to be given to family, and payments
- Ensure adequate number of basic equipment to provide quality services.
- Develop job aids to support health center staff to provide quality services.
- Develop "mock emergencies" so the health staff can practice their skills

D. Post-Partum Care (PPC)

The post-partum period is from the time the placenta is delivered until the 42nd day after delivery. As stated earlier, the international medical community has recommended a post-partum visit six weeks after delivery, and most programs are based on this recommendation. The World Health Organization recommends that there should be four PPC visits with the following schedule:

- the first visit on first day, preferably within the first 6 hrs
- the second visit after 3-5 days
- the third visit after 14 days
- the fourth visit on the 40th day.

The Rwandan Service Protocols recommends two visits; one at 4 weeks and another at 6 weeks.

PPC Situation: In general, post-partum care was largely non-existent; health staff was not aware that there was a PP Protocol. On a positive note, most women who delivered in the HFs stayed at least 24 hour; in the Mission facilities they usually stay 2 days. However, once a woman was placed in the post-partum ward the staff said that:

- there was not a regular protocol for monitoring the woman
- if there was no problem they would check on the woman once a day
- they asked the woman if she was having a problem, but they did not exam the woman to see if her uterus was contracting or if she was bleeding.

The nurse could not tell us how they calculated blood loss and did not know how much bleeding indicated a hemorrhage. As described above knowledge of danger signs, management of complications and infection prevention practices were poor among the staff.

In some HFs the staff gave one dose of Vitamin A (200,000IUs) routinely, but most did not. The most common counseling messages for PP women was about hygiene. Since staff was not aware/unclear of the PP Protocol, they did not provide any clear messages on women should return for a PP visit. Most staff said they should return after 6wks when they bring the newborn for care; they could also receive FP services at that point in time.

Post-Partum Challenges

- Post-Partum Care is not seen as an important time to care for the woman.
- HF personnel are not familiar with the Service Protocols for PP care.
- Poor/little monitoring of the woman in PP period (e.g. while n the HF after delivery and when she brings that baby for EPI).
- Poor interpersonal counseling skills; staff are unclear what information to give women.
- Low knowledge of what the woman can expect (e.g return to fertility, how long/how much discharge should she have, when to begin sexual relations) and danger signs that can occur during the post-partum period.
- Poor infection prevention practices.
- Poor knowledge of FP methods in general and particularly those that can be provided to post-partum women and men.

Post-Partum Recommendations

- Review/clarify the post-partum protocols with health staff.
- Build the capacity (knowledge/skills) of HF staff to appropriately monitor women in the immediate post-partum period (e.g assess uterine size/texture, assess blood loss, physical exam before discharge) and counseling on what the woman can expect and when she return for a PP visit.
- Develop BCC materials to assist health education efforts for women.
- Develop job aids to support health center staff to provide quality services
- Systematically give Vitamin A to all post-partum women.
- Build the capacity (knowledge/skills) of HF staff to appropriately counsel women, men and couples on FP methods, particularly methods that can be used in the PP period.
- Develop strategy to combine post-partum follow-up visits with EPI.

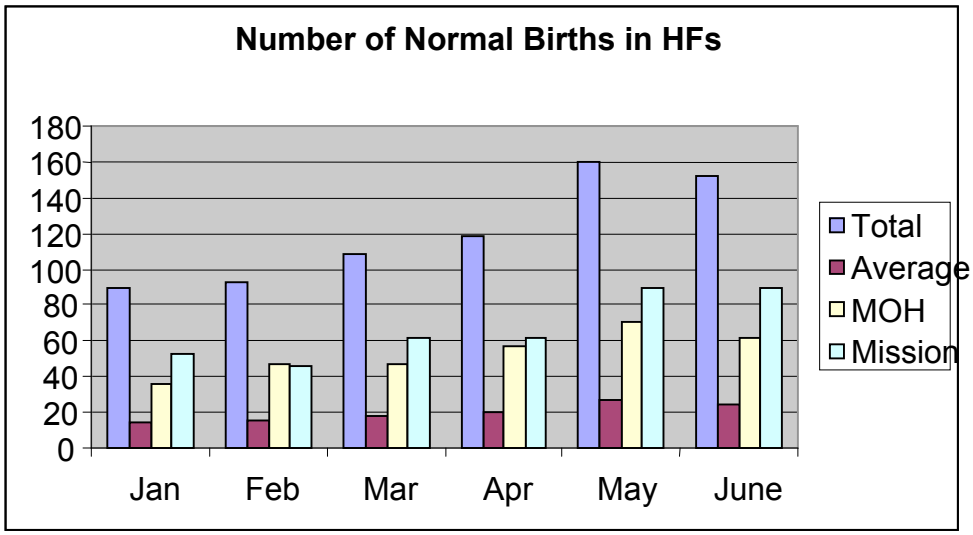
E. Normal Newborn Care

Normal Newborn Care Situation: Figure 5 outlines the pattern of institutional births. There is a slight upward trend which is consistent Figure 3, institutional deliveries.

Figure 3 outlines the numbers of deliveries which includes:

- total number normal births per month (blue bar)
- average number of normal births per month(maroon bar)
- total number of normal births in MOH facilities per month (yellow bar)
- total number of normal births in Mission facilities per month(light blue bar).

Figure 3:
Number of Normal Births, Kibilizi District (Jan-June 2004)



In general the HF staff's knowledge on management of the newborn was fair. Several staff did not know the APGAR scale elements (e.g fetal heart, respirations, color, movement). The staff said that they did not harshly press on the woman's abdomen or pull on the baby's head to facilitate the delivery. When asked what they would do if the baby was not breathing they said they would suction the baby's mouth and nose, some said shake the baby or turn them upside down, but most had no idea what to do if the baby did not breathe.

They all indicated that they cut the cord with sterile scissors, put betadine or iodine on the cord and covered it. Then they would dry the baby, but they did not bath the baby within the first 24 hours. Once the baby was wiped and dried with a clean cloth they were given to the mother to begin exclusive breastfeeding. Babies were weighed before leaving the delivery room. Some HF staff was systematically providing prevention with tetracycline eye ointment while others did not give this service. The mother and newborn are kept together in the ward once they have left the delivery room.

As stated previously, there was poor understanding about infection prevention. There was no special precautions to deal with HIV/AIDS, either in terms of protecting health staff or breastfeeding counseling.

Newborn Care Challenges:
- Poor knowledge and use of newborn protocols (e.g, Apgar, preventive eye tx,).
- Limited (systematic) use of preventive eye treatments.
- Poor infection prevention practices.

Newborn Care Recommendation :
- Review/clarify the newborn care protocols, particularly Apgar.
- Build the capacity (knowledge/ skills) of HF staff to provide quality newborn care.
- Develop job aids to assist HF staff.
- Systematically give preventive eye treatment.

F. Complicated Normal Newborn Care

Complicated Newborn Situation: The HF's did not have a separate registry for newborn referrals. Therefore, to get some idea of newborn complications the Team looked at the numbers of stillbirths and low birth weight babies as shown in Table 6

Table 9:
Numbers of Stillbirths and Low Birth Weight Babies, Kibilizi (Jan-June 2004)

Health Center	**Total Expected** deliveries in catchment area **from Jan-June (1)**	**Actual Total** deliveries in HF from **Jan –June (2)**	Maternal referrals (2)	**Actual Total** stillbirths in HF from Jan-Jun (2)	**Actual Low Birth** weight babies in HF from Jan-Jun (2)
Kibilizi	389	54	27	0	02 (04%)
Gikore	545	84	5	5	15 (18%)
Kansi	650	166	17	6	14 (08%)
Kigembe	785	160	21	1	15 (09%)
Kibayi	592	99	10	1	04 (04%)
Mugombwa	591	158	26	5	10 (06%)
TOTAL	**3552**	**721**	**106(15%)**	**18 (3%)**	**60 (08%)**

(1) number of expected pregnant women divided by 2 for the six month period. (2) figures from registers**.**

As stated previously, the Team found that knowledge of danger signs and identification and management of complications was very low among the HF staff. Stillbirths were less than two percent for all live births which is very low. This is probably due to the fact that most deliveries occur at home and in many countries couples are not willing to share that they have had a stillborne child. Staff had experienced stillbirths, most thought the cause was obstructed labor but had a hard time explaining how this contributed to the baby's death baby. There was no equipment for neonatal resuscitation and staff was not trained on these procedures.

The average percent of LBW babies in the district was 8% which seems low. Gikore has the highest level of LBW babies followed by Kansi (9%), Kigemebe (8%) and Mugombwa (6%). In addition, the staff seemed to know very little about the special needs of LBW babies (e.g. more prone to hypothermia, infections). Some staff knew that they might have difficulty breastfeeding; their recommendation was express breastmilk with cup feeding.

None of the staff had ever seen physiologic (normal) jaundice or pathologic jaundice, or tetanus. They also did not seem to understand the association between hypothermia and infection.

Complicated Newborn Care Challenges:

- Low knowledge of neonatal dangers signs/complications and appropriate treatment
- Little knowledge about management of low birth weight babies
- Limited knowledge on managing difficulty breastfeeding
- Lack Resuscitation equipment and staff had not received training.

Complication Newborn Care Recommendation :

- Review/clarify the newborn care protocols (both normal and management of key complications) with health staff
- Build the capacity (knowledge/skills) of HF staff to identify anger signs, stabilize/manage newborn complications.
- Develop transfer and payment guidelines (e.g., clear protocols of when a newborn should be transferred, who should accompany the baby, contact with Butare Hospital so they are ready to receive the client, information that needs to accompany the newborn, information to be given to family)
- Develop BCC materials to assist mothers in caring for newborns and identifying danger signs
- Develop job aids to support health center staff to provide quality services

G. Support Systems

There are two areas that will be discussed the use of data for decision-making at the HF and District level and district supervision.

1. Use of Data for Decision-Making

In discussions with HF staff few seemed to have a good understanding of the size and health status of their target population (e.g., number of pregnant women, number of deliveries). The in-charges had a better understanding because they were responsible for oversight of the data and reporting. The registers were fairly well-maintained; all the HFs complete and submit a monthly report to the District. However, it seems that few of the HF staff was using this information for program improvement. The HF staff were very interested in the data that the Team presented at the District workshop. There is a monthly District meeting with the HF staff; The Team was told that some times they review/discuss the data.

Health Centers: There is quite a bit of existing HF data that could be further analyzed and used to improve health services and community interventions. The first step would be simply to start looking at the "absolute numbers" and try to understand the reasons for the changes at each HF (e.g., in May 5 deliveries, in June 10 deliveries- why did it increase?). It might be useful to develop a poster to hang on the wall that shows how many women come every month for ANC services to help build the capacity of all the HF staff about the services they provide. While each HF has to prepare a report for the District, this activity also provides an opportunity for the HF staff to do a self-assessment, identifying what is working well and potential problem areas. The second step would to begin using rates. For example, calculating the number of deliveries in the specific HF compared to the total number of pregnant women in the catchment area who are expected to deliver. This gives an indication of the coverage of your services.

District: The District officers (e.g., medical officer, administrator and supervisor) seem to have a better handle on some of the data. They send a report to Butare monthly. They have had to calculate all the figures manually because they have only recently received a computer, but they have no power.

There are two roles of the district staff. First, they help to build the capacity of the HF staff so that they can better understand their own data. Second, through more advanced analysis, the District staff can identify district-wide issues where existing resources could be re-allocated, partnerships could be formed and/or additional resources discussed with MOH or other donors.

The District staff said that they have had minimal training on basic data analysis, particularly computer assisted analysis (e.g., excel). This is an area where they said they would like to learn more about. This may be an area where they could forge closer links with the University of Butare and the Provicial MOH authorities.

District Data Analysis Challenges:

- Limited use of existing data for decision making at both Health centers and District level.
- Limited knowledge on data analysis, particularly computer assisted, at the District level.

District Data Analysis Recommendations:

- Begin with basic review of data at the HF level to encourage staff to begin asking critical questions.
- If HFs are comfortable with the basic review, they should begin using rates to understand their service coverage.
- Assist the District to identify their needs associated with improving data analysis (e.g, training, excel software, generator)
- Continue quarterly meetings with CSP staff to review and analyze data in relation to program progress.

2. Supportive Supervision

Supportive supervision is an approach to supervision that emphasizes joint problem-solving, mentoring, and two-way communication between supervisors and those being supervised (JHPIEGO, 2003)

The Team had a limited amount of time to discuss supervision with both the District and the HF staff. There are only 3 people at the district level which is probably too few. Although we were told that there is a supervisory checklist and people used it we did not see a copy. In general the district staff seemed to have a good relationship with the HFs in the sample. The HF staff seemed comfortable in raising issues with the district staff. The District staff thought this was an important area for them to strengthen, particularly combining the data analysis/results with supervision visits.

Supervision Recommendations:

- All supervisors should be involved in the recommendations regarding data for decision-making above.
- Provincial MOH and other relevant partners to should assist the district to conduct a training for supervisors (e.g supportive supervision, updated checklist, review of data and use for management of health services).

V. Assessment Team Findings: Community

Each sub-group of the Assessment Team conducted a focus group discussion with trained TBAs; meetings were held at Kibilizi, Kigemebe and Mugombwa HFs

A. Traditional Birth Attendants

TBA Situation: Forty-five TBAs have already received training (for 5 days); CSP is planning to train an additional 60TBAs for a total of 105 (15 per HF) by the end of the project. While the training materials developed for the TBAs were useful, the MTR felt the materials were more appropriate for people with higher literacy skills and were too advanced for TBAs.

The trained TBAs interviewed ranged in age from late 30s-late 60s. They told use they each conduct between 2-5 deliveries a month. While the TBAs were knowledgeable, their reported practices seemed "too good to be true". Several of the Team members wondered if they were just repeating what we wanted to hear or if they were actually doing all the things they said they do. For example, they stated that they always wash their hands with soap and water. When asked if they had any problems getting water they aid no, but access to water was a major problem during the field visit. They said they do not use any traditional medicine or put anything on the cord. They also aid that they refer the woman immediately to come to the HF and no one ever refuses, however this was not supported by the HF staff's perspectives. Unfortunately the Team did not have time to analyze the TBA referral sheets; this information is needed to better understand the situation. The Team can not reach final conclusions; hopefully the TBA practices will be further assessed in the upcoming training.

The TBAs said that women do not want to go to HF because of the cost; the woman waits and hopes the problem will go away. Many times they will not call the TBA until the problem is very serious.

Most TBAs knew that bleeding, infection and swelling (of the feet and some mentioned face/ hands) were problems. There is a local herb that women take for swelling. None of the TBAs interviewed had ever seen a woman with convulsions and most thought that being in labor for 2 days was not a problem.

TBAs of several HFs have formed their own associations. The trained TBAs serve as resource persons/leaders to their associations that meet monthly at their respective HFs. They all said they meet regularly with the CSP community activists; meetings with the HF staff were less frequent. Some associations have done training for their members, particularly the untrained TBAs, while others are trying to develop revenue generating activities.

Some of the TBAs said that they follow-up with the women after she has delivered/post-partum care. However, the timing frequency of the follow-up varies throughout the district. In general the TBAs ask the woman is she is having any problems and sees if there are any problems with the baby.

The community's perception of the TBAs varies, but many women preferred to deliver at home without the TBA. These findings are consistent with the 2001 KPC finding that 53% of women delivered at home without TBA assistance. Some community's said that the TBAs could not be trusted because they did not maintain confidentiality about the delivery process.

TBA Challenges:

- Fair knowledge of the delivery process BUT low knowledge of danger signs.
- Some TBAs encourage women to deliver at home, which increases the delays n accessing appropriate services.
- Lack of BCC materials for health education (e.g., danger signs, referral, newborn care)

TBA Recommendations:

- District needs to clearly define the role they would like the TBAs to play (a balance between health educator, catalyst for referral and/or assistant during delivery).
- Review TBAs (through mock observations) and build their capacity to provide and use BCC materials, facilitate referrals, and identify and promptly refer complications.
- Explore a role for TBA in family planning education and/or distribution.
- Develop more practical hands-on training curriculum for TBAs.
- Develop more structured relationship with HF staff and TBAs (e.g., quarterly refresher trg, monthly review of their data).
- Assist TBA associations in developing revenue generating activities (e.g., possible social marketing of clean delivery kits.

B. Men's Perspectives

Men said that pregnancy was a normal condition; many woman are pregnant every year. They also said that they preferred their wives to deliver at home because it is more convenient and less costly.

In general there has been very little male involvement in MNH services. The Team found that most men have very little or inaccurate information about MNH issues. This was also found in the 2004 LQAS data, including:

- 35% of men knew 2 dangers signs during pregnancy
- 26% of men knew 2 danger signs during labor
- 36% of men knew 2 post-partum danger signs
- 17% of men could name 2 newborn danger signs.

Despite the fact that men have little knowledge, both men and women told the Team that men are the key decision-makers, particularly regarding decisions to seek care. The 2002 Gender study found that husbands were the principle decision maker. The study also found a strong discordance between men and women regarding who decides about conception and the use of FP, when and if the woman attends ANC, place of delivery, when to seek emergency assistance for obstetric complications. These findings indicate low levels of communication and consensus between couples on how they actually make decisions regarding reproductive health.

Cost was a major factor that inhibited use of services, even for women with complications. Families who belong to the mutelles said that they are more likely to use services because they can afford them. There has been a positive correlation between membership in the mutelle and services use; as membership has increased so has service use. Participation in the mutelle ranged greatly by village (10%-40%). So the first need is to design a way to increase the participation of families in the mutelle. The Team was told that the initial payment ranging from 2000-2500 ($3.3-$4.2) was too high for many families. Many men said that they could pay the initial fee in installments (they thought 500F was affordable) but to pay the full amount was very difficult

Another issue is that the mutelle policies are not consistent and many of the committee members are fairly new at managing this program. In addition, there is a need to collectively harness the benefits of the mutelles with more flexibility. For example, to date if a family is a member of a mutelle and they move there is no way to transfer their membership. These findings are consistent with the MTR findings and their recommendations were to standardize mutelle policies and begin to create a federation of mutelles.

The men told us that if the woman has to go to the HF, due to a complication, and she is not in the mutelle it would cost 4000F ($6.84) while she would only have to pay 100F is she was in the mutelle. If the woman had to go to Butare Hospital it would costs at least another 10,000F ($17.09), including 5000F for the ambulance, for those not in the mutelle. The men said that the HF would take care of the woman who was not in the mutelle without money but she could not leave without paying. Often times they would have to sell part of their land to get the money.

Some men said that the TBAs could not be trusted because they did not maintain confidentiality about the women. In general men said that they make decisions quickly, but if the family is very poor they may delay to decide due to the cost of services. Once a decision is made, the men (stretcher committee) gather to carry the woman to the HF.

Both men and women said that they resumed sexual relations within the first 10 days after delivery, which could increase infection of post-partum women (2003 Gender and health study also confirmed this finding).

Knowledge among men on family planning (FP) options was fair (62% could name 2 modern FP methods, LQAS); all men said that they did not like to use condoms. There seems to be very little discussion among the couple about child spacing. Most of the men said they would like to learn more about these topics which is an encouraging sign.

***Male Involvement Challenges*:**

- Low knowledge among men in terms of reproductive health, MNH.
- Limited involvement of men in health services.
- Lack of “ready cash” and high cost of health services.
- Limited participation in mutelle due to high cost.
- Men don’t prefer women to use of FP, and they particularly dislike condoms.
- Little couple discussion/planning (e.g. if there is a complication, space between children)
- Preference for home deliveries.

Male Involvement Recommendations:

- Develop appropriate BCC messages and materials for men; distribute these messages through male peers, male animators or appropriate channels where men meet
- Involve the local authorities in sensitization efforts particularly discussion of gender issues.
- Develop strategy to enhance male knowledge of an involvement in MNH issues based on Gender & Health study findings and community feedback discussions, particularly to increase couple communication.

C. Women's Perspectives

Many of the women's perspectives were similar to the men's so those common areas will not be repeated in this section, including:

- pregnancy is considered normal
- preference for home delivery
- limited participation in mutelle due to high cost
- mixed perceptions regarding TBAs
- high cost of delivery services.

Most women said they went for 2-3 ANC visits. Most did not see the need why they should go more often. All the women knew that they should check the position of the baby during an ANC visit; this was the main reason they went to the services. Some knew that they should get TT immunization. Very few knew they should take IFA and unfortunately even fewer had taken IFA during their last pregnancy. When asked about danger signs they said dizziness, swelling, usually of the feet, and bleeding. Only a few mentioned headache. There is a traditional herb that most women take fairly often for swelling during pregnancy and/or post-partum period.

Most women said that the HF staff had told them to deliver in the HF with their first baby. Women did not because of cost and the cultural belief that "a strong woman" delivers alone. It was clear that the women thought there was absolute no risk once you had delivered the first child, and very minimal risk for primiparas.

Women said they preferred to deliver at home; some wanted the TBAs there while many didn't feel the need to call them. Several women that hey only called the TBA when there was a problem. Some women said that the TBAs could not be trusted because they did not maintain confidentiality about the women. Some women also gave similar feedback about the HF staff. Most women said that complicated deliveries were not a main problem; only a few women had problems. Women said that the men would make the decision about either to go to the HF or not. They indicated that cost was a major barrier, particularly if the family did not belong to the mutelle. Some women said there family members would encourage them to wait to see if the problem would go away because of the lack of "ready cash" and the cost of services. Families that belong to a mutelle did not site cost as a barrier to services.

While women said TBAs do not "get paid for their services, most receive some in-kind gift. Some women said that the TBAs were overtly charging (500F) for their services. Some of the Assessment Team members felt that the TBAs were purposely encouraging women to deliver at home to maintain this livelihood. This was based on limited discussions with focus groups in a few villages, but not all. Further study would be needed to understand the magnitude of the problem.

Many women thought that it was normal to be in labor for 2-3 days. Bleeding was the most commonly known danger sign. Women said that swelling was a problem, but they used a local herb to treat it. No one had ever seen a woman with convulsions. So in general, knowledge of dangers signs was low which is consistent with the 2004 LQAS findings that:

- 50% knew 2 dangers signs during pregnancy
- 46% knew 2 danger signs during labor
- 37% knew 2 post-partum danger signs
- 31% could name 2 newborn danger signs.
-

While overall awareness of FP was fairly high (85%), only 53% of women could name 2 modern FP methods;17% of women are currently using a modern FP method (LQAS, 2004).

In general there was not an appreciation of the importance of post-partum care; it was not well understood and services were generally not accessed by mothers and or their newborns. Only 3% of mothers receive a post-partum visit within the first month following delivery while 82% of mothers attend at least two ANC consultations (B/SPH 2001). There did not seem to be a lot of food taboos or other traditional practices that were harmful for women during this period. Both men and women said that they resumed sexual relations within the first 10 days after delivery, which could increase infection of post-partum women (2003 Gender and health study also confirmed this finding).

The Team was told that the cord was cut with a new razor (that they buy) and tied with thread (that they had from the house). Women said that they did not put anything on the cord. Very few village women mentioned receiving clean delivery kits from the HF. The HF staff said that they had not had any clean delivery kits for several months. The woman told us that they dried the baby but they do not bath them until the second day. In addition, when they bathe the baby they do not try to remove the vernix. Women said that they begin breastfeeding after delivery (56% began within the first hour, LQAS 2004) and they do not give any other fluids to the baby.

Women knew only a few newborn danger signs: difficulty breathing and some knew about difficulty breastfeeding. None of the women had ever seen physiologic (normal jaundice), pathologic jaundice or tetanus**.** Some women said that they believed small babies did not breastfeed well because they were lazy.

Women's Challenges:

- Low knowledge among women in terms of reproductive health, MNH issues, particularly maternal/newborn danger signs.
- Low knowledge and lack of access to modern FP services.
- Preference for home delivery, many without a TBA.
- Limited couple communication.
- Limited participation in mutelle due to high cost.

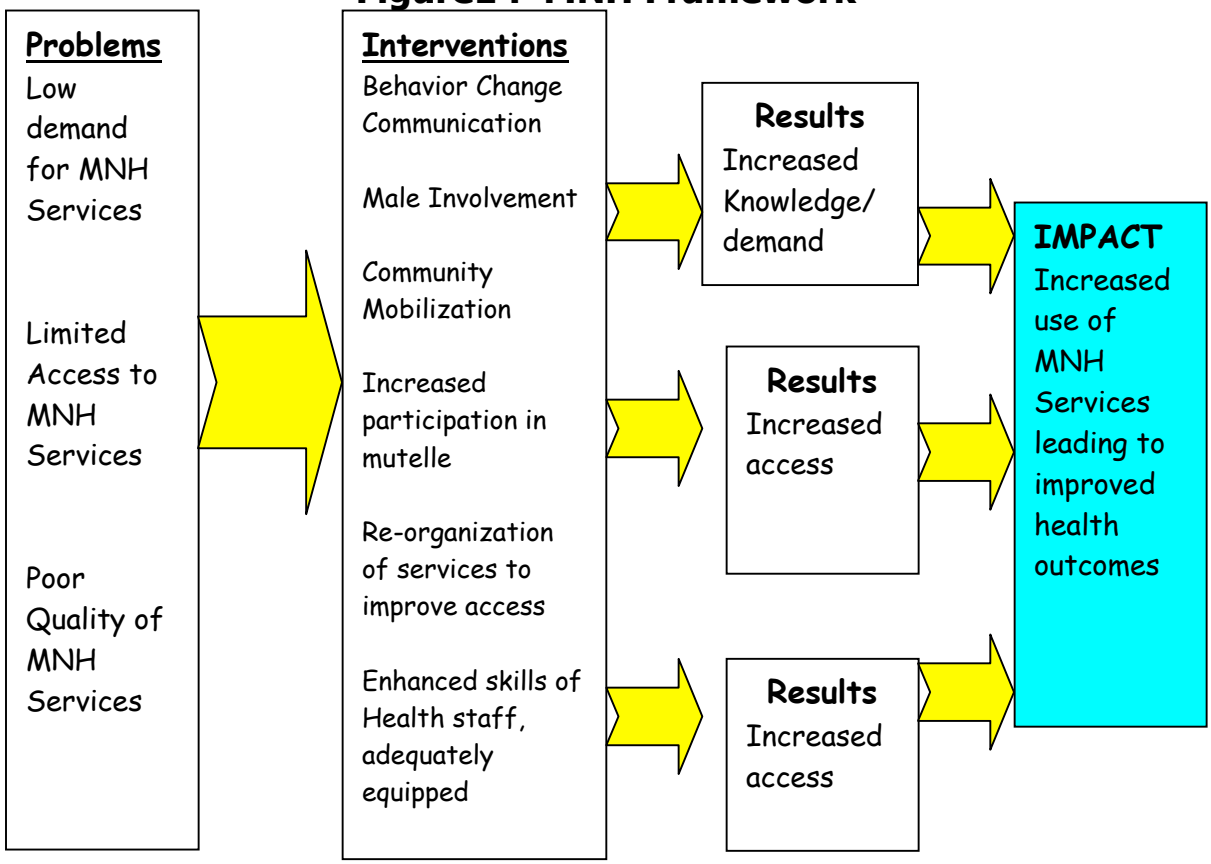
Women Recommendations:

- Develop appropriate BCC messages and materials in key area including the importance of:
  - ANC (e.g., IFA, TT and 4 visits),
  - primiparas delivering in the HF;
  - immediately coming to HF for any maternal or newborn danger signs;
  - appropriate duration of labor;
  - post-partum care
  - good newborn care
  - couple communication.
- Involve the local authorities in sensitization efforts.
- Income generating activities with women's groups.
- Increase participation in mutelle.

Section Two:
District MNH Strategy

The District developed a 3-5 year draft District MNH strategy, Based on the findings of the Assessment Team and discussions with district and HF. Figure X outlines the overall MNH framework for the District.

Figure1 : MNH Framework



As outlined throughout the assessment section the key MNH issues in the district are:

- low knowledge, identification, stabilization and transfer of most maternal and newborn danger signs/complications among HF staff
- low knowledge of key service protocols, particularly use of partograph and protocols for post-partum and newborn care
- limited availability of basic equipment and supplies to provide high quality services
- limited access to FP services
- low knowledge and lack of clear BCC messages/materials to educate men and women about all MNH services and danger signs
- women prefer to deliver at home with female relatives, often time without a TBA
- TBAs have minimal knowledge of maternal and newborn danger signs
- low knowledge and involvement of men in key MNH Issues, including FP
- cost of health services, particularly if they are not in a mutelle, is a major barrier to use of services
- limited use of data for decision-making processes to improve services.

Table 10 outlines the key strategies to address the main problem areas identified by the Assessment Team, district and health centers staff. The Table outlines key activities to be implemented by time period and level of personnel. (*See Annex E for a more complete listing of interventions for each strategy.*