A Behavior Change Approach to Investigating Factors Influencing Women's Use of Skilled Care in Homa Bay District, Kenya

Mona Moore (1), Rebecca Copeland (2), Isabella Chege (3), Donna Pido (4), Marcia Griffiths (5)

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Academy for Educational Development/The Manoff Group
Washington, D.C.

1. Senior Maternal Health Advisor, CHANGE Project
2. Consultant, CHANGE Project
3. Skilled Care Initiative Project Coordinator, Family Care International, Kenya
4. Consultant, CHANGE Project
5. President, The Manoff Group

This version of the qualitative report is a WORKING DRAFT. Family Care International (FCI) requested that CHANGE technical assistance be designed in such a way that the process of working with raw qualitative data to develop a research-based behavior change intervention strategy be transparent.

This presents an opportunity for capacity building, since all of the field teams will be able to follow the step by step process evident in this working draft. The key steps in this process are: 1) selecting a full set of verbatims from the interview responses, 2) clustering the verbatims, 3) developing summary statements that capture the main t theme of each cluster, 4) identifying the behavior change implications of each verbatim cluster and corresponding summary statement, and 5) identifying the specific strategies suggested by the behavior change implications.

In a later version of this report, all but the most illustrative verbatims will be removed, summary statements will be more cohesively presented, references will be interwoven into the new text, and the discussion section will contain a more comprehensive presentation of the importance of these research findings to the global safe motherhood community.

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Acknowledgements

Community Interview Team

The Research Team

Isabella Chege, Project Coordinator, FCI
Dr. Donna Pido, Research Coordinator, CHANGE Project Consultant
Josephine Sika, Language Consultant

Coaches

Dishon Gogi, Provincial Health Education Officer, Nyanza Province
Mary Mboya, District Public Health Nurse, Homa Bay District
Grace Ajuoga, District Public Health Nurse, Migori
Dr. George Orero, Obstetrician
Dr. Chris Comoro, Anthropologist
Salome Adala, Ministry of Health

Community Interviewers

Evanson Odhiambo
Celestine Atieno Ojijo
Hawa Adhiambo Ojwang
Miltone Omondi
Jane Oswago
Andrew Midigo
Sospeter Ochieng Oyugi
Jashua Makobongo

Okello Ahago
Anne Akinyi Obiny
Roselyne Atieno
Thomas Sariah
Fred Olima
Prisca Awuor Okech
Ruth Anyango Muga
Edward Juma Oloo
Colletta Ogutu
Esther Vusaka
Irene Adhiambo Masudi
Beatrice Rachuonyo
June Achieng

Data Pre-analysis Team/ Nairobi

Dr. Donna Pido
Dr. Odoch Pido
Josephine Sika
Beatrice Rachuonyo
Miltone Omondi
Thomas Sariah
Edward Juma Oloo

Family Care International

Ann Thairu
Ellen Brazier
Ellen Themmen
Ann Starrs
Michele Trombley
Pam Bolton
Kate Straub

CHANGE Project

AED
Suzan Zimicki
Anton Schneider
Sarah Barnwell
Jennifer March
Cindy Rider

The Manoff Group
Lisa Sherburne
Paulette Edwards

Acronyms

AED	Academy for Educational Development
AID	Agency for International Development
ANC	Antenatal Care
BCI	Behavior Change Intervention
BEOC	Basic Emergency Obstetric Care
CBD	Community Based Distributor
CEOC	Comprehensive Emergency Obstetric Care
CHW	Community Health Worker
DHMT	District Health Management Team
DPHN	District Public Health Nurse
EFFI	Elderly Female Family Influential
EmOC	Emergency Obstetrics Care
EPPC	Early Postpartum Care
FCI	Family Care International
FGD	Focus Group Discussion
FP	Family Planning
GD	Group Discussion
GOK	Government of Kenya
IDI	In-depth Interview
IPPC	Interpersonal Counseling and Communication
KDHS	Kenya Demographic and Health Survey
KRCHN	Kenya Registered Community Health Nurse
KRM	Kenya Registered Midwife
LSS	Life Saving Skills
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
NRHCS	National Reproductive Health Care Strategy
OB/GYN	Obstetrician/Gynecologist
PHT	Public Health Technician
RVF	Recto-vaginal Fistula
SCI	Skilled Care Initiative
SKATT	Skilled Attendant
STI	Sexually Transmitted Infections
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
USAID	United States Agency for International Development
VVF	Vesico-vaginal Fistula

Executive Summary

The CHANGE Project (Academy for Educational Development (AED)/The Manoff Group) was designed to identify, develop and apply innovative behavior change tools and approaches to improve behaviors relevant to maternal health, child health and nutrition. CHANGE has received support from the United States Agency for International Development's (USAID) Global Bureau to develop tools and approaches to specifically address priority behavioral issues in maternal mortality reduction, and to work with partners to plan, implement, and evaluate these tools and approaches. CHANGE collaborates with field partners and programs where improved maternal health services are in place, or being strengthened, as part of the globally endorsed "systems approach" to reducing maternal and newborn deaths.

A generic set of model tools is being developed and tested with partners in several country settings. The set of tools, "A Minimum Package of Behavior Change Interventions for Maternal Survival", focuses on changing behaviors at individual, household, community and institutional levels. The major behavioral objectives are to increase birth preparedness; to increase the use of a skilled attendant during pregnancy, birth and early postpartum; to increase the timely use of skilled care for obstetric and newborn complications and emergencies; and to improve the provision of quality maternal and newborn care by skilled maternal care providers.

The generic qualitative research tools were developed by CHANGE as part of the Minimum Package to help identify the country-specific, local dimensions of decisionmaking related to maternal health care seeking, and other contextual factors. This helps to increase demand for services, and to design services that meet the stated preferences of women and communities. The field-tested generic tools, and the lessons learned through field-testing, will provide a model for adaptation and implementation for other countries that want to include research-based behavioral interventions as part of comprehensive maternal survival programs.

This report presents results from the application of adapted generic tools in partnership with Family Care International (FCI), as an initial part of the field work for their Skilled Care Initiative program in Kenya. The FCI Skilled Care Initiative (SCI) has as its overall goal increasing rates of skilled attendance by ten percent in the project implementation areas. Among its objectives are promoting birth preparedness, increasing use of skilled care for all women during normal births, especially when obstetric complications occur, and increasing the use of focused antenatal care by skilled providers. These objectives are consistent with those of the CHANGE Project, as well as those of many safe motherhood and maternal survival programs worldwide, making lessons learned from the experience with FCI in Kenya useful to a wider audience.

As the first step in developing a research-based behavior change intervention strategy for the SCI program in Kenya, CHANGE worked closely with FCI staff to create a behavior-based set of research instruments. This included generating a clear statement of ideal behaviors for each category of respondent thought to be involved in decisionmaking about use or provision of skilled care. Working from the list of ideal behaviors, detailed research objectives were developed to document current behaviors and underlying factors influencing use of skilled care. Research objectives were also included to capture the additional information needs required to develop interventions to **change** current behaviors more toward ideal behaviors.

Throughout Homa Bay District in Nyanza Province, eighty-five interviews were conducted. These included focus group discussions (FGDs), in-depth interviews (IDIs), group discussions (GDs) and complication narratives. Twenty-one community interviewers were recruited from local communities in the Homa Bay and Migori Districts of Nyanza Province.

Behavior Change Implications of Key Research Findings

Many of the research results confirmed findings that are common to rural Kenya as a whole, and to remote rural areas around the developing world. There were, however, several intriguing and unexpected findings that have contributed new dimensions to the current understanding of childbirth careseeking behavior in Homa Bay District. In addition, a review of the anthropological literature documented several sociocultural factors unique to Luo people, which could have implications for the use of skilled childbirth attendance.

Perhaps the most potent motivator for use of ANC was the desire to obtain the antenatal card, available only at facilities where skilled ANC is provided. All categories of respondents acknowledged the critical importance of having an antenatal card as a "passport" to skilled childbirth care, particularly emergency obstetric care.

Despite high ANC attendance, birth preparedness according to the accepted elements of global safe motherhood programs is almost non-existent in Homa Bay District. As in many similar settings, household careseeking decisionmaking is uninformed, excruciatingly slow, and often with many instances of careseeking from multiple, unskilled sources before even considering skilled care. There was an unanticipated finding of common and often lengthy "detours" to consult prayer groups that believe in curing through prayer alone. These detours often added to life-threatening delays in receipt of skilled care.

In Homa Bay District there is an unusually high existing knowledge of obstetric complications in the general population, even among male partners and religious leaders. Also, there were few "absolute" constraints to improving intrafamilial dialogue about childbirth related matters. The research documented the local terms for, and beliefs regarding, the major obstetric complications. In addition, the interviews uncovered a wide range of other "obstetric complications" that differ substantially from the Western medical belief system in terms of both attribution of cause and mode of treatment. The most intriguing among the "locally-perceived" obstetric complications is "rariu." Rariu and the beliefs surrounding it provide a perfect example of a "cultural mismatch" between the belief systems of clients and skilled obstetric care providers, and an ideal focus for the behavior change approach of negotiated behavior change.

The typical barriers to access to skilled care - cost, distance, and transport - were found to be important constraints in Homa Bay District as well, particularly in the most remote areas where even the most basic public transport is unavailable and unreliable. Respondents expressed several factors that motivated use of their preferred source of care. The kindness and "caring" care provided by traditional birth attendants (TBAs) is an overwhelming factor motivating women to continue to use TBAs. These characteristics of TBA care were in stark contrast to the characteristics ascribed to facility-based care from skilled providers.

The high level of expressed acceptability of the “linkworker” concept - repositioning TBAs as links to skilled care providers instead of their current role as childbirth care providers - is encouraging. Respondents expressed clear “conditions of acceptability” that would affect their acceptance of TBA linkworkers, especially developing an acceptable alternative means of compensation for TBAs who agree to link instead of deliver care.

There appears to be an overall faith in the technical competence of skilled providers among all categories of respondents. This faith in skilled providers persists despite clear documentation, **from the same respondents**, of widespread and serious inadequacies in both provider factors and system factors of quality of care, as measured by Western standards. This points out the need to continue investigating the differences between the relative importance given to various elements of quality care as measured by “community-perceived” factors versus Western “evidence-based” standards.

The attitudes and behaviors of skilled providers toward clients were described by respondents as a major barrier to use of skilled care. Even skilled attendants themselves recognized that their behavior toward clients was a significant barrier to use of skilled care. One aspect of the discussions with providers in Homa Bay District that must not be overlooked is the expressed felt-need of skilled providers themselves for more attention to not only the excessive physical demands, but also the psychological demands placed on them by their difficult conditions of service.

The complication narratives documented significant provider-related factors contributing to poor overall quality of care, particularly long delays in receipt of required emergency obstetric care. This means that even if women **do** manage to reach skilled care in a timely manner, there are frequently life threatening delays receiving care once they arrive.

One of the secondary objectives of this research was to explore behaviors in the early postpartum period, the two weeks after birth when many maternal and newborn deaths occur. Despite the fact that many of the complication narratives demonstrated a high occurrence of serious obstetric complications continuing into the days and weeks after birth, early postpartum care (EPPC) is virtually non-existent. The importance of continuing to observe women and newborns to detect complications during the first weeks after birth and the need for routine EPPC are underappreciated. Home-based skilled early postpartum care is virtually non-existent, and what EPPC there is at facilities is underutilized. However, skilled attendants were well versed in the elements of routine EPPC for those women who deliver in facilities (about 15%), and expressed a strong interest in learning more about the new emphasis on early postpartum care.

The research clearly identified “network nodes,” individuals central to setting community norms and facilitating the spread of information within each category of respondent. These central figures within social networks and illness networks can provide a focus for community behavior change interventions, and speed the diffusion of new ideas. Leaders of both conventional and unorthodox “religions” have been shown to demonstrate concern about maternal mortality, and already play an active part in providing social support to improve care.

Past qualitative research has shown that families and communities are not always willing to accept new ideas and behaviors that would require them to alter firmly established childbirth traditions. In Homa Bay District however, respondents expressed an unusually high degree of willingness to change current behaviors toward the increased use of skilled attendance. Many respondents eloquently expressed realistic, constructive suggestions for change, and a willingness to try to improve skilled careseeking behaviors, despite the difficult circumstances that exist in Homa Bay District for both clients and providers. The presence of such a high level of amenability to change toward skilled attendance increases the likelihood of rapid, measurable behavior change.

The experience working with FCI in Homa Bay District has provided valuable insights into the utility of CHANGE's generic qualitative instruments, and about aspects of their use to investigate factors underlying use of skilled care in safe motherhood programs. Along with lessons learned from application of the generic CHANGE qualitative research instruments in two additional country programs, the experience working with FCI in Homa Bay District will provide a basis for modification of the current format and content of the tools. Several changes for future research were recommended to FCI based on the preliminary analysis of the results from Homa Bay District that will hopefully provide additional information and fill some "gaps."

These recommendations included: reducing the total amount of interviews per category of respondent; adding two categories of interviews to further investigate the beliefs among religious "sect" leaders and their followers that inhibit use of skilled care; quickly eliminating areas of inquiry from interview guides once it is determined that the responses are similar to those from Homa Bay District; allowing the interviewers the flexibility to suggest and add new areas of inquiry based on daily review of results; devoting more attention to probing unusual or interesting findings; de-emphasizing the IDIs with women, as they did not yield much new information in Homa Bay District; and adding the additional methodology, projective techniques, planned but not implemented as part of the Homa Bay District research.

Working with the "seasoned" community researchers from the Homa Bay District study, the research in FCI's comparison area, Migori, has already been completed. When available, those findings will surely add not only to what has been learned from conversations with the women, families, community members, TBAs and skilled providers in Homa Bay District, but to the global understanding of factors influencing the use of skilled obstetric care.

I. BACKGROUND

A. BACKGROUND OF THE CHANGE PROJECT'S MATERNAL HEALTH COMPONENT

The CHANGE Project (AED/The Manoff Group) was designed to identify, develop and apply innovative behavior change tools and approaches to improve behaviors relevant to maternal health, child health and nutrition. CHANGE has received support from USAID's Global Bureau (SO2 team) to develop tools and approaches to address priority behavioral issues in maternal mortality reduction, and to work with partners to plan, implement, and evaluate these tools and approaches. CHANGE collaborates with field partners and programs where improved maternal health services are in place, or being strengthened, as part of the globally-endorsed "systems approach" to reducing maternal and newborn deaths.

A generic set of model tools is being developed and tested with partners in several country settings. The set of tools, "A Minimum Package of Behavior Change Interventions for Maternal Survival", focuses on changing behaviors at individual, household, community and institutional levels. The major behavioral objectives are to increase birth preparedness; to increase the use of a skilled attendant during pregnancy, birth and early postpartum; to increase the timely use of skilled care for obstetric and newborn complications and emergencies; and to improve the provision of quality maternal and newborn care by skilled maternal care providers.

The generic qualitative research tools were developed by CHANGE as part of the Minimum Package to help identify the country-specific, local dimensions of decisionmaking related to maternal health care seeking, and other contextual factors. This helps to increase demand for services and design services that meet the stated preferences of women and communities. The field tested generic tools, and the lessons learned through field testing, will provide a model for adaptation and implementation for other countries that want to include research-based behavioral interventions as part of comprehensive maternal survival programs

Rationale for the CHANGE Approach to Behavior Change Interventions (BCI) to Improve Maternal Survival

In the late 1990's, several international conferences were held to mark the ten-year anniversary of the Safe Motherhood Initiative, and to review progress made toward achievement of the goals of the Initiative during the first decade. A wealth of information detailing experiences, evidence and lessons learned from maternal health research and program implementation was compiled and disseminated. In-depth analysis of the data collected resulted in recommendations for many sweeping programmatic and methodological changes for programs to reduce maternal deaths (29, 36, 50, 72, 89, 111, 136, 194, 199). New approaches to measurement of maternal mortality and program monitoring, and refocused priorities for program design and content were suggested (1, 44, 52, 62, 73, 87, 140, 141, 143, 153, 164).

The recommendations for a new approach to safe motherhood programs were, in contrast to some interventions and approaches proposed earlier in the Initiative, firmly evidence-based. These suggestions for evidence-based reprioritization of resource allocation and program interventions have had far-reaching implications for national safe

motherhood programs. Policy makers and program planners have collaborated to revise global safe motherhood guidelines (184, 197, 198).

As understanding of the implications of the new evidence has grown within the global safe motherhood community, there has been a strong commitment to applying the evidence to develop more effective country programs, with good result (116, 129). An infusion of new funding has allowed rapid scale-up and expansion of programs, to continue to develop and improve interventions to reduce maternal deaths (42, 90, 105, 111). Efforts to evaluate current programs, analyze results and continually refine programs continue (22, 136, 139, 143, 153, 158, 171).

Although there is wide agreement on most of the new priorities regarding *what* needs to be done to reduce maternal deaths, many questions persist about *how* to rapidly and cost-effectively implement new approaches. This is true as well for behavior change interventions to improve safe motherhood and maternal survival. All of the many programmatic changes discussed above have implications on the design and content of the behavior change component of programs to reduce maternal deaths. Yet many programs have not updated their behavior change approach and intervention design to reflect the new, evidence-based global priorities.

Several comprehensive reviews produced during the past several years have provided updated information on innovative approaches to safe motherhood behavior change (75, 175, 176, 184), many of which are now being implemented as part of national programs (90, 116). Intense debate continues regarding the selection of priority behaviors to be communicated (76, 108), and the relative merit of the many diverse communication and mobilization approaches to help women, families and communities to improve maternal survival (28). A variety of frameworks and approaches have been suggested to guide the development of effective country programs (75, 110). The global dialogue on these safe motherhood behavior change and communication issues continues.

The CHANGE Project is developing a comprehensive package of behavior change interventions to improve maternal survival. The framework for the “Minimum Package of Behavior Change Interventions to Improve Maternal Survival” has three main components, which focus at the individual/ household level, at the community level, and at the care provider/facility level (Appendix I). The approach suggested for each level is based on a comprehensive review of behavior change field experience and research during the first decade of the Safe Motherhood Initiative, and takes into consideration the new global recommendations for maternal survival program priorities based on this evidence and experience. Because the CHANGE approach adds a new dimension or innovation at each level, the components are called “Danger Signs Plus”, (household) “Birth Preparedness Plus” (community), and “Skilled Attendance Plus” (care provider/facility). Three multi-disciplinary meetings were held during 2001, to elicit the input of an anthropologist, a behavioral scientist, an evaluation specialist and a midwife trainer on the content and format for the “minimum package” of tools and approaches.

From September 2001 to February 2002, CHANGE collaborated with **Family Care International (FCI)** to assist in the development of aspects of the behavior change component of their Skilled Care Initiative (SCI) in Kenya. Funded by The Gates Foundation, the Skilled Care Initiative is developing programs in three countries - Kenya, Tanzania, and Burkina Faso - to reduce maternal deaths by increasing skilled attendance at birth. The primary focus of the FCI/GOK program, in Nyanza Province,

Kenya, is to improve the use of skilled attendance by all pregnant women. Field activities began in September 2001, with a comprehensive facility needs assessment in two districts in Nyanza Province, Homa Bay District and Migori. Qualitative research was conducted in Homa Bay District and Migori from December 2001 – March 2002. This report describes the qualitative research in Homa Bay District.

Applying a Behavior Change Intervention (BCI) Approach to Increasing Skilled Attendance

A behavior change approach is a process for planning and implementing a comprehensive, strategic set of interventions and activities that aims to change behaviors at many levels to achieve a health objective. A behavior change approach identifies priority behaviors for change; uses qualitative research among critical target audiences to define major factors influencing these behaviors; and recommends a research-based set of behavior change interventions. A broad range of interventions might be required to change behaviors directly as well as to create a supportive community and policy environment for change. This usually requires expanding the range of "behavior change" activities beyond conventional communication, to link and coordinate communication activities with training, health systems support, product and service improvements and policy changes that may not usually be recognized as essential components of a behavior change strategy.

A comprehensive approach to behavior change to improve maternal survival recognizes that behavior change does not result from increasing knowledge alone. Many contextual factors, including the behaviors of a wide family and community network influence individual behavior change. Creating an "enabling environment" – addressing barriers, resistances and motivators - is essential. The strategic selection and implementation of an appropriate set of behavior change interventions can help to directly improve maternal care-seeking practices, and help to create a supportive, "enabling" environment at household, community, health facility and policy levels, within which behavior changes to promote maternal survival can best occur.

The initial step in applying a behavior change approach is to conceptualize health objectives in behavioral terms and develop a set of behavior change objectives for each health outcome. The contributing behaviors and underlying factors at many levels that influence healthy outcomes - individual, family, community, health system, and policymakers - for each category of behavior and for each health objective should then be identified and addressed.

Thus, changing behavior requires links between interventions at multiple levels of influence, and interaction and integration among levels. Health care system improvements, including training and management support to improve quality of care, improved products and services, community mobilization, and support for policy change are not isolated individual activities, but may be considered as an integral part of a strategic behavior change plan.

Behavior change to increase demand for, and utilization of, maternal health services is influenced by access factors and acceptability of services. Service acceptability from a client perspective is often based on perceived quality, health worker attitudes and client-provider interactions. Comprehensive strategies to change utilization behavior often require interventions that address these factors.

For health service providers as well as individuals, knowledge alone does not change behavior. Training programs to improve technical skills and interpersonal counseling and communication (IPCC) skills alone will not likely to result in sustained change in behavior or practice. Long term changes in the behavior, attitudes, and performance of health service providers are more likely when training includes provider behavior analysis and practice of new behaviors.

Behaviors identified for change at individual and community level should be systematically reflected in, and linked to, clinical protocols and training guidelines for health care providers. Motivational activities and team building initiatives help to build bridges between communities and health services empower health service providers to recognize the need for changes within the health system. Dialogue between professional health service providers and community/traditional health workers, and between public and private sector providers, supports effective institutional-level behavior change.

One of the fundamental principles of the behavior change approach is promoting behavior change in the context of social change. Community engagement, ownership and empowerment are recognized as key to sustained behavior change. Often, it is necessary for programs to re-examine current activities and rebalance strategic approaches to include and better integrate social mobilization, community mobilization, and advocacy activities with more conventional behavior change strategies such as health communication aimed at individual behavior change.

At the community level, a behavior change approach focuses on activities that create and sustain an enabling environment for behavior change and social change, building partnerships with communities and developing interventions considering the community's own assessment of their needs and priorities. Community-centered behavior change interventions promote the empowerment of community partners, and encourage collaborative design and implementation of local programs. A community-oriented behavior change approach recognizes people and communities as agents for their own change, placing information within the community for dialogue, debate and collective action, and using community-available resources to overcome barriers when feasible. An assets- based approach helps communities identify, strengthen and utilize resources and knowledge that exist within the community itself to support behavior change and improve health outcomes.

Key Elements of the CHANGE Approach

There are several concepts/elements involved in the CHANGE approach to behavior change to improve maternal survival that are key to the success of the approach. Among them are the central concept of behavior-based programming; a standardized format for strategic application of research results to behavior change strategy development; "concept testing"; negotiating behavior change; localization of behavior change interventions through use of a lexicon of terms; positioning qualitative research as a community behavior change intervention through use of community interviewers; repatterning behaviors modeled on "positive deviance" identified in the community; and applying a "stages-of-change" – based framework to measuring behavior change.

Behavior-Based Programming

The concept of behavior-based programming is central to CHANGE's "Minimum Package of Behavior Change Interventions to Improve Maternal Survival". This concept **places behavior change at the center of the program design process**. As described above, developing a behavioral framework based on a program's desired health outcomes is the initial step, beginning with clear delineation of the "ideal" behaviors that would be required of all potential influentials, at all relevant levels of intervention, to achieve the improved outcome (Appendix II). A set of research objectives per category of respondent, based on these ideal behaviors, guides the systematic design of a qualitative research plan and instruments that contain all the elements, not only to document current behaviors in relation to the "ideals", but also to explore how current behaviors can be redirected, repatterned or repositioned. Appendix III contains a sample instrument from CHANGE's generic qualitative research tools to explore factors influencing use of skilled childbirth attendance. The tools, a set of behavior-based instruments, were designed to document actual behaviors, barriers, motivators, amenability to change, conditions of acceptability, and "user characteristics". Each of these elements is essential to the design of a comprehensive set of research-based behavior change interventions.

The design of these instruments incorporates the information needs suggested by recent global emphasis on universal use of skilled care at birth; the need to "reposition" TBAs as "links" to skilled care for all women, instead of their current role as care providers; the critical, lifesaving importance of use of skilled care during the early postpartum period; and the need to enable skilled maternal care providers to actively participate in the provision of higher quality, more "caring" maternity services for women.

BCI Strategy Formulation Grid

CHANGE uses a standardized format for the strategic application of research results to behavior change strategy development. This format has been successfully applied in a wide range of health programs over the past decade. One of the most persistent gaps in the design of the behavior change component of programs is that often, even when results from qualitative research that was well-conceived, well-implemented and well - analyzed are available, the results are not systematically carried forward into the strategic design of comprehensive behavior change interventions. The BCI strategy formulation grid suggested for use with the generic CHANGE qualitative research instruments helps to address this gap by providing a simple framework for incorporating research results into BCI strategy design (Appendix IV).

Consultative Research: Concept Testing and Negotiated Behavior Change

To date, consultative research is most widely known through its application to child nutrition, but is appropriate to promoting skilled childbirth attendance as well. Consultative research maximally involves communities and households not only as respondents in the qualitative research, but also in the design, testing, and modification of new behaviors to increase acceptability and adoption. For example, in this research, all categories of respondents are specifically asked for their opinion on the "new" concept of repositioning TBAs as "links to skilled care", instead of actual care providers. Testing this concept on the ground, with the people who must actually agree to try it, is

critical to assure the potential acceptability **in the field** of the global consensus on promoting skilled care for all women.

Negotiating behavior change – talking with women, families and communities to develop realistic, feasible behaviors that come as close to the "ideal" behaviors as local conditions permit, and to determine the specific "conditions of acceptability"- **before** behaviors, strategies, and interventions have been decided on can increase the likelihood of sustained behavior change.

Analyzing Social Networks to Improve Maternal Survival

Social network analysis is a method to improve understanding of the nature and composition of social networks that influence behaviors. Subsequent use of these networks to rapidly disseminate information about new behaviors can accelerate their adoption and increase sustainability. Social network analysis can improve understanding of the nature and composition of social networks influencing behaviors of pregnant women and new mothers. It can document the actual and potential connections between people in those networks; describe the primary sources of power, influence and communication in networks; identify sub-groups and common social roles of network members; define network boundaries and find bridges between networks; and identify embedded behaviors that take place within the network structure. Adoption of improved practices, in theory, is more rapid when it is perceived that those practices have the "social approval" of key influentials within an individual's social network.

Safe motherhood behavior change interventions during the past decade have shown that pregnant women themselves are rarely the primary decision makers regarding the health care they receive during labor, birth and postpartum. Depending on cultural variables, husbands, mother-in-laws, and other elder female family influentials (EFFIs) have been shown to control many aspects of health seeking behaviors that impact on both maternal and newborn survival. As recognition of this influence grows, communication activities are being aimed at key influentials in social networks, in addition to the pregnant woman herself.

"Localization" of behavior change interventions

There is a growing recognition that generic messages promoting broad behaviors, use of skilled attendance at birth for example, need to be "localized" to have contextual meaning in order to be effective. Too often, "messages" are developed centrally, in countries, regions or even at global level, and may not retain the intended meaning once they reach families and communities, who live their lives locally, often within well-defined cultural boundaries. Defining local cultural context and linguistic subtleties can make a generic message locally meaningful and **actionable.**

An important initial part of the qualitative research process is developing a **lexicon of maternal health terms** relevant to childbirth and early postpartum. The purpose of this lexicon is more than simple translation of predominantly Western-oriented medical terms and concepts into the local language. A well-researched lexicon also captures the colloquialisms or local "slang" terms. As many traditional cultures have a strong, vital oral tradition, there are also often proverbs, idioms and rhymes that are used to indirectly express concepts that are culturally sensitive.

Documenting the precise words, phrases and concepts that communities themselves use allows them to be skillfully woven into behavior change materials and messages, to increase local comprehension. This localization process has been called the “house-to home “metaphor by UNAIDS. The lexicon of terms developed to guide the research in Homa Bay District District is included as Appendix IV.

Qualitative Research as an Intervention: Community Interviewers

Use of community interviewers to implement qualitative research has been widely practiced and widely debated. Although there are often many challenges involved in the training and orientation of community interviewers, there are also distinct benefits. In contrast to well-educated, methodologically-adept, external qualitative researchers, community researchers are more likely to bridge the often significant social and cultural gaps that can hinder accurate data collection in households and communities. Community interviewers speak the same language in more than the literal sense- they share common life experience within the same conditions and constraints that respondents themselves experience. Perhaps more importantly, through the process of investigating and analyzing behavioral determinants, community researchers frequently become informed, motivated advocates of and participants in community behavior change interventions.

Doers/Non-Doers

The positive deviance approach was popularized through its use in child nutrition in Asia (168). There are several methods of identifying positive deviants in communities – individuals who, despite the presence of the same barriers, constraints, and resistances of their neighbors, practice the “ideal” behavior when the majority in the community do not (169). Identifying the characteristics and motivations of such “doers” can help determine the enabling factors, social support, and other factors that influence health-promotive behaviors. “Doers” identified through the research can be used as models for realistic promotion of improved behaviors in resource-scarce settings. The respondent identification information for each category of respondent in the CHANGE generic qualitative instruments, if properly collected and applied, can be used to separate and analyze responses according to “doer/non-doer” status.

Using a “Stages- of- Change Based” Framework to Measure Behavior Change

A consistent finding in maternal survival programs over the past decade is that **changing behaviors related to childbirth takes time,** often more time than typical program timeframes allow. Small but significant changes in use of skilled childbirth care and other recommended behaviors have been demonstrated. However, these changes might have been of a greater magnitude if behavior change interventions had been continued over a longer time period. CHANGE has developed a framework for measuring behavior change in use of skilled childbirth care utilizing Prochaska’s stages-of-change behavioral theory model. Adapting Prochaska’s stages of behavior change, this model classifies respondents according to the five sequential stages of behavior change to get a broad sense of the level of behavioral resistance, contemplation, intention, adoption, and maintenance currently in a community. Using baseline results, programs can develop realistic behavior change goals accordingly.

For example, even if a program timeframe was not sufficient to allow measurable change in an "end behavior," such as use of skilled care in an obstetric emergency, by comparing pre- and post- survey results, demonstrable shifts **toward** the end behavior might be measurable. If a given community at baseline was 70% resistant to the concept of skilled emergency care, if the percentage of resistors at end-of-project was reduced to 20%, this demonstrates substantial **incremental** movement through the stages of change, **toward** the ideal behavior. This approach could be useful to add to the small but growing evidence base for the effectiveness of behavior change interventions to increase maternal survival. A sample of the "stages-of-change" based framework applied to maternal survival is included as Appendix V.

B. RESEARCH BACKGROUND

Adapting the Generic CHANGE Qualitative Research Plan and Instruments to Meet Specific Partner Program Needs

As discussed above, although some elements of the research plan and process would likely be used in all research settings, the generic CHANGE qualitative research tools must be adapted to accommodate specific program objectives and local, setting-specific considerations.

The Family Care International (FCI) Skilled Care Initiative in Kenya has as its overall goal increasing rates of skilled attendance by ten percent in the project implementation area (there is also a comparison and a control district). Among its objectives are promoting birth preparedness, increasing use of skilled care for all women during normal births and especially when obstetric complications occur, and increasing the issue of focused antenatal care by skilled providers. These objectives are consistent with those of the CHANGE Project, as well as those of many safe motherhood and maternal survival programs worldwide, making lessons learned from the development and adaptation of a qualitative research plan and instruments specific to FCI program needs useful to a wider audience.

Behavior-Based Research Objectives/Planning the Research

Working closely with FCI staff, CHANGE assisted in the development of a behavior-based set of research instruments, beginning with a clear statement of ideal behaviors for each category of respondent thought to be involved in decisionmaking about use or provision of skilled care. Working from the list of ideal behaviors, detailed research objectives were developed to document current behaviors and underlying factors influencing use of skilled care. Research objectives were also included to capture the additional needs required to develop interventions to **change** current behaviors more toward ideal behaviors.

The set of CHANGE generic instruments – IDIs, FGDs, and GDs for complication narratives – were reviewed in detail by FCI staff in New York and Kenya, and a CHANGE research consultant in Nairobi. A category of respondents for community and religious leaders was added and adaptations of the generic tools were made based on FCI's priorities. However, the basic structure and content of the original instruments was maintained.

Research Methodologies

Perhaps the most widely used qualitative method is focus group discussions (FGDs). However, qualitative research results based on FGDs only, particularly when exploring childbirth-related issues, often to not provide the depth of information required to develop high quality behavior change interventions. For this reason, the research plan developed by FCI and CHANGE relies heavily on in-depth interviews (IDIs) with most categories of respondents.

A "complication narrative" interview guide was also developed, to trace the steps in careseeking and document the delays, barriers and specific local conditions contributing to non-use or late use of skilled care in obstetric emergencies. The complication

narrative instruments were designed to be conducted as group discussions (GDs) among what we called the “Birth Unit” – the woman herself, if still alive, all family members present at the time of the complication or called into participate in decisionmaking or careseeking and the birth attendant. This group composition allows for expression of the opinions and perspectives of all those involved in recognition, decisionmaking, and emergency careseeking.

FCI’s Qualitative Research Plan

The respondents were selected from five divisions in Homa Bay District: Riana, Rangwe, Asego, Nyarongi and Ndhiwa. (see map next page)

The qualitative research instruments included:

In-depth interviews (IDI) guides for:

- Women who had experienced a normal delivery within the past six months
- Women and families who had experienced obstetric complications
- Elder Female Family Influentials (EFFIs) of women who delivered during the last six months
- Husbands or male partners of women who delivered during the past six months
- Traditional birth attendants (TBAs)
- Skilled birth attendants, including nurse-midwives, registered and enrolled nurses, and physicians.

Focus Group Discussion (FGD) guides for:

- Women who had experienced a normal delivery during the past six months
- Husbands or male partners of women who had delivered during the past six months
- Traditional birth attendants (TBAs)
- Community leaders

Group Discussion (GD) guide for:

- Women who experienced obstetric complications during the past six months and their “birth unit.”

Number of Interviews

An appropriate number of interviews were planned per category of respondent to develop a sample representative of several key variables FCI and CHANGE thought were important in skilled careseeking. These include: distance from District Hospital or other facility with comprehensive emergency obstetric care (CEOC) capabilities; age of woman; and trained versus untrained TBAs. The hypothesis was that segmented, targeted behavior change strategies and interventions might be required according to these variables.

HOMA BAY DISTRICT: Health Facilities Map

Table 1: Number and Type of Interviews Planned/Conducted in Homa Bay District

Type of Interview	Type of respondent	No. of interviews planned	No. of interviews conducted
In-depth Interviews		54	49
IDI 1	Women with normal delivery	12	14
IDI 2	Elderly Female Family Influential	4	6
IDI 3	Partners	6	6
IDI 4	TBAs	8	9
IDI 5	Skilled attendants	18	10
IDI 6	Women w/ delivery complications	6	4
Focus Group Discussions		14	19
FGD 1	Women with delivery	4	6
FGD 2	Partners	2	4
FGD 3	TBAs	8	9
Group Discussions		8	17
GD	Birth Unit	6	11
GD	Community leaders	2	6
TOTAL INTERVIEWS		**76**	**85**

Arranging Locations and Identifying Respondents

Locating appropriate respondents, particularly for complication narratives, was challenging, as many women who had experienced obstetric complications and were recorded as such in hospital records could not be traced with the limited identification information contained in those records. Although there was a clear statement of the criteria for selection by type of obstetric complications acceptable for inclusion in the complication narratives, preliminary data analysis revealed that some of the respondents selected and interviewed did not actually meet that criteria. Therefore, the criteria were reviewed with interviewers and “Round Two” – a return to the community to identify more appropriate respondents for the complication narratives - was conducted, yielding respondents, many among families where maternal deaths had occurred.

The district public health officer assisted the research team by deploying 14 public health technicians (PHTs) to locate the number of respondents needed in each sample group. PHTs relied on TBAs and village elders residing in the study areas to identify respondents and assist in locating their homes. The district public health nurses (DPHNs) identified the skilled attendants in local facilities.

Community Interviewers/Interviewer Training

After much discussion about the relative merits of a professional, external interview team versus a community interviewer team, it was agreed to work with community interviewers. There are substantial challenges associated with the use of community interviewers, particularly those with no previous interview experience or familiarity with the technical aspects of skilled attendance programming. In this case, many interviewers lacked experience even with use of tape recorders.

Twenty-one community interviewers from both the implementation district (Homa Bay District) and the comparison district (Migori) were recruited. The interviewers had completed Form Four (high school) and had to have some personal experience with childbirth. They were selected by age and gender to work with specific groups of respondents. For example, young women conducted the interviews with women under 20 years of age, senior women interviewed EFFIs, younger men interviewed husbands and male partners, and senior men interviewed community and religious leaders.

The three-day interviewer training initially scheduled was increased to five days, to accommodate the additional training needs of this "interview-naive" group. The interviewers were requested to keep journals, and their journal entries, as well as the training notes of training coordinators, reflect initial apprehension on the part of both the interviewers themselves and the Kenyan senior staff in charge of the project. However, during post-training practice and the two weeks of actual interviews, most of the interviewers gained confidence working with the instruments and the quality of their interview technique improved noticeably.

After the training, the interviewers spent two additional days pre-testing the tools and interview procedures in Rachuonyo District, bordering Homa Bay District. Research assistants were deployed in teams of two, one person to ask questions and the other to take notes and tape the session. Each interviewer was under supervision of a "coach" (field supervisor).

Conducting, Transcribing, and Translating the Interviews

Over eighty-five interviews were conducted throughout Homa Bay District, according to the original research plan. One exception was a change in the total number of interviews per category, which necessitated unexpected field situations. The taped interviews were transcribed into handwritten Dholuo, the dialect spoken in Homa Bay District, and the written Dholuo transcripts were then translated into handwritten English. Because of time constraints, the assistant research consultant was requested to prioritize translation of those interviews that daily debriefs or discussions with fellow interviewers indicated were the most complete and insightful. At the time of the preliminary analysis of the data, approximately fifty-six of the total eighty-five interviews had been translated into handwritten English.

C. COUNTRY BACKGROUND

Skilled Childbirth Care in Kenya

Kenya hosted the first international meeting of the Safe Motherhood Initiative (SMI) in 1987. Since then, increasing access to and use of skilled maternity care is a major priority of the Kenyan Ministry of Health, as part of its efforts to reduce maternal mortality. Each year, there are almost 5,000 maternal deaths in Kenya, and over half a million women experience obstetric complications (53).

The Kenya National Strategy for Reproductive Health Care (NSHRC) states as its goal reducing the maternal mortality ratio (MMR) by half, from 365 to 170 (103). One survey, however, estimates that the MMR in Kenya is as high as 590 (115). The National Strategy for Reproductive Health Care (NSRHC) also aims to increase skilled childbirth attendance from 45% to 90% by the year 2010. The NSRHC outlines a set of key activities to increase access to skilled obstetric care and to improve the capacity of the health system to manage and refer obstetric complications.

Equity

There are large regional disparities in the availability and utilization of delivery care in Kenya. The global recommendation for health workers with "midwifery skills" necessary to allow skilled attendance for all women is a ratio of 20/100,000 (this could be interpreted as including both doctors and midwives) (87). There are approximately 3,300 physicians and 24,600 midwives in Kenya (104). Given the total population in Kenya of 29 million, this results in a physician to population ratio of 13/100,000, and a midwife to population ratio of 98/100,000(104). On the surface, this appears well within the global recommendation.

Table 2: National Demographic Indicators	
Total Population	28.6 million (2000 National Population Policy)
Women of Reproductive Age (15-49 years)	22%
Maternal Mortality Ratio	590 per 100,000 live births
Total number of hospitals	212
Doctor per population	13 per 100,000
Midwife per population	98 per 100,000
Adult literacy	77%

Source: Kenya MOH (104)

However, in Kenya, more than half (56%) of all health personnel are urban-based, and almost one quarter (25%) work in Nairobi (53). Separating out physicians from all health personnel, the percentage of urban-based is 84%. In 1998, urban women were almost twice as likely to deliver in a health facility as rural women (68% and 36%, respectively). There are also inequities in the distribution of skilled care providers. Skilled childbirth care, particularly in rural areas, is provided mostly by nurses/midwives. In Nairobi, twice as many obstetric care facilities have at least one physician on staff compared to obstetric care facilities in other provinces in Kenya (64% and 30 –45%, respectively) (102).

Coverage

From 1995 – 1998, forty four percent (44%) of all births nationwide were assisted by a skilled attendant, either a doctor or a nurse/midwife (115). In urban Nairobi, 78% of all births took place in a health facility, compared to 33% in rural Western province. Women who did not attend antenatal care, women over age thirty five, grand multiparas, and women with no education were the least likely to deliver in a facility (115). Particularly in rural areas, nurse/midwifes provided most skilled delivery care. Traditional birth attendants (TBAs) attended slightly more than 20% of all births nationwide. Only ten percent of the TBAs were trained. Up to a third of all births nationwide were either attended only by a relative, or with no birth attendant present.

Antenatal care (ANC) use is relatively high throughout Kenya. Almost all women (92%) made at least one ANC visit during pregnancy, and 60% of women made four or more visits (115). Although there were few rural-urban differences in the number of ANC visits per woman, considerable differences in the type of ANC provider were noted among provinces. For example, doctors provided thirty percent of all ANC in Nairobi, and only twelve percent of ANC in Western Province. Similar variations were also noted in the proportion of women who had received tetanus toxoid (TT) immunizations.

Table 3: Assistance During Delivery: Percent Distribution By Type of Attendant During Delivery, Kenya Demographic and Health Survey, 1995 - 1998

Attendant assisting during delivery*	National	Nyanza Province	Nairobi Province
Doctor	12	8	32
Nurse/midwife	32	30	45
Traditional birth attendant:	21	24	6
Trained	11	14	2
Untrained	10	10	4
Relative/other	24	21	12
Alone	10	16	4

The NSRHC identified the need for safe motherhood needs assessments to be conducted throughout Kenya, to provide the basis for program planning in the provinces. At least four major needs assessments have been conducted in the last few years. The needs assessments provide a comprehensive picture of the major problems in the health system that need to be addressed in order to ensure safe delivery care and care for obstetric complications for all women.

Quality and Access to Care

Overall, the four studies identified strikingly similar health system problems that limit the provision of quality skilled care during pregnancy and birth, particularly emergency obstetric care. Such care is not, in fact, available at many health facilities in Kenya. About 45% of all births in Kenya take place in health facilities. Among the 45% of facility-based births nationwide, 30% are in government or mission hospitals, 5% in health centers and 5% in private clinics (115). Most public and private health facilities provide

antenatal care. Yet only 37% of all facilities have the capacity to provide care for even normal births (102). According to a national survey, only 40% of hospitals and 30% of maternities had basic essential obstetric care (BEOC) capability. 28% of hospitals and 15% of maternities could provide comprehensive essential obstetric care (CEOC), which includes cesarean section (CS) and blood transfusion (102).

The assessments documented a limited capacity at lower level facilities (health centers) to manage common obstetric complications. Many facilities did not have the equipment, drugs and supplies to provide a full BEOC or CEOC package of services, lacking even basic supplies, such as delivery sets, cord ties, and disposable needles. (101,104,105). A significant proportion of skilled obstetric care providers at health centers did not have current knowledge and updated skills to correctly diagnose common obstetric problems and treat, stabilize, or refer patients appropriately (101,102,105).

Eighty percent of Kenyans live within six kilometers of a health facility, including health centers (53). However, because many health centers cannot currently provide even basic care for obstetric emergencies, to reach appropriate emergency obstetric care it is often necessary to bypass health centers to go directly to a hospital. This can require an hour or more of travel by vehicle, if vehicle is available (105). Only half of health centers providing delivery care have a vehicle and driver to transport patients to the nearest referral hospital (102). And even after women reached an appropriate referral facility, avoidable delays in receipt of emergency obstetric care were also noted. Two assessments found that many women had to wait from three to eleven hours for a cesarean section to be performed (104,105).

Some of the assessments noted that there were policy barriers that limit availability of life saving emergency care at health centers. For example, midwives are not currently allowed to use magnesium sulfate for treatment of eclampsia or perform manual removal of a placenta at health center level (104).

However, efforts are well underway to improve the maternal health care infrastructure in Kenya. A Safe Motherhood Demonstration Project (SMDP) is underway in four districts in Western Kenya, to develop and test approaches for improving maternal survival that can later be expanded to national level (101). Family Care International (FCI) is collaborating with the Kenyan Ministry of Health (MOH) to improve access to and quality of obstetric care in two districts in Nyanza Province, Homa Bay District and Migori. A key objective of the five-year “Skilled Care Initiative” is to increase the proportion of births assisted by skilled attendants by ten percent.

The MOH is near completion of an updated set of national guidelines, standards and protocols for obstetric care, and is completing a review of current national policy governing the skills and practices currently allowed for each level of maternal health care provider.

Skilled Childbirth Care in Nyanza Province

Maternal health indicators in Nyanza Province are similar to the national average. However, for most indicators, there is a wide gap when compared to urban centers such as Nairobi. In Nyanza Province, skilled birth attendance is roughly half that of Nairobi. In Nyanza, current use of modern contraceptives is only half of that among women in Nairobi. In Nyanza, women have almost twice as many children as women in Nairobi.

Table 4: Comparison of Selected Maternal Health Indicators: National, Nyanza Province, and Nairobi, Kenya Demographic and Health Survey, 1995 - 1998

Indicators	National	Nyanza Province	Nairobi
Total fertility rate	4.7	5	2.6
Current use of modern contraceptive method	32%	25%	47%
Antenatal care (1 visit)	92%	--	--
Tetanus toxoid (2+ doses)	51%	37%	52%
Delivery by skilled attendant (doctor or nurse/midwife)	44%	38%	76%

Source: KDHS 1998 (115)

Beginning in September 2001, FCI conducted a comprehensive facilities needs assessment in three districts in Nyanza Province. The results of that needs assessment were not available at the time this report was written, but will provide much-needed data on the infrastructural capacity to provide skilled care in Nyanza.

The Setting: Homa Bay District

Homa Bay District has a total population of approximately 300,000. Homa Bay District is an ethnically homogeneous district in which all but a very few of the inhabitants are Luos, a Western Nilotic community who speak Dholuo. They are one of the largest ethnic groups in Kenya, numbering approximately three million in 1999 (84). The total population in Kenya is 29 million.

Fishing and subsistence farming are important sources of income. Due to lack of local employment opportunities, many Luo men work in Nairobi or Mombasa, leaving the first wife at home to take care of the rural homestead. Roads are poor, and the high cost in time and money for travel between Nairobi, Mombasa and the Luo homeland contribute to infrequent visits home by Luos working outside the District.

Cultural Background

Luo social structure is organized according to patriarchal clans headed by small groups of elders. Three elements of Luo social structure, bride wealth, polygyny, and patrilineal descent, combine to exert powerful influence on gender specific roles and responsibilities. Luo culture gives only men the right to own property. Women do not own property. Instead, it is transferred through them to their sons. The Luo concept of respect, or *luor*, is important in the definition of manhood (84).

Certain types of behavior are expected of Luo women. These include obedience, bearing many children, particularly male children, sexual fidelity within the marital relationship, and support of the family and domestic homestead guided by the control and authority of the husband. An unwed, disobedient, sexually unwilling, unfaithful, infertile, or indolent woman would thus be labeled disobedient. Such misbehavior by women can have serious consequence, including divorce, separation, or a husband taking additional wives into the household. Beating women appears to be a common and culturally-acceptable practice.

Women's status

Cattle are important in Luo society, and marriage negotiations often include payment of cattle to the bride's family. A wife for whom cattle have been paid has more value than a casual, consensual partner (known in Kenyan parlance as "come we stay.)" When a woman marries, she initially moves into her husband's father's homestead. Traditionally, after a few years of marriage, a husband will establish his own homestead near his father's.

Because of this pattern of Luo household composition, a mother-in-law has domestic authority over a wife or co-wives. For the first period of her residence, a new wife must cook in her mother-in-law's house, and a woman's mother-in-law exerts strong influence over many aspects of her movements, including illness careseeking for both the woman herself and her children. Senior co-wives have influence over junior co-wives. Co-wifehood may be a source of jealousy between women who vie for the husband's attentions. This rivalry is expected in Luo families, and embodied in the term for co-wife, *nyiego*, which means jealousy (84). However, the structure of relationships between women in Luo households also has many benefits, such as sharing child rearing, farming and other household responsibilities. The Luo tradition of widow inheritance, or

the levirate, continues to express male control, and affects the independence of women into their old age.

Religion

Luo traditional religion is monotheistic. God, (Nyasaye or Nyasache) is traditionally thought to remain somewhat aloof from human affairs. God exerts supernatural control over humans primarily through the Jok, or senior clan spirits, and through the ancestors (107). Luo culture recognizes God's omnipotence, and clearly delineates domains that belong only to God and domains that humans may control.

Traditionally, a Luo man lives and creates his family in *Dala*. This can be the actual place where his ancestors lived, or a new ceremonially-designated place that serves the function of *Dala*. No other place but Dala can be his real home. Any other dwelling a Luo may live in is perceived as only a house, *Ot*, but not as *Dala*.

The strong role of ancestors and the maintenance of ancestral values and practices in Luo families contributes to the requirement to 'follow suit', to follow the same practices and behaviors that one's ancestors did. Thus, within a given family, what the firstborn does, subsequent siblings are also expected to do. Conversely, what the firstborn does not do, the junior siblings must also not do. The implications of traditional beliefs on childbearing are potentially many, first because of spiritual connection to *Dala* and second because of establishing the precedent or following suit. For example, ideally, a baby should be born in Dala, the ancestral home. And unless the newborn's umbilical cord is buried within the Dala almost immediately after birth, the child may have trouble in adult life establishing inheritance rights because of the parents' failure to observe this tradition.

There is thus inevitable conflict in the Luo community between "safe" birth in a facility and traditionally-sanctioned home birth in accordance with the principle of setting precedent and following suit. However, these traditions can also be exploited to encourage positive childbirth behaviors. If, for example, it was negotiated that all primipara could give birth in hospital *and still insure that the neonate's umbilical cord is buried at home in Dala*, then a positive practice could also accommodate an important cultural tradition. Also in accordance with the principles of Dala, for any woman who gives birth in a facility, all of her subsequent births would also have to be in facilities, as would those of her juniors; if a first wife gives birth in a facility, then all subsequent wives must also.

Interestingly, delay in seeking obstetric care outside the household due to the cultural need to conform to the tradition of giving birth in Dala was never mentioned in the research results from Homa Bay District by any category of respondent.

Among the Luo, time is not measured or discussed according to the hours on the Western clock face. Rather, time is considered and named according to blocks of several hours each. Names for times of day such as noontime or midnight do not conform to Western timekeeping nomenclature. Special times, such as preparation of the midday meal, are pinpointed to within an hour or so. This discrepancy in describing intervals of time was important during the implementation of the research, as "Luo time" had to be translated into "Western time" in many instances.

Disease etiology

Luo disease etiology reflects the importance of tradition and social relations in maintaining health and well-being. There are five distinct categories in Luo beliefs regarding disease etiology. The major causes of illness according to Luo beliefs are diseases of air, water, and food, or natural causes; diseases that are inherited; diseases of the "living dead" or those caused by neglected relationships with ancestors; diseases caused by humans, such as witchcraft or sorcery; and diseases resulting from breaching taboos or customs (84).

There is a clear delineation between which of the above disease etiologies can be treated by Western medicine and practitioners, and which are the exclusive domain of traditional medicine. There is general agreement that Western medicine treats malaria, headache, and anemia. Some illnesses are thought to be particularly unresponsive to Western medicine, such as infertility. Traditional medicine is believed to cure illnesses caused by ancestral spirits, or breaching taboos, and some "natural" diseases. These illnesses are more "social" in nature and understandably connected to traditional Luo medicine. Specific illnesses best treated by traditional medicine in the literature on Luo illness include infertility, abdominal pains, mental illness, vaginal bleeding, many of which are connected to spirits and witchcraft (Table 5).

Table 5: Diseases According to Perceived Treatment Efficacy

Western Medicine	Traditional Medicine
Malaria	*Rariu*
Headache	Epilepsy
Anemia	*Chira*
Stomachache	*Segete* (menstrual cramps)
Dehydration	*Agongi* (infant illness)
Amoeba	*Oriyangja* (women's and children's illness)
Typhoid	Amoeba
Cholera	Leprosy
Pregnancy complications	Witchcraft
Bodily pains	Infertility
All diseases	evil spirits
	impotency
	vaginal bleeding
	snake bite
	kaposi's sarcoma
	children's diseases

One particular Luo illness, *chira,* seems to parallel Dala in many respects, and may also affect women's health care seeking practices. *Chira* functions to maintain "social and moral control on family and lineage life" through a set of guiding principles. For example, a senior wife must begin her harvest—which is accompanied by ritual sexual intercourse with her husband—before a junior one. *Chira* may affect an individual who breaks these rules or taboos, or his or her family, causing misfortune and suffering as punishment. It may cause child death, decrease fertility, or influence the sex of children that are

conceived. *Chira* causes shame and stigma, as it indicates that one has neglected important relationship rules.

Types of traditional healers

A distinct hierarchy exists among Luo traditional healers. At the top are influential war diviners, known as *jobilo* or "men of charms," who use magic to foretell the future, mediate between men and the ancestors, and settle disputes. Lesser healers include common herbalists who specialize in herbal remedies and do not utilize magic. In general, women are the lesser healers who oversee the domestic domain, while men cover the public domain and magical power. A *nyamrerwa* is a minor medicine man or woman who does not possess *bilo*, or magic power, but knows how to obtain drugs from specific plants used for curing people.

Pregnancy and childbirth are the domain of herbalists and traditional midwives. *Nyamreche,* the type of healer who specializes in women's health, including pregnancy and childbirth, are usually women. In the following sections of this report, the term traditional birth attendant (TBA) is used interchangeably with nyamrewa. There are often several *nyamreche* in each village, or within walking distance of most households. *Nyamreche* give advice to women during pregnancy about diet, exercise, and work. They traditionally prescribe daily doses of "pot medicine"—an herbal concoction kept in a clay pot—to ward off illness in general. This practice is still very common throughout pregnancy and birth. Some obstetric complications are perceived to be within the domain of the Jok, the ancestors, or of witchcraft. Thus, nyamrewa (TBAs) frequently attribute obstetric complications to a spiritual cause, best dealt with through prayer and herbal medication (84).

Childbirth

In contrast to the male dominance in other aspects of Luo culture, the reproductive power of women is reflected linguistically. In Dholuo, the uterus is called by the same name as God, Nyasache, while the cervix or channel through which the baby passes is called Ruoth. This is a small-scale model of God and God's medium on earth, the priest or spirit medium. The uterus, as with all matters pertaining to the creator God, is outside human control.

It has been recently documented that some traditional Luo birth practices are still widely known and often practiced. These include traditions related to the cutting of the umbilical cord, burial of the placenta, the birth of twins, and the diet and mobility of new mothers during the early postpartum period (107).

Also in accordance with tradition, Dholuo speakers continue to name their children in relationship to the circumstances of their birth. Names are assigned according to the time of day when the baby was born, location of birth, and particular conditions and complications that took place during the birth process. Table 6 lists some of these names.

Table 6: Luo Naming by Time and Circumstance of Childbirth

NAME	**Luo time**	**Name**	**Circumstance/ Complication**
Kogwen	Dawn - 5-6 am	Piyu	Quick
Okinyi	Morning - 7-9 am	Dong	Remain behind
Onyango	10am – 12 noon	Oyoo	Born of the way
Odiochieng	11:30am – 1pm	Ooko	Born outside
Oyiw	Cooking the midday meal	Obiero	Placenta previa
Migago	Food	Odhoch	Breech
Odhiambo	Afternoon	Owino	Cord around neck
Angich welo	Evening – 6:00 to 7:30pm when visitors come to the homestead	Ouma Apoya Owiti	Face down Sudden onset of labor Dropped on the
Tek Remon	When women are very busy with kids and cooking	Oywa Oliech	way/rejected Pulled out
Otieno	Night - 7:30 – 11:30 PM	Ojwang	Big, like elephant
Chuny Otieno/ Odiwor	Midnight to Predawn		Mother died in childbirth/father died during pregnancy

Table 7: Luo Proverbs and Idioms
Chako chon loyo dhi ajuoga Starting early is better than seeking a medicine man later
Ang'e ok tel "I wish I knew" never comes first
Chako ok e tieko Starting is not the same as completing
Chuth ber Immediacy is best
Piny agonda The world is zigzagged. Anything can happen
Thuol odonjo e koo The snake has entered the gourd

II. RESEARCH RESULTS

Despite many challenges encountered during the conduct of this qualitative research, and some frustrating information gaps, the results nevertheless provide deep insights into the realities of childbirth in this particular region of Kenya. Much of the information is not “new”, and often mirrors results found in other qualitative studies in Kenya (53, 101, 104, 105, 183) and throughout the developing world (8, 9, 10, 14, 18, 25, 26, 27, 31, 32, 37, 55, 83, 88, 91, 130).

What is perhaps most intriguing about these findings is the overwhelming willingness of almost all categories of respondents to try the new approaches suggested to increase use of skilled childbirth care, and the simple eloquence with which their feelings and opinions are expressed. This is particularly true in the case of the complication narratives. As much as possible, this report relies on the actual words of the women, family and community members, TBAs and skilled care providers who participated in the interviews.

A. BEHAVIOR 1: BIRTH PREPAREDNESS

Lack of advance planning for use of a skilled birth attendant for normal births, and particularly inadequate preparation for rapid action in the event of obstetric complications, are well documented factors contributing to delay in receipt of skilled obstetric care (75). To address this problem, birth preparedness has been globally endorsed as an essential component of safe motherhood programs (184, 197, 198) and many programs are now underway to test the effectiveness of various interventions to increase advance planning for birth (21, 56, 66, 132, 133).

There are several key elements of birth preparedness, which includes planning for both a normal birth and the possibility of an obstetric complication. These elements are: identification of preferred birth location and birth attendant; finance, transport, chaperone to accompany a woman in labor to the care site, and advance identification of a compatible blood donor, which are all functions of social support; and a new and important element, identification of preferred early postpartum care visitor.

Traditional Behaviors Related to Birth Preparedness

In Homa Bay District, as in most of rural Kenya, there are traditions and customs related to birth. All categories of respondents recognized that reduced workload and abstaining from sex during late pregnancy are traditional elements of birth preparedness among Luos. However, observation of these customary practices is decreasing.

> *“Prepare? Food, light duty, relives her from sex, from about 6 months (of pregnancy) on.” [P37]*

Assuring the availability of nutritious food for new mothers is widely recognized as important. EFFIs have a major responsibility in assuring good nutrition. However, more emphasis appears to be placed on nutrition after birth, not during pregnancy. Birth-related nutritional customs and traditions are widespread. "Eating down" and pica are common practices.

> ***“****Prepare? Discourage her from eating stones (pica). Not overfeed – big baby.” [P37*

Use of traditional herbs throughout pregnancy and birth is almost universal and is considered an important part of birth preparedness by all categories of respondents. Even men and community leaders were well informed on the routine use of herbs during pregnancy and birth.

> *"It is required that women take traditional herbs and they must always take precautions while pregnant". [W74]*

Few women and families now prepare in advance according to the globally recommended elements of birth preparedness, either for normal births or for potential complications. However, there are a few women and families who do prepare for birth, and some prepare early.

> *"Preparation must be there but it is not quite. Because delivery is unpredictable." [E26]*

> *"Before delivery or when the time is drawing nearer, like maybe after five months." [W1]*

Skilled attendants agree that birth preparedness is not widely practiced. Some skilled attendants appear discouraged that families do not follow their instructions on how to prepare for birth.

> *"Yah, maybe. In fact they don't get prepared though they know they have that pregnancy for nine months, but the time for delivery they don't get prepared. You just find the mother coming in labor. She has got nothing, though we do tell them to have some things in hand when they are coming to deliver. But in fact I have not seen one coming with them." [S52]*

Some women and EFFIs rely on the woman's antenatal clinic appointment schedule to anticipate when onset of labor is near. More closely spaced ANC visit appointments alert them to begin preparing.

> *"The nearing of the baby's birth is an important event. The mothers attend clinics, and the clinic staff gives them weekly appointments. They may begin with monthly, then every 2 weeks, then weekly until delivery." [E4]*

Some families plan, much as they always have, for the costs associated with birth, as even birth at home assisted by a TBA has associated costs. For example, some women and EFFIs plant corn and beans to sell to get money for birth-related expenses. Some men buy cows when they know their wife is pregnant, to sell later to cover birth-related costs.

> *"I usually prepare cereals, beans, so that when my time nears for birth I can sell them and they can help me go to the hospital at the onset of labor. I should also have a very close associate. She may be my co-wife, my grandmother that will take me to the hospital at that time that I may not be able to walk." [W74]*

Many women buy small things to prepare for baby before birth, such as soap, diapers, baby clothing or a new razor blade for cord cutting, if finances allow. Some women and EFFIs mentioned the purchase of a mosquito net as an important element of preparedness for birth and the postpartum period. Almost all categories of respondents mentioned the purchase of a "layette" for the baby.

"Women should avail ready cotton, razor, gauze, cord ligature, gloves and children clothes in readiness for the newborn." [TBA63]

"Preparedness: we must foresee the future and save for birth - hospital fee, baby clothing, gripe water, powder. We must plan towels, basins, but not clothing yet because you don't know sex, milk powder, one month before birth." [P28]

Birth Location and Birth Attendant

Many women and families do not think about birth until labor actually begins. Many respondents said that the suddenness and unpredictability of the onset of labor make it difficult for most women to deliver with skilled attendant, even if they had planned to do so.

"Birth comes in different ways. There are some that deliver on the road, in marketplaces even in vehicles. I have seen it." [P28]

"I can't say so much there, because giving birth is just like an accident; an accident can occur at anytime, you can't tell when it is coming." [W1]

"To make them prepare better? What helps them think (pause) when a woman wants to deliver it is that that makes them move faster. The birth may come at a good time like early in the morning and all day the people will think of taking her to the hospital." [E4]

Costs

Overwhelmingly money was stated to be the most important element of planning for birth. Almost all categories of respondents mentioned saving money during pregnancy as a main component of birth preparedness. Husbands are primarily responsible for the financial costs of birth. EFFIs also help with costs to the best their financial status allows. Many skilled attendants agreed the importance of saving money for the costs of childbirth is recognized in community as important.

"Money is required and the husband is required to provide money."

"Then prepare here means money, because at all stage money is important." [E26]

"Wherever you go is money. Whatever you do is money."

"If you have money, you can just plan whatever you want." [P6]

One community leader expressed the critical importance of money in birth preparedness particularly well:

"The main problem that we keep saying is that for a human being, you may be willing to prepare for birth but without money, then you can't succeed in doing anything. Taking you as an example, if you had no vehicle than there is no way in which you could have done this research in these two districts. For you to take a woman for skilled attendance, you must have money for you to prepare, there must be food and other requirements." [RL31]

Antenatal Care

Almost all categories of respondents listed antenatal care attendance as an element of preparing for birth, and stated that they encourage women to attend. Many women themselves regard attendance at ANC as an important part of birth preparedness, and most do go.

> *"When delivery is closer at eighth month, I visit a skilled attendant (at ANC) to write for me what is required during delivery." [W18B]*

Family Dialogue about Birth Preparedness

It has been well documented that lack of intra-familial communication about many matters related to childbirth - routine planning for anticipated normal births, ability to discuss problems when they arise, and particularly the onset of a complication and the need for emergency care - hinders timely use of skilled care. Programs now emphasize not only increasing knowledge and awareness of danger sings among individual population segments in families and communities, but encouraging dialogue and discussion between and among those segments.

Increasing dialogue within families, between family members and skilled care providers, and between TBAs and skilled care providers is now recognized as an important part of programs to improve maternal survival. Many programs have explicitly stated such increases in dialogue as program objectives (109, 111, 178, 179). In Homa Bay District, almost all categories of respondents recognized the importance of dialogue, and indicated a willingness to not only learn more about matters related to birth and skilled attendance, but also to talk with others in their families and communities about it.

Most women feel free to discuss pregnancy and birth with all close family members. Many women are equally comfortable discussing pregnancy and birth with TBAs and skilled attendants. A few women feel that pregnancy and birth are very personal issues.

Many women, particularly young women, do not "take birth seriously" until they have actually experienced it themselves.

> *"And in your pregnancy did anybody tell you about how labor is and such like things? People could tell me about those things but I didn't take them seriously until I gave birth is when I realized that labor was painful because I could see my mother sometimes giving birth in the house." [W18A]*

> *"They don't always teach us when the baby is still in your womb. They tell us about these things when we have already given birth." [W2]*

Most EFFIs feel that they are already an important part of household dialogue about birth preparedness, and almost all are willing to participate in "teachings" so that they can assume an even greater role.

> *"I would give all the support needed either physical, economic, and social to solve the problem in which level I can manage. And whenever, in movement that need walking long distance." [E26]*

"What we can do to make them deliver is show by example – my daughter, see what happened to so-and-so so for you its good to go to hospital, as there are skilled attendants who can tell you what you need and assist you." [E54]

"Before birth, all women, daughters-in-law, included should be advised by elder mothers who would tell them that while we were at your age we used to do this and that. One should allow questions from the young ones and while answering one should say that while we were at your age we used to do this and that."

Many EFFIs expressed frustration that their advice to deliver with skilled attendance is often not accepted. They blamed the stubbornness of some women, particularly young women. This "cold-headedness" was cited by most EFFIs, as well as many partners and community leaders.

"Most women want hospital care, but some women have "cold head", are not clever enough to reason, and they do not see the need for seeking care. They say others around them did not seek care and delivered well. The heart is as hard as a stone you cannot change this reasoning." [E4]

"Where do you tell them deliver? Me I like using the hospital, but these daughters-in-law all have different characters. There is one who will not even tell you that she has abdominal pains but she will surprise you in the evening when the sun has set. Another may inform you that "mother, today I am not doing so well"…I usually tell them that if you are not doing so well, could I take you to the hospital now? The one who reports to me late in the evening, I usually get them to TBA." [E4]

Some women, particularly younger women, appear to have lost faith in the validity of information about pregnancy and birth that EFFIs give them.

"Like my mother-in-law lied to me about my first birth. She told me that I may give birth to a boy or a girl by doing some things I could not understand, like taking two stones and predicting from them and finally when the time for delivery comes, it becomes the opposite. So from that time I know she is lying to me."

Many men would like to know more/ talk more with their wives about pregnancy and birth. Some men recognize the importance of their own role in initiating dialogue and providing social support during pregnancy and birth.

"What more could women tell you? You should ask her more questions because if you don't she can tell you shallowly without details. Sickness has names so she should tell you." [P77]

"How do men find out – only when the women tell them. You wish you knew more for this is a woman you live with you should know how she is, what is troubling her." [P37]

"You would have to take time with her, to explain how she is feeling for she knows herself best. From the difficulties she expresses you can assist." [P37]

"What more could men do? They could be closer to their wives and find out after birth any problems. Responsible man would give woman more attention and assistance in domestic affairs you are the husband you have to make arrangements to hire someone to assist." [P37]

"The Bible tells you, you and your wife are one flesh. You and your wife are one thing. So you yourself, can you dislike your legs?" [P77]

Some men recognize the need for harmony in the household during pregnancy and birth. Some men are aware, and perhaps apprehensive, that "too much" assistance with women in birth-related matters might be interpreted by other men as "weakness".

> *"During that time women are delicate and weak. You must maintain peace and avoid fighting because you can accidentally beat the woman in the stomach and that can cause complication. So you must try and maintain peace. I first go through prayers and tell god my problem and he can deliver me." [P77]*

> *"What would your friends say if you personally assisted your wife? They would talk about it or maybe say you really love your wife (bursts out in laughter) that the person loves his wife too much, that he is fetching water!" [P37]*

Traditional birth-related roles, values, and cultural practices are changing. Some of those changes are negatively affecting birth outcome.

> *"The elders would sit around and teach young ones nowadays it is not done because people have different ideas these elders would teach people on how to stay with a pregnant woman and after, they shunned extramarital sex during this period because they believed it could ruin your house." [P28]*

Barriers to Birth Preparedness

Putting birth outcome "in the hands of God" was commonly expressed. There is widespread hesitation to prepare for something like birth where the outcome is uncertain.

> *"There is not much I can say because what you have not seen you cannot talk about. Therefore, with this I leave it to God. Human beings we can only talk of the present." [P77]*

> *"We have noticed on interesting thing with our people…they leave everything to God and then wait upon God to help (we iweya nyasae biro konyi). When it is too late is when they call a TBA because they cannot afford money for a vehicle." [E53]*

Superstition and cultural factors, discussed above, continue to influence birth preparedness and other behaviors related to birth.

> *"Prepare? They didn't agree because they complained you couldn't prepare for something you have not seen." [W62]*

> *"My husband said I couldn't count the eggs before hatching."*

> *"The clan doesn't accept the preparation because of superstition. Even there are believers that napkins (diapers) are to be washed and hidden not publicly." [W18B]*

> *"Families cannot. Prior advice is needed so that a woman can prepare to go to the hospital when she is due to escape the bad omen (gima rach cha)." [E53]*

Antenatal Care

The importance of antenatal care (ANC), at least in terms of its contribution to reducing maternal deaths, has been reassessed during the past decade. Global guidelines now recommend refocusing ANC to emphasize components of care that have been proven effective. Antenatal care is also a critical potential "point of contact" between skilled care providers and women, an opportunity to encourage birth preparedness and use of skilled childbirth care.

Antenatal Care Use

Throughout Kenya, and in Homa Bay District as well, ANC attendance is high. As mentioned earlier, most respondents felt that early and regular antenatal care attendance is an important part of birth preparedness. Most women intend to use ANC and do use it.

> *"How do they solve those birth problems and emergencies? Those who reach them before they give birth, they examine them, they estimate date of birth, they check how the baby is lying…they examine a mother for any problem and they solve the problems they find."*

> *"Yes they are ways you can prepare her to go to hospital, you tell her she must attend ANC she will know how she is, shall be given medication, will be given good different advice. She will also say that TBA advises me to come here (hospital). [T1]*

Finding out the estimated date of confinement (EDC, or due date) was extremely important to many women, EFFIs and TBAs, and is an important stated reason for attending ANC. Some EFFIs and TBAs knew that formal ANC visits increased in frequency from two times weekly to once per week as delivery got nearer. They used this information to estimate the remaining time to prepare for birth. TBA inaccuracy in determining EDC disappoints many women and EFFIs, and often results in delivery at unanticipated time, without adequate time for advance preparation.

> *"At clinic, she may report to you that she was asked to go back in 1 week. I will reassure her that with one week appointment it means her delivery may be anytime, to start watching out for labor pains, for that reason she should be happy." [E4]*

> *"Women don't go to clinic. When you to clinic you know when you are due, so no surprise." [RLL12]*

> *"Yes. We go to the clinic, you know I have given birth so at least I know that labor pains can start at any time, so the things to be prepared. First I go to the clinic so that they can tell me if there is any problem that I have I got during my pregnancy. And when my days are getting close, sometimes I may ask the nurses the things that we need, and they write them down for me, and I buy them and keep them in the house. So that during my labor, even if I give birth by the road side, I know that at least there is what can be used." [W18A]*

> *"How do you advise women to go to the hospital? I advise them to go to clinic where they get appointments for subsequent clinic dates. So I just encourage them to keep to the dates, and deliver in the hospital."*

Some EFFIs and TBAs felt that fear of injection (maternal tetanus toxoid) keeps many women from attending ANC.

> *"Women need to be encouraged to go to ANC because they fear injection."*
>
> *"Sometimes they complain injection is painful." [T15]*

When "nettie nets" (mosquito nets) were given at ANC, this was a strong motivator for attending ANC. Apparently these nets are no longer routinely available at antenatal clinics.

> *"There was a time when practically all women were going to health facilities simply because they were being told of "nettie nets" were there (free mosquito nets)." [P6]*

Some women totally reject the idea of ANC, and have no intention to use it. All categories of respondents knew of this type of women, and had a variety of terms that they use to refer to these stubborn women.

> *"Those who do not attend clinic shy away from hospital birth." [P28]*
>
> *"Some it's due to their stubbornness. Others don't see the sense, you tell them they are not doing well, they keep saying they are planning to visit hospital until the day the birth complication sets in. Some are just lazy." [E4]*
>
> *"Some prefer going, others do not. Those with husband, some become reluctant and must reminded and even forced to go." [E26]*

A few women rely solely on TBAs for ANC. Many of these same women utilized TBAs at delivery as well. Utilization of dual health systems, traditional and modern, during both pregnancy and birth is widespread, according to almost all categories of respondent. TBAs are visited regularly and frequently by many pregnant women, while they are also using formal ANC. Many traditional herbs are used throughout pregnancy, mostly obtained from TBAs.

> *"Sometime it is our responsibility to insist to family because we can see how things are disorganized in our houses we cannot even go to the farm. This is why the TBAs help us very much. They always advise on when to give birth. The TBAs always encourage us to go to the hospital so that they always know the right delivery and they send us to the hospital before delivery time." [W74]*

Cost is a factor in use of ANC as well as care during childbirth.

> *"How did you choose your source of antenatal care? I made my selection according to the amount of money I had. Like in our health center it is expensive so I opted for a cheaper clinic." [W1]*

Skilled providers indicated that they felt ANC was an important mechanism to communicate with women about birth preparedness. Many stated that it would be more effective if men were also educated at ANC.

> *"When they come for clinic that is when they start that relationship with the nurse, so they live with it in a way. By continuing giving them health education… you can call this mother to see how this mother is. When we go for mobiles these health talks in the middle there, so through those health talks the mother is encouraged to come and see us*

in health institute. So from those (mobile clinics) we come to know the mother, and encourage her to come to the clinic. We ensure her that the case of the clinic we are doing some investigations." [S66]

"You see as a counselor, you talk to mama and help her to reach to the answer; but you don't tell her the answer. Now you can have a talk, but as we are having a talk, you see like now you are questioning." [S42]

"You'll know the age of this mama, her level of education, if she is a first wife or a second wife, how many kids she's having, the way she has been delivering these kids. This mama will be free and they tell you the way they feel, the problems they have, and now they ask you "sister, how can you help me?" It is not you to tell her what to do but it's her choice…." [S42]

"We usually do (counsel), but just to mother only but not to their husbands. You know the people must be there together to plan this thing, the man plus the wife. But here you find it's only mothers who usually come to the clinic. So to give a health talk, you will give a mother but the man is not there, so it is not easy to work out."

Antenatal Card as "Passport to Childbirth Care"

Almost all categories of respondents made reference to the need for women to have an antenatal card, given only at government antenatal clinics. Possession of an antenatal clinic card was important "passport" for access to skilled acre, especially emergencies. This was also found in qualitative research in Western Kenya (101).

Some women recognized that women who do not attend ANC are not well received at facility for birth. EFFIs and husbands both stated that doctors place importance on women having antenatal cards. Many felt that the ANC card plays a critical role in ease of acceptance at a facility when obstetric complications occur, and that there can be significant delays preparing new records if an ANC card is not available.

"What do they think about women? Doctors wish that pregnant women visit them as soon as they feel they are pregnant, so that they can estimate for their expected date of delivery. Doctors want every woman to take an antenatal card." [E53]

"Fear of not having cards inhibits women from facility birth." [E78]

"To assure use of skilled care at birth, this card is given by the doctor to all attended to." [P20]

"Hospitals do not accept those that were not going for antenatal care. They will assist you but after many tribulations." [W23]

"At the hospital you have to have a treatment card." [W10]

"When she doesn't have a referral letter (ANC card) it can make her not deliver skilled." [E78]

"Hospital card helps because when she goes to hospital for birth she is not disturbed by doctor or sister." [T64]

"At the facility, what happens when she has a letter or when she doesn't have? When she has a letter she can be helped when she doesn't she can be chased away." [E78]

"Clinic cards very important". [T36]

"Do they welcome women from the village? They only assist you when you have a problem and you have a card. But if you don't have card they won't ." [E53]

All categories of respondents recognized that value is placed on a written summary of delivery, or the events leading up to a woman's arrival at a facility with an obstetric complication.

"Yes, I would urge those who only want to come to me for palpation, and not to go from their examinations at ANC to visit hospital. I stress to them the importance of getting clinic cards as when pregnancy or birth complications, they should easier get assistance from them." [T55]

"When she goes to a hospital and they already know her case, it's not an emergency." [T39]

"When a woman goes for treatment of birth problems at a facility what happens? First she goes to the reception to write her details and how she's feeling." [T43]

"Recommend? I take her to Asego when I am defeated. I accompany her and also have a letter." [T38]

"After (unattended at home) I still take her to a TBA to write for her that she delivered on such a date, and the delivery was good." [E54]

When asked about the concept of a birth preparedness card and community pregnancy monitoring, almost all categories of respondents accepted. Skilled attendants also accepted, some enthusiastically, but with a variety of conditions attached.

"Birth preparedness card. Only nurses should to give patients. Card will have guidelines. Community monitoring scheme - given to TBAs, TBAs get many mothers. Pregnancy monitoring scheme can assist mothers to know whether the pregnancy is maturing. They can be given in clinic. Can be introduced if personnel are taught how to use them well to be effective." [S52]

"It can be important because the card can have the regiment and can help. The community, they know them better, they would hear them more. As long as she came to clinic we record our finding and know where the woman will deliver." [S71]

"Birth preparedness card - only nurse to give patient and will have guidelines." [S52]

"They just will help us monitor pregnancies because some may forget". [S73]

"Maybe possible in terms of financial preparation, but for baby preparation it is impossible." [S68]

"Pregnancy monitoring schemes – assist the mother in knowing whether the pregnancy is maturing, i.e. fetus growing in a healthy way." [S52]

"A birth preparedness card and pregnancy monitoring scheme? This is like the partograph? What are you talking about? Is it the people who are going to use it? And when are they taught on how to do it? How might they work? I think they will be effective if at all they are taught how to use them, like the way we were taught on weight

monitoring. It's being done even in the rural. How would health workers participate in such interventions? Like the monitoring? They fully participate. How would they feel about such interventions? I think it will improve the proper care." [S42]

B. BEHAVIOR 2: USE SKILLED ATTENDANCE AT BIRTH

In many parts of the developing world, TBA-attended home birth is still the women's overwhelming preference. Yet, there is evidence that TBAs, despite decades of training programs in safe birth techniques, still do not measurably reduce maternal mortality. Promoting use of a skilled attendant at birth for all women is now the primary global goal of safe motherhood policymakers and planners (39, 42, 61, 87, 89, 92, 184, 185, 197).

In Homa Bay District, where almost eighty percent of women give birth at home, the matter is often, though not always, a result of happenstance rather than choice. Many in all categories of respondents stated a strong preference for the use of skilled attendance at birth, and expressed clear reasons for that preference.

Preference for Skilled Attendance

Many of all categories of respondents expressed a strong preference for and willingness to use skilled attendance at birth, and for giving birth in health facilities. This was true even among EFFIs and TBAs, who are often thought to actively discourage use of skilled attendance and birth away from home.

> *"Yes, EFFIs support hospital because its hospital which helps people." [E78]*

> *"These days most women prefer to deliver hospital." [P21]*

Perceived Advantages of Skilled Attendance

All categories of respondents expressed the advantages of skilled care as they perceived them, regardless of whether or not they themselves used it. Among the many respondents who said they preferred skilled care at facilities, many reasons for this preference were stated. There is a widespread perception that skilled attendants are better able to manage obstetric emergencies than TBAs, and that facilities, obviously, are better equipped that TBAs.

> ***"****Doctors are ready with their gadgets for such problems." [E53]*

> *"Because the hospital knows and test diseases that affect and the doctor knows about them. The client is assisted and the doctor is qualified." [E26]*

> *"Why deliver in hospital? Because any human being anything can happen so it's the doctor who knows how." [T64]*

> *"I prefer Ndhiwa center not Kojowi or Homa Bay District. Why? The reason is that there are well-trained midwives their mother is quickly received and examined." [T1*5]

> *"They trust the hands of the doctors." [P28]*

> *"What are the advantages of giving birth in hospital? Good assistance because qualified doctors and nurses make assistance easy."*

> *"Because they know if they go to hospital they wouldn't suffer much like the ones who give birth at home". [E54]*

"Yes, skilled attendant is different. When you deliver in hospital that is a place people are prepared but when you deliver at home it is just done by luck, they have no knowledge about safe delivery." [W62]

"Giving birth in the hospital is better. In the hospital you don't take long to deliver unlike at home where they say that you are put on a stone like a chicken, and you may take three up to five hours before you give birth." [W74]

"*Why I think so is because human being is not clever for death (they don't know when death comes). Complications can arise in a short time. So you have to be under a doctor's care and in case of a problem, the doctor is always there to assist." [RL36]*

"TBAs are not bad and there are some aliments that they can treat, but this does not necessarily mean that we place them high above skilled care attendance. We must just speak against anything that is bad and this is what I have to say. In these days, there's this disease called AIDS, and if a woman gives birth in the hospital and she's suffering from this disease, then she'll be given medicines but if she delivers at the TBA, she will not get and help and will die in a very shameful manner. The TBAs also can't immunize the babies so what is the need of using them?" [RL31]

The ability to transfuse at facilities was also widely recognized and appreciated. Newborn care (vaccinations, eye care) given at facilities was also a strong motivator for many respondents.

"*My opinion? Nurse is better because a mother may start bleeding profusely, which if at home she will bleed to death, at hospital nurses have injection to give." [E4]*

"The goodness in hospital is because she's vaccinated immediately she delivered, the baby is examined immediately. If she had less blood she's added in case she needs any help she gets it then and there." [T14]

"Women should deliver in the hospital because they we have "daktar" who can examine a pregnant mother, discover different types of problems (fwenyo touche mopogore opogore) by testing... they apply some drugs on children's eyes to prevent eye damage." [T63]

Ability to accurately predict the estimated date of confinement (EDC) was an important factor for selection of birth attendant for many women and EFFIs.

"Chose attendant? I chose one who could tell you the almost exact date of delivery. Some could tell you a date, which is too far or too late. One of the TBAs told me I still had one month until delivery, but the pregnancy was already nine months. This made me get discouraged seriously and I did not want to go back to her." [W45]

Many respondents who preferred skilled attendance had strong negative feelings about TBAs.

"Delivering in the house is what I do not admire." [W18B]

"TBAs are only supposed to deliver people, if a TBA detect a sign of illness she should refer the client to the hospital." [E26]

"A TBA cannot do a c/s (caesarian section), so a woman can even bleed to death in the presence of a TBA, she can do nothing. If baby is too big, TBA will just say a woman cannot push properly until it is too late and the baby might even die." [P77]

"Fear" was expressed by man respondents as a motivating factor in use of skilled attendant.

> *"There are women who fear to die, that is why they go to hospital to give birth." [E78]*
>
> *"These days people visit the hospital because they fear the deaths they see occurring when fellow women are giving birth." [E78]*
>
> *"They accept (being in hospital) because they fear being at home brings problems, so it's better to prevent than to cure." [T14]*

Some women said that by virtue of planning for a facility delivery, they were able, even expected, to prepare for birth with purchase of better quality clothing and other items.

> *"In my home, we prefer hospital because of the care, but also because when you go to the hospital to deliver you are bought new things for the baby ,whereas in the home you are asked to use old napkins (diapers) that you used on your other babies. So the love showed when you deliver in the hospital is higher than when at home." [E4]*
>
> *"What I can see in giving birth in hospital is when a woman gives birth there, they are taken care of very well. Even they can get things like towel and other things for the baby. They can dress the baby nicely, so the hospital is better, and in cleanliness also the hospital is better." [RL36]*

Proximity to a facility is a strong motivation for use.

> *"Those who stay close to the hospital prefer giving birth there."*
>
> *"Nothing good about TBA except for the charges and distance to hospital makes women to use TBAs." [T48]*

Some EFFIs said "educated" women use skilled attendance more.

> *"Yes, I know some women who use skilled attendant, they are taken up to Migori (Hospital). What kind of women? They are the educated ones." [E54]*

Some skilled providers recognize positive attitude as a motivator for use of skilled care.

> *"What do you think makes them go where they go to? Like you say they go to the hospital. What makes them go there? Sometimes the attitude. The nurses' attitude, like the way you talk to the mother you explain to her and you reassure her. That can make her happy to come and deliver in hospital and also the family."* [S66]

Barriers to Use of Skilled Attendance

Cost

Many barriers to use skilled care were expressed by respondents. All categories of respondent emphatically agreed that cost is a major barrier to use of skilled attendance. They recognize and appreciate the role of skilled attendance, but more than any other factor, finance limits use.

"Skilled attendant is good, it is only that it is very expensive. We have money problem, money makes them a bit sluggish in their reaction." [P6]

"Money, these days at hospital no credit facilities, so you will stay home with your problem." [P77]

"Me, I see like (showing with his fingers) it's this – lack of money. Because it started, like the labor, it started and I don't have anything, so I can't go to the hospital empty handed from here to Homa Bay District. I also can't go on foot. And I'm also unwell. That can bring those delays - the pain, the distance, lack of money, the hospital is far - can all bring this problem. That is why we would like them (skilled attendants) to be near to us." [T13]

"Mostly what has prevented them is the pain of the sister (the nursing sister) who requests fees, because you are requested that if you are going to the clinic you must have even ten shillings for the card. Sometimes ten shillings, you have it but you are planning so many things on it. This ten shillings is for salt, for soap, and when you are pregnant and you don't feel any pain you just feel fine. So I think instead of going to the clinic when I'm not feeling pain, this money I go and buy something else. So money is the most common cause of delaying to go to the clinic." [T13]

Families and TBAs are aware that they will be asked to bring or purchase even basic supplies.

"Nothing is for free nowadays, you are asked to produce hand gloves and that's money. Drugs, and that is more money. Cotton wool they ask for. Sometimes there is no blood, if you don't have money, you are told there is no blood. But if you have, and go to blood bank, blood will be given." [LL32]

"What I'll still repeat is that it all depends on someone's financial status, because even if the woman dies, all they can afford is to use some branches, make a makeshift bed and carry her to the hospital."

Some women who arrive at facility for birth are delayed looking for money before care is given.

"I witnessed a woman who went to a health center when she was about to deliver, and she was told to go to the district hospital. I could not see the problem she had. She goes back to look for money and takes a vehicle. She delivered in the nearby Primary School compound, the child died. Money is the real problem."

Widespread rumors in the community of the high costs of facility-based delivery discourage some from even considering use of skilled care.

"Some women see that it is expensive to go to the District Hospital, because you have bought the things that are needed, and so when the others ask you about how much you spent at the District Hospital, they get discouraged and go to the TBA instead." [W18A]

"Some women view the district hospital charges as high. They already know what is needed, some ask those who delivered how much they paid and feel it's expensive, and they later say God can help at any place." [W18B]

Distance

Physical proximity of facility or care source a widely stated motivator/advantage when considering use of skilled care. The "preferred" care source is often the **closest** care source.

> *"Ok. You as a TBAs why do you think women delay in getting to a doctor or nurse in their household or community? Me I think it's because of the distance." [T13]*
>
> *"Between a TBA and a skatt which do you prefer? The one nearer. Why? Remember the closet stick is the one you use to kill the snake." [P77]*
>
> *"We prefer nearby places." [W23]*
>
> *"I prefer Homa Bay because it's nearest." [T39]*

Some respondents blamed "quack" providers for contributing to life threatening delays.

> *"The quack doctors, they are without training. They are school leavers, relatives of doctors, wives of doctors, no qualifications at all. They just start practicing. They attend pregnant mothers in private clinics. Some give drugs, which should not be given to pregnant women like metronidazole. Or they give panadol for amoeba. Or pregnant women buy the wrong drugs from the chemists, they only sell drugs they don't care. They dish drugs without dosage or explanation." [RLL33]*

Some religious beliefs and practices contribute to care seeking delays.

> *"Another thing prevents people from preparing for delivery is culture. Some religious leaders teach their followers that going to clinic is a sin. And that going to the clinic means you don't trust the protection of God, (ok gi trust Nyasaye emomiyo ghi dhi)…." [RLL33]*
>
> *"After such prayers mothers feel relived, and instead of going to hospital…they go home on pretext that God will help them." [RLL33]*
>
> *"There are some churches that does not believe in going to hospital they say church is enough (kanisa oromo)." [P6]*
>
> *"We must not join cults which prevent their wives from going to hospital, and law should be drafted to deal with these cults." [P28]*

Unexpected Onset of Labor

Often, women's stated intention to deliver with skilled attendant is not always achieved. All categories of respondent agreed that "circumstances" could foil plans. In many cases women intended to deliver with a skilled attendant but actually delivered at home with TBA.

If a pregnancy is not proceeding normally, (either family-perceived or ANC-diagnosed) there is widespread intention to deliver with skilled care among all categories of respondent. Some respondents recognize that women and families delay unnecessarily in care-seeking decisionmaking, even in deciding to seek TBA care. Many times, it is simply the last resort when labor has progressed unexpectedly fast**.**

"I went to the closest TBA." [W7]

"They would wish to be delivered by the nurses/doctor but labor pain is normally unpredictable and the hospital is far." [E26]

"It's good to go where you were told to deliver, they would prefer nurse to attend, but sometimes you are told to go back on such and such a day and then you get the pains before and you can't reach." [E54]

"My idea is the same, that we should always seek skilled care attendance but the TBAs come as the last option, when you have gone on your knees and you may not reach the hospital." [W74]

Provider Attitudes and Behaviors

All categories of respondents described verbal and physical mistreatment that women often face when they go to health facilities. This disrespectful treatment is widely perceived as a barrier to use of skilled care.

"Women like TBAs because they don't bite them, cheap. and social." [T25]

"Nurses give substandard treatment at facility while TBA handles you soothingly." [W23]

"Why prefer TBAs?They are afraid of maltreatment in hospital." [P47]

Almost all categories of respondents expressed dissatisfaction with the attitudes of skilled providers. Many respondents reported verbal abuse.

"They fear clinic due to nasty words that bring shame – why don't you space your births, what type of innerwear are you wearing, and what type of husband do you have? They fear physical discomfort/confrontation, especially when a mans' sperms are found in their vaginas." [P28]

"Barrier to skilled attendance? The way they are received in these institutions, when you are harsh to a sick person it takes long for him to recover, whatever type of care you give." [P6]

In addition to verbal abuse, physical abuse occurs at facilities.

"Hospital, there are also different characters. You may get one who is very good and knows how to talk to patients, but at times you get the clerk who instead of escorting you, he hauls abuses at you, assesses your cleanliness level, things which will not assist you at all. You may at times get slaps and beatings." [E4]

"… At hospitals they beat us. People are beaten. Some have that thought and fear going, because the nurses beat the mothers. But others just fear...some say even reaching the hospital is "war", meaning the difficulties encountered on reaching the hospital, so they say they will not go." [E4]

"There are some skilled attendants who will tell you that they are not your husband, and didn't make you pregnant. This will hurt the woman, and so she will prefer to go to the TBA rather than the hospital."

Many respondents stated that they were left alone during labor and delivery, frequently using the term “neglected”.

> *“Some are very negligent, like when a patient’s hope lies on you she comes so that you assist her to deliver. Then you leave her, and she pushes and develops problem. Who would you blame in that case? (Wgenna wach)” [RLL33]*
>
> *“Yes, negligence is one of the major causes of deaths especially these maternal deaths in hospitals (pastor).” [RLL33]*
>
> *“It may be a problem to decide where to deliver. When I went to deliver my child I was not given good care in the hospital. I was in a terrible state. I delivered alone, when I was calling, no one responded. I was in the labor ward. The child cried and no one came for my rescue. I left the hospital with a negative attitude. I thought I would deliver in a District Hospital so that I could be handled properly but I was not.” [W18B]*
>
> *“Why are they bad? Because you can deliver in the veranda or on the bench.” [W22]*
>
> *“The fact that they come makes it quite a painful experience. Another skilled attendant was sleepy, she was recording names while sleeping while I was feeling labor pain. She felt not concerned, she couldn’t do them quickly. She kept on asking to be pardoned. In fact I was mistreated. It was painful to me. After labor and then what? I was having labor pains and they were saying there was contraction. The skilled attendant was sleepy and seated comfortably, while I was waiting on a hard bench.” [W18B]*
>
> *“So they left you alone in the room? What I saw, if you want to deliver something comes as if you want to for a “long call” (slang term for bowel movement). So I wanted to go for a long call. The skilled attendant lamented “don't upset me with your long call smell yet, I am eating bread” (laughter). Such remarks are not pleasing. The remark “do not upset me with the smell of your feces” (laughter). When she came she found a baby crying. They went and carried the baby.” [W18B]*
>
> *“That was when I had gone to the labor wards. I wanted to push when I was calling nobody came so I just delivered.” [W18B]*

Many respondents reported that attention to women’s needs during labor and birth is particularly lax at night. The difference in quality of care between night and day shifts seems to be recognized by all categories of respondents, even partners and community leaders.

> *“Safe birth is in the hospital, but you should not happen to go at night. Otherwise you will receive frustration from sisters on night duty.” [P37]*
>
> *“Yes, sometimes when a woman goes (to a facility) at night, she will just struggle alone, as the nurses will be asleep. If normal, she just delivers alone, but if a complication she can even die because no one will assist her. So I think it’s better, if they can accompany a woman until the time of delivery, not leaving her alone.” [P77]*
>
> *“They just watched this woman laboring in difficulty but couldn’t help? Until the baby died. But what really hurt me was the fact that they were watching and just laughing. In Luo, I think that it is bad to laugh at somebody’s problem, but they just sat there laughing, and this really surprised me.”*

Many respondents feel that patients who could pay received preferential treatment.

"You are first asked for cash, because it is your money that will enable them to assist you." [W7]

"They are reluctant if they realize you don't have money." [P5]

"Most people die because of no money. Medical staff recognizes rich faster than the poor." [P37]

Many respondents suggested that providing lifesaving care should come before questions about payment. Several husbands and community leaders told of provider requests for extra money before agreeing to provide emergency care.

"What could help skilled attendants? Save life first, payment later would solve the problem." 'P37]

"Another one is that there is no love of mankind, no love for humankind. You go to hospital and you find doctor is not there but in their private clinics and it is working hours. Sometimes you might find him, but if you do not bribe him he can't come fast enough. In the end you find the patient reached Homa Bay, but she still dies. Then taking her there is meaningless. The community thinks if the case was left for the TBA, she could have struggled for her, that the daughter of so-and-so would not have died." [CL32]

Many respondents recognized that the working conditions of skilled providers were very difficult, and that this contributed to problems with quality care. Some men and community leaders had a broader perspective on the problems of receipt of quality skilled care.

"Salary is not adequate for the doctors. Nurses working terms may not be good so they also want to get extra money in their own way, for them to meet their needs." [CL32]

"Thank you. What I can say is that it is those who make the laws that hurt the people in the grassroots level. There are doctors that they just look after their private clinics, and so they don't care about what others want in the hospitals. The lawmakers should put in place policies that allow doctors to only choose one place to dedicate themselves, instead of having to serve two masters at a time. The doctors have tendency that they will refuse to help you in the public hospital but will likely ask you to visit private clinics for help." [RL31]

Still community leaders were hopeful.

"What can be done to make women use skilled care facilities more frequently? (Silence). As per me, if the facilities have considerate and humane skilled attendants most women can go there because at home, those who are there are just people who were picked and they don't take their work seriously. Not all skilled attendants are bad, but there are some few bad elements that tarnish the name of all skilled attendants. Let's hope that through the Grace of God we will find people, who will take good care of us."

Despite perceived deficiencies in facility-based care, many respondents still rated skilled care as "good". Despite "negligence" on the part of skilled providers many respondents, stated they are still willing to use skilled care.

"TBA is ever close to woman, advising. In hospital, it is help yourself, but all in all, hospital is good." [P47]

"But sometime she is neglected by medical staff, and this has happened so many times, the midwives will dump her in the labor ward, while they are still on their own stories and women will deliver there with no assistance. And this is negligence. But still, we prefer skilled attendants, as they are more knowledgeable, we get help there and then when something goes wrong." [P37]

In many cases, but not all, respondents perceived that being accompanied by a TBA improved acceptance and reduced delay in receipt of skilled care.

"Yes, TBAs are welcome there. They welcome us so well and tell us "You are the effi who has brought the mother. Come in, come in my dear woman, please sit, we are going to take this sick woman." [T55]

"I left with my TBA who carried everything that would be required, and even if I could deliver on the way, she would have taken care. When we reached the hospital, I was received immediately and they took good care of me." [W18B]

"Does the staff there welcome TBAs? Some places they despise TBA, and some places they welcome TBA..." [T14]

Skilled Attendants on Quality of Care

Skilled attendants recognized and expressed many of the factors that they believe make use of skilled care difficult for women and families.

"How do the facilities demotivate women or how do they discourage them from attending? You know outside they say that the hospital, they charge a lot of money. That there are many problems, that here the charges are so many. They want you to buy gloves, they want you to buy cotton wool, sometimes when there's no sutures they tell you to go and buy. So the only problem is just finance. It's only money because here you cannot take any shortcut, while at home it's those things are not there, even if you get a tear they don't bother about the tear." [S52]

Many skilled providers are aware that provider attitudes could improve.

"When a mother comes to a skilled care unit, what might delay is the attitude maybe you have, the way to ask to this patient that can make you delay the patient. So you take the first initiative and assist the mother. Not all are gifted in acting quickly. You know, some people are slow in the observation and what is supposed to be taken, so they can see the baseline of that patient. So it's the concern and feeling for this person that can make the coming about of the emergency." [S66]

"The care provider has to be active and quick serving this patient, and also to learn how to talk to the mother. She has to humble herself because these mothers need to be clarified on some of the things." [S65]

Lack of even basic equipment and the need to ask patients to bring supplies is frustrating to skilled attendants too.

"If the items needed are not in the facility then the patients are told to go buy."

"Sterilization of delivery pack, since sometimes there is only one in the hospital."

Skilled attendants are aware of causes of delay in receipt of care, and have many ideas on how to improve care.

“The equipment that we are supposed to use. Because you see sometimes nurses are being blamed for not doing the right thing, but we don’t have the right thing to use. and if those things are available it is you who do the work. But not to ask the mama “Do you have gloves? Do you have the sutures? Do you have even the cotton wool” because there are some who don’t know the price of this cotton wool. They don’t even know what sutures are, and you are asking that mama. These things should be available in the place so that we can use. You see the nursing care we are not suppose to blame you, not knowing whether these mamas are having these things, you deal with emergencies the way it is.” [S42]

“*The delivering mothers, …there are some small things they need to buy. Those things, if we can have them in stock so that women would come and pick, and just add 120 shillings for delivery, only that one can help them.” [S52]*

“Can improve services by home care from retired health professionals instead of TBAs.” [S69]

“Use midwives instead of PHOs (public health officers) as is the case currently. Should be handled by midwives. Training and practice are different, and lack of practice leads to forgetfulness.” [S69]

“Maternity nurses should be involved in teaching TBAs, currently they are not.” [S69]

“Invite TBAs to witness delivery in hospital so they can learn from the maternity staff.” [S69]

Preference for TBA-Assisted Birth

Perceived Advantages of TBAs

Despite an unusually high stated willingness to use skilled care at facilities, many respondents still expressed a preference for birth at home with TBAs, especially for anticipated normal births. All categories of respondents spoke realistically about the pros and cons of TBA use, the circumstances that result in non-use of skilled care, and the reasons why women and families often had little real choice regarding use of skilled attendance.

"Ease of use" is a strong motivation for use of a TBA.

> *"At TBA no frustrations at all". [P37]*
>
> *"TBAs are always available." [TBA36]*
>
> *"Women like their co-women to deliver them." [P77]*

Many TBAs have a reputation in the community for good, safe care. For many women, skilled care is only sought when complications cannot be handled by TBA. Many will rely on TBAs first, only seeking skilled care when the TBA is "defeated**".** The word "defeated" is repeatedly used by all categories of respondent to describe when a TBA gives up and refers a complication to a facility.

> *"Most here give birth at TBA. The TBA would have been informed and she will be collected. Whatever defeats the TBA she will refer but majority are sorted out by the TBA." [E4]*
>
> *"They prefer local TBAs. They go to TBAs because they always get their antenatal care from them and it is only when the TBAs are defeated that they go to the hospital." [W74]*

The low cost of TBAs widely appreciated, as is humane care and personal attention by TBAs.

> *"Giving birth at home is easier because you will get a good TBA who will take good care of you unlike the hospital where this is rare. TBAs are cheaper than hospitals." [W10]*
>
> *"The TBA is so kind and loving and knows them on personal level, addresses them with their names, reassures them not to worry all through. At hospital nobody knows you…at times they are slapped and that is why some women prefer TBA." [E4]*
>
> *"TBA, yes, they assist so many people. You may laugh and think its ignorance and loss, but there is no income so the TBA really helps us. The population has really grown high for the dispensary, no trained staff to deliver, so you're referred to HOMA BAY HOSPITAL. No money no transport. Doctors despise patients instead of helping them so they fear going to hospital because of abuses. It's better a TBA." [RLL12]*

Some long-held attitudes about TBAS and skilled attendants, mostly among EFFIs, may be changing.

> *"Many elder women don't approve pregnant women delivering in the hospitals. They rationalize that even themselves they delivered at their houses (ne wanyuol anyyuola e*

udi). However, those elder women who have been given some education, prefer women to deliver in the hospital, because in the hospital if you have less blood, you will be added more blood, if the person has less body fluids, she will be added, and if you develop any other disease it will be managed." [E53]

The comparative proximity of TBAs, especially in precipitate labor, is a strong deciding factor in care source. As noted with facility use, proximity to a TBA makes use easier, and thus more likely, even when it is understood by all that a woman has already developed a potentially serious obstetric complication.

"Sometime labor starts at night and the TBAs are near, so the clients are taken to them. Some have normal delivery at TBAs, which encourages them to try the TBAs for other delivery. TBAs are closer to the pregnant mothers in the village than the health facility."

"Skilled care providers are different from the TBAs. We only go to the TBAs because they are nearer to us and they keep us very close that you may not think of going to the hospital. But actually we should be going for skilled attendance. Sometimes it is the distance between home and the hospital that discourages." [W74]

Women regard what they perceive as the "special skills" of TBAs, such as giving herbs throughout pregnancy, and repositioning the baby during pregnancy.

"TBAs, I go because sometimes I feel my thigh is heavy and cannot even walk. When I feel the fetus is very heavy in my stomach, when I go to the TBAs, they give an herbal medicine. Touch the position of the baby. If not good then the baby is repositioned correctly. After taking herbal medicine, I normally get a change." [W18B]

"Good things which make women use TBAs are the herbs, which we provide to make them feel lighter. Some women become heavy when pregnant, so these herbs make them to be lighter. If you are a Christian, and you can't use herbs, then I don't give you. I have seen most women who drink herbs (boiled in a pot). Even after delivery, they can bring the child to me when he/she is sick and I can give her herbs. So when my herbs work on them they don't go to hospital. That's why many people like coming to me." [RL3B]

"Yes, she can change the position of the baby and better still there are some TBAs who can know the position of the baby by doing a check-up on the mother. Some TBAs even if they are trained have some natural healing powers."

Many respondents expressed respect for the traditional role of TBA in community, and the special care and support women receive from TBAs. The dedication of TBAs and their commitment to helping women is widely appreciated by all.

"Oh, we should not be parted with the TBAs because they are doing a great job. "Mama Damar" has been assisting in many deliveries, and women can die but just the same way as they die in the District Hospital. What helps them is that they are dedicated to their duties. Some people have put their faith in the TBAs so much that you can't stop them from using the TBAs, and if you take such a person to the hospital, definitely there will be a complication and so we can't convince her that the TBA is bad because that is where her faith is." [RL31]

"The service she renders to community, or to the individual it is assumed to be her duty without failure. Many times a woman is brought late with complications. She (the TBA) hires taxi with her own money to take the woman to facility. If a woman delivers at her home and is unable, TBA buys her baby clothes and necessities." [T35]

"What I can say is this, as a TBA, I have done this work for a long time. I am dedicated because if you aren't you can't assist. Any complication I refer to hospital, to the extent I even use my own money… the work involves being anywhere at anytime. So you have to be dedicated. Sometimes you are called when it is dark and raining and so you have to go. You don't even get anything but we can assist…." [T35]

TBA's flexibility toward payment, the willingness of TBAs to "deliver now – pay later" is a major motivator to use, recognized and appreciated by all categories of respondent.

"TBAs are lovers of mankind and they also understand you if you don't have money. "[P6]

"A TBA can sympathize with you so you pay small fee and the difference you pay later." [W7]

"Women prefer TBAs cause can pay later or no pay if not able." [T34]

"You can help someone deliver at home it doesn't matter if she has money she can pay later which is different than the hospital." [T15]

The interaction of cost, transport and distance strongly influence women's use of TBAs.

"TBAs, nyamrewa? They are preferred because they can even ready to accompany you to your house when the need arises, they're cheaper and there is not transportation." [P6]

Why TBAs Think Women Prefer TBAs

TBAs freely expressed their own feelings about their work, their current role, and why they feel women and the community value them. They are proud, perhaps boastful of their skills with herbal remedies.

"Women know that we have knowledge and can talk to the hospital people. They know we welcome and examine them. They know we are trained. They know we are decision-makers. They know TBAs have medicines for "Ruoth", when it (the uterus) comes out as a globe (bulb shape)." [T58]

"Advice? We as TBAs give good teachings for the communities we serve. We also have herbs. Our role as TBAs, we perfectly assist women. The women are doing well. We have not seen a woman with problems, not a case of death even pph (postpartum hemorrhage), because we use the herbs…" [T55]

"What can promote me, to work in a clean place…and that I have a clean workplace and the number of years that I have worked. I started working before my "initiation" (removal of six lower teeth) and this means long time ago. I have worked till now. I have never done anything wrong. Even God knows. Women come to me from Kagan, Karachuonyo, and Kamagambo." [R36]

"I only help when I know how to help. God gave me wisdom (Nyasaye ne omiya rieko, moro maka aneno to nitie kaka akonyo). When the child is too big, I know how to tell her to push and as soon as I see the heads of baby, I put on gloves, hold the baby's neck then I deliver the baby."

T38, Kanyabala, (a trained TBA age 100 years) described herself as "the best in community, with lots of herbs."

TBAs are aware that cost and access make them the “first choice” of many women.

> *“You can accompany her to facility, and negotiate the charges for her, because sometimes she doesn’t have the money. If you are with her, she doesn’t have to pay all what is expected.” [T61]*

Barriers to TBA Use

Disadvantages of attendance by TBAs are widely recognized, lack of hygiene particularly.

> *“What bad things can happen? She can use dirty hands, uncovered hands, can cut the cord using sugar-cane peel, and can use an old blade.” [W22]*

> *“Bad? You can give birth in a dirty place, you can even be told to give birth on a stone sometimes my sister, it is so difficult if you do not have a strong heart you can’t.” [W62]*

> *“TBAs, well TBAs don’t have that general cleanliness that a woman needs, they use the tools more than once.” [P6]*

Why Skilled Attendants Think Women Prefer TBAs

Skilled attendants had many opinions about why women deliver at home with TBAs.

> *“They are comfortable when they are being delivered by these TBAs, because they go to the TBAs with their hearts, and the TBAs will assist them and when they come to the hospital they will be needed to have gloves, cotton wool, they need the sutures; and these things sometimes* they don’t have them because they are not prepared for.” [S42]

> *“What are the barriers? Lack of money. Lack of transport. Distance to facility. Negative attitude towards facility delivery. Mislead by TBAs. Fear to be chased away because of not attending ANC.”*

> “*What are the delays? By TBAs. Distance to facility. Decisionmaking at home, where to take her. Lack of money. Lack of transport.”*

> *“They tell you the reason why they don’t deliver at the hospital are, one it is expensive. Secondly, they will tell you that in the hospital they are needed to buy gloves, cotton wool, sutures, and maybe these things they can’t afford. That is the reason why they can’t come to the hospital and when you tell them the charges they say they were not aware it was cheap like that and you see at the TBAs' place it is not a must that they have to pay money, so they can even pay chicken or a goat or even beans which they are planting or even maize.” [S42]*

C: BEHAVIOR 3: USE OF SKILLED CARE FOR OBSTETRIC EMERGENCIES

As described above, in Homa Bay District, more than eighty percent of women give birth at home, many attended only by family members. In this setting, understanding the dynamics of careseeking decisionmaking at household-level, both for anticipated normal and complicated births, is a critical prerequisite to re-patterning careseeking more toward use of skilled care.

This section of the results is reported according to a refinement of the Three Delay model used to analyze careseeking in obstetric emergencies (177) called the "pathway to survival" (75). Understanding the local patterns involved in all four steps in the pathway – knowledge and recognition of complications, deciding to seek care, reaching care and receiving quality care at a facility or from a skilled provider - is essential to designing effective behavior change interventions.

Knowledge/Recognition of Obstetric Complications

Low levels of household awareness of the types and life threatening nature of obstetric complications is an important factor in non-use of skilled care in some country settings, (91, 110). However, a decade of experience in safe motherhood programs has shown that there is often a "disconnect" between household knowledge or awareness of obstetric complications and informed care-seeking decisionmaking when obstetric complications actually occur (75). In many settings, even in the presence of adequate knowledge for complication recognition, appropriate action is still not taken.

To understand household and community knowledge about and recognition of obstetric complications among Luos in Homa Bay District, it is important to note that respondents expressed three distinct categories of "obstetric" complications. There are those obstetric complications that correspond to the Western medical classification, for example hemorrhage, retained placenta, and obstructed labor. There is another category identified by respondents as "obstetric" complications that are more appropriately categorized as indirect, or contributing, causes of maternal death. Respondents listed STIs, HIV/AIDs, and malaria in this category.

The third category of "obstetric" complications does not fit into any Western medical model, but is clearly recognized by almost all categories of respondent. Dominant among these is "rariu", an example of a widely held traditional belief in an illness that is not recognized or understood by Western medicine. Several of the traditional illness beliefs appear to have a strong impact on careseeking decisionmaking, particularly the decision to seek care from a traditional or modern source. They are presented separately in the following discussion.

Obstetric Complications

In Homa Bay District, there is an unusually high level of detailed knowledge of most major obstetric complications among all categories of respondents, even men and religious leaders. Among all of the obstetric complications, postpartum hemorrhage (PPH) was the most widely recognized among all categories of respondents. Prolonged labor, ruptured uterus, and retained placenta are also widely know by all categories of respondents. However, attribution of cause often did not correspond to Western medical belief.

"From all these complications, which one would take to be the worst? When the blood is coming out but in general there is no good complication." [W18B]

"Generally, the cause is hard work. Here is a lady who has been laboring the whole time embarking on another hard work after labor. The artery must give way (ligeo cha chodi)." [E53]

"Bleeding, abdominal pain after birth so severe that ordinary drugs cannot treat."

"She can bleed furiously when heat gets into the womb. And after birth she can deliver badly, she can have a tear at delivery time when the baby is big, the baby can also die and also the baby can die if she doesn't push immediately, when the mother is exhausted." [T13]

"What changes? After giving birth blood is supposed to flow a bit and it stops, but if this goes on then you obviously know that there is a problem." [W2]

"The problems which we have are baby comes with the legs first, after birth placenta refuses to come out, after delivery stomach pains and headache". [W22]

"Some people say that some products of birth remain (wino ochot odong). Some remain pieces of placenta. When this happens, she can only get assistance from the hospital." [E53]

"After a woman has given birth it takes a certain duration of time before the placenta comes out, but if it exceeds this time, then the woman should be rushed to the hospital or she will die." [RL31]

"Problem? Breathlessness the woman cannot push (muche ruma)." [RLL33]

"Problems? That is rarip and kata jachien (placenta). Serious? Yes my wife has had, my wives, they get ready for these problems." [P47]

Uterine prolapse, vesico-vaginal fistula (VVF) and rectovaginal fistula (RVF) were recognized by almost all female respondents. VVF and RVF, end-stage complications resulting from prolonged labor that can result in loss of the normal anatomical separation between the uterus and the urinary bladder, are feared and dreaded complications. This was also true for ruptured uterus, or any condition that will likely result in hysterectomy. These disfiguring conditions are particularly dreaded when they occur in younger women, especially primiparas, who as a result would be prematurely unable to bear more children. Men did not mention VVF spontaneously.

Traditional "Obstetric" Complications

Many traditional cultural perceptions of pregnancy, birth, and birth complications still persist. A condition called "rariu" is a major concern of women, and widely known by all categories of respondent. "Rariu" is an intriguing "obstetric" complication, in that it may not be an obstetric complication at all (84). Yet respondents universally reported it as such, and did not distinguish between rariu and modern medical obstetric complications. Community respondents described the signs and symptoms of rariu in totally different ways, with some common elements emerging.

Skilled providers differ widely in their interpretation of the Luo cultural phenomenon of rariu, assigning to it many different and contradictory Western medical diagnoses (84). The most intriguing aspect of rariu is the predominant belief that only traditional healers and TBAs can cure it, and that skilled attendants cannot cure it. Belief in the inability of Western care providers to cure rariu is a significant deterrent to use of skilled care.

> *"In rariu, the foods we take fatten the placenta and it holds too much blood rariu. The mother remains with nothing, it is even bigger than the child is." [RLL33]*

> *"Most women do not go to health facilities because treatment of rariu is not there – only TBAs can cure." [WMN46]*

> *"Something cuts across the lower abdomen that prevents you from walking. At the hospital they operate you. It is the TBA who gives herb, and you hear a noise coming from your abdomen turrrrrr, like worms (njona) that is the problem our women have nowadays rariu." [LL32]*

> *"Ok. Is there something that you can do that the sister or doctor cannot do? Mostly here at home. There is! (Everybody now wants to contribute) One, which we do…. when she is taken to hospital she will be operated on. So that Rariu (a kind of pain) we assist mostly more than the hospital, hospital doesn't recognize rariu." [T13]*

Even religious leaders knew about and named "rariu".

> *"Problems? There is this disease known by TBAs called rariu, the placenta becomes too big it blocks the lower part of the womb and displaces the baby upwards. The small clinics cannot detect what blocks the progress of this delivery, so a woman goes to a church leader to pray for her. (Jadnong lamna wyasaye mkeci owinja ka iya rama kamae). We pray for them, but encourage them to go to hospital." [RLL33]*

> *"Rariu this is a very great pain that cuts across the woman's womb. It becomes an obstruction that the baby cannot come out. And…me I was taken for c/s recently but I don't feel its over, it is something so dangerous that when delivery comes you can consider it a death case." [W62]*

Other traditionally-defined obstetric complications, for which it is difficult to identify a Western equivalent, were also described by respondents.

A "decrease in blood" postpartum is widely believed to be a problem.

> *"After the post-partum period the blood can decrease and she becomes unwell. These are cases that happen. Theses are things which doctors can see and assist. Because even when we see them, we cannot help them through." [T13]*

> *"She now suffers from less blood, which is called in Luo "Remo cha ouyu kwome." [G53]*

An immediate/early post-partum complication called jariwre was also frequently mentioned, as were several others, nyatong and ojiwo..

> *"In this world there are certain problems that we should blame ourselves as the cause. Many babies die because of their mothers' bad habits. In search of food clothing and other essentials that would help her and her child after delivery a pregnant mother works without rest or without regard to her health…The time of labor finds her with less blood followed baby breathlessness. She cannot push (nyuolne dh bedo matek). This is with a*

*disease called **jariwre**. A mother should go to clinic so that diseases can be eliminated." [RLL33]*

"*Which of these problems are serious or worse? The most common one is "Nyatongtong" because it takes only 3 hours and you are gone." [E5]*

"Nyatong tong? She should avoid hard work like clearing the Shamba before plowing especially when one is eight months pregnant. If she develops this problem during pregnancy she should go to the hospital where she will be told to leave hard work. Should she continue with hard work, this disease will just get in her way."

"Nyatong after birth, back pains, bleed so much you lose appetite and die." [E78]

"Ojiwo", blood in the uterus that was not squeezed out and remains to cause serve pain." [T64]

"Childbirth? There's ojiwo (pains after delivery) so you have to massage her to reduce the pains. It's very common in women and they cannon eat when in pain. Even when it's a normal delivery. Ojiwo is really a problem." "Sometimes a woman gives birth, the baby comes out – THUP! And then she faints - that is another problem." [T13]

TBAs often spoke of a complication they call "Ruoth". Ruoth is the Luo word for God, and, apparently, for uterus. From the definitions provided, the signs and symptoms of ruoth seem to correspond to uterine prolapse.

"Can you tell me what this "Ruoth" is? … Some people call it "Jaleb" some "Ruoth"…. It's something that when a woman pushes the baby alone, after delivery it can come out after the placenta. So in one woman whom I delivered, I just washed my hands and pushed it back in place. It's like uterus, because after a woman delivers many times, that's when it happens and Luos call it "Ruoth" (God). It can come before the baby is out, so it blocks the exit of the baby that's why "jatelo'; you have to make sure you take it back for the baby to come out. It's very light." [T58]

"When there is a complication during the delivery, I take the woman to the hospital because sometimes the "Ruoth" (uterus) comes out first, so there is a kind of herb, which I give her to drink because when you take her to hospital with this problem, they will operate her. So I put on gloves and assist the woman." [RLL36]

Other Complications

Malaria was frequently mentioned as an "obstetric complication" and is perceived as serious, for its believed effects on both maternal and newborn outcome. It does not appear to be differentiated from true obstetric complications by community members. There was no specific mention made of malaria in the qualitative instruments, it was unprompted response.

"She can get infections or malaria so as the person who was with her during her birth, you advise her and take her to hospital." [T15]

"She should be told to deliver in hospital because what kills women after delivery in this part of the country is malaria. Women harbor malaria only to resurface after birth. Even the unborn child is born with malaria. This could lead to death." [E53]

"There is malaria, which may attack after delivery. Even severe abdominal pains before and after delivery..." [E26]

Sexually transmitted infections (STIs), including HIV/AIDS, were another unprompted response given by many respondents under the category of "obstetric complications'. STIs are widely recognized in the community as having a negative effect on pregnancy outcome, and therefore not differentiated from true obstetric complications by respondents. This may be due in part to the high prevalence of HIV/AIDS in Homa Bay District (5).

"Due to the fact that these days there are diseases (AIDS) she needs to link.." [T49]

"Serious? The STI, you can't give birth to a live baby." [E78]

"STD. Mostly people see GC (gonorrhea), because it produces pus. Some you cannot see. Such a couple goes to people who pray for the sick and give them medicine. Then some mothers have stillbirths. These deaths are caused by STDs that were never treated, you see pus in the child's eyes." [RLL33]

"Nowadays, these young people have infections. When you are pregnant it swells on the belly and produces some liquid mixed with pus…you get rashes in your private parts, it's a lot of suffering." [E78]

"Complication can arise when a woman sleeps with a man not her husband, that is a taboo – if (it is the child of her) husband delivers normally." [T38]

TBAs on Obstetric Complications

TBAs expressed their own perspective about obstetric complications, elaborating on many of their practices in handling such events.

"Make the woman to lie on her back or cross her legs to make the uterus to go back in place…" [T58]

"As a TBA, when the placenta comes out before the baby I make the woman to lie on her side, then I hold the leg and try to push back the cord. Then using my finger, I check if the baby is breathing, then I tell her to push. To make her empty her bladder I pour water, and then she can pass urine…When the placenta refuses to come out, I make the woman lie on her back and remove it with my hand using gloves."

Many TBAs are aware of the limitations of their skills and equipment and the effects that has on ability to treat complications effectively.

"Advantages? When you can't give birth you can be operated us TBAs don't have machines but if she has orip, or "rairu" I can assist." [T38]

"There are "daktare" in the hospital that can help you very fast should your baby's lie prove complicated for safe natural delivery." [T63]

"Advantage of skilled attendant one will be assisted no matter how complicated the birth when there is no other way they provide operations." [T55]

"At hospital, it is good because operations are done. I cannot use a panga (machete) to operate a complicated delivery." [P21]

"Hospital is best if you develop complication you can be taken to theater or to infusion. TBA cannot operate." [W23]

"You never know, delivery with complication… may get one anywhere. Being in hospital…is far much better, when you get bleeding problem, you get injections and if poor appetite you get vitamin injections."

However, it appears that even knowing the legal, equipment and skill limitations they face, many TBAs try to treat complications at home before referring upward for skilled care. Some stated that they did not delay, and referred complications as quickly as possible. TBAS often expressed great confidence in their abilities, and satisfaction with their "job". They expressed a variety of motivations for being TBAs, different types of strategies to motivate patients who needed referral to seek it, and a long list of things they think would improve their ability to practice.

"If I examined a mother and I find that the baby is not lying in the right position, I would advise that mother to go to sister to get assistance (onuang' konyruok)." [T63]

"Yes! Sometimes after delivery the placenta can refuse to come out, which will force you to take her to the District Hospital. That is where she can get help." [T13]

"We call them "Nyamrewa" (TBA) but there are some TBAs who will very fast see signs of complications in a woman, more than the others. There are some who will just force the baby out despite the complications and this will lead to delivering of an unconscious baby." [RL37]

"If the labor started yesterday and…now she has not delivered. When the child move to the upper side of the womb. If they have given her medicine and there is no change." [S71]

"Turns. When you see some leg has come out, you just start going to a facility immediately without trying first, unless you are defeated."

"What happens, if a woman gives birth at home with a TBA, then artery gives way (Liego cha chodi), the TBA has some herbs to handle that…but should she get defeated, she should get a vehicle, take her to the hospital very fast before the condition gets worse." [E53]

Treatment with herbal remedies is extremely widespread. TBAs in Homa Bay District use herbs for many conditions throughout pregnancy, birth, and after. This has also been documented in other parts of Kenya (101, 184).

"We have traditional herbs which is not available in hospital. Hospital is more advanced than us. TBAs, that's why they train us. Hospitals do 20% but God does 80%." [T58]

"Prices are high for medicine and treatment, so it is better you chew traditional herb at home (omieng). That is when you are chewing the herb you will be told that you are of the "old world", people take you as an ordinary person." [CL32]

"(Yadh agulu), boiled herbs, TBAs have herbs to make women healthy." [TBA36]

"When a woman knows she is pregnant, she will come to me and I will give her herbs and examine. She will inform her husband who likewise will come for treatment." [T55]

"The TBA, there is a special leaf they give the mother to grasp in her fingers, then she touches the presenting part of this child, the child will just return to the right position." [RLL33]

“If she’s pregnant she can’t defecate or urinate, you can give her medicine for sitting in - in a basin; and another she can massage herself with so she can urinate very fast. Can use to urinate and defecate.” [T13]

“There is a traditional medicine for labor. If the pains delay, she is given to chew so that she can deliver before the time of delivery. It is called kisieikp. And also there is one, which can be used to delay labor when the woman is being taken to hospital.” [T13]

“For breech, we give herbs, and after palpating, the fetus changes position to normal.” [T55]

“Too much bleeding …I give an herb and the bleeding stops. She can even remain with me in my place for two days, and when I find out she has the strength she can go back home.” [T15]

“Ok. Another? If the water comes out fast (discharge) there is a traditional medicine, which she drinks, and it washes all that.” [T13]

“We TBAs have tablets and herbs we give after delivery, or even before to hasten delivery of the baby. And the after birth the herb causes the pains to cease completely after, and women like that.” [T55]

“For labor I give herbs, to change position of the baby and get help from other female family at birth. I give warm water.” [T36]

“We have herbs where a woman has been losing one baby after another, we smear on the baby on the mother’s breast, on the feet, and when she walks away the baby will grow well, and she will not lose child again.” [T55]

“I just give her an herb and the cervix opens, the placenta comes out, we cut the cord.” [T15]

“Severe abdominal pains after birth, serious, we have herbs.” [T38]

“The traditional herbs for infections of the cervix, the woman is given herbs so that the pregnancy may progress will and not cause problem after birth.” [T55]

Husbands also know about the use of herbs by TBAs.

“You are trying to say that there are some complications that cannot be treated by skilled attendants but they can be treated by TBA? Yes, there are some diseases, which affect the lower abdomen, that cannot be treated at the hospital, but they can treat them. Some disease even stop women from having sexual intercourse with a man, but the TBA have a herb that when the woman drinks helps even a woman who previously was unable to give birth. The skilled attendants say that the condition is caused by “growths” and they must be operated, but the TBA will give you the herb and the “growth” will disappear. So this is the role that the TBAs play. One TBA is blessed with an herb, she just wipes with her hands, and her placenta is out. Another use blood from a cow she takes it fresh, raw.” [P37]

“Or the afterbirth can be stuck there, make childbirth complicated, that is the serious one – one of my wives had, and the herbs helped. What causes? Don’t know but usually we give traditional herb, and then and the placenta expels in two or three minutes. No, I do not know the herb, but a woman I know, she used it and I paid her a goat. 300 ksh and a goat.” [P37]

"We have an herb called alandra, and a flower chewed that facilitates labor and fast delivery." [P28]

"There are some TBAs who are associated with giving out herbs during pregnancy to assist in delivery. The herbs that they give help a lot, and this makes people come from very far in order to be assisted by her. If there's an emergency in the community and the hospital can't be reached for help, it is the TBA who tries to handle the situation if she's trained." [RL31]

Use of herbs can be harmless, and might be helpful in some situations. Repeated and prolonged use of herbs by TBAs to try to resolve complications, however, can severely delay skilled care seeking.

"Complication? I give herbs or change to another herb, and another, and she will deliver. If not, I will dress up and escort her to the nurse and explain what already took place." [T55]

"TBAs, because of herbs… sometimes they give wrong herbs, that complicates births." [P28]

The traditional wisdom on preparation and use of herbs is gradually declining.

"Most herbs used in the past are gone, those who knew did not teach others and have died." [CL32]

"How did they get this healing power? In the olden days it was called spirits and it can make someone heal better than a trained person." [RL31]
"Long ago, old women used to make medicine for this which were very strong in some kind of pots, they were "yadh agulua". STDs today are very complicated. The old one used to be abuba (GC), which could be treated by yadh agulua." [RLL33]

Skilled Attendants Opinions of TBA Complication Recognition

Skilled attendants expressed a variety of opinions on the quality and timeliness of care provided by TBAs, and the delays in careseeking that can result.

"They cannot tackle the retained placenta. The client denies visiting TBAs but the vaginal wall and swollen uterus normally show a sign that it has to be tampered with. Cord cut and dirty." [S70]

"The TBAs were trained seriously. The TBAs don't refer, but even if they try to refer they…only refer at the last minute, but the patient ends up dying. They don't know, they wait for a long time to wait for the baby to come out. They wait until death or until the family takes action themselves." [S71]

*"TBA can't recognize emergency until it's late. Transfer by TBAs is usually late. Relatives have to interfere mostly. They try hard to reach hospital fast, four hours maximum. Prolonged labor however is not taken serious enough**."** [S68]*

"When a baby is not going fast enough, it's obstructed. They know. The perineum is dilated, they can detect early enough". [S73]

"TBAs refer complication cases to hospital late, ruptured uterus. Young girls come late or lose their uterus or end up rectovaginal fistulae (RVF) or vesicovaginal fistulae (VVF)". [S68]

"What I know is that they (TBAs) do delay mothers, because when a mother is supposed to deliver, depending the time the labor starts… so these mothers, most of these have been coming to ANC. They (TBAs) say, "keep on going you will be alright, you will be alright." So I think what they do, they delay the mothers so much because for one maybe they will not understand this is a complication which is arising." [S64]

"TBAs recognition of complications and time factors in emergency? Those we train act very fast. TBAs are to refer all primiparas when problems arise, but they don't consider unless there is bleeding. Depends when labor started, they keep on telling mother, "it's coming, it's coming."

Skilled Attendants on Obstetric Emergencies

Many of the skilled attendants interviewed worked at health centers, where normal deliveries can be managed, but facilities to handle major obstetric complications are not available. If a doctor is not available, these care providers stabilize emergency cases and refer to district hospital. Some respondents worked at facilities where comprehensive emergency obstetric care can be provided on-site, including blood transfusion and caesarian section. Skilled attendants shared their perceptions about the quality of care they provide, especially the management of obstetric emergencies.

"The ones, which I can deliver, I will deliver them. The ones I can manage here I manage but the ones, which I defeat, I refer. We only attend emergency cases we don't have labor ward so have skilled attendants but no facility." [S73]

"Here it depends on the way the mama comes. If at all it is because of fetal distress or pph (postpartum hemorrhage), you just fix the 5% dextrose and refer to Homa Bay." [S42]

"Take the history, do the observation, then more observation. Giving a rough observation which may tell delivery after two, then it takes eight hours. This may get the skilled personnel unprepared." [S70]

"So you are telling us you don't get any maternal deaths here? No, because as you said, that is how we detect if there is any danger if we see this mama will not make it in our health center we transfer her." [S66]

Provision of care changes substantially at the end of the doctor's shift - 5 P.M - when responsibility for care or referral decisionmaking becomes the domain of the nursing sister in charge.

"As soon as patient arrives, if before 5 P.M., we help send her to the doctor; after 5pm, we inform the nursing officer in charge."

Skilled attendants acknowledge many barriers to quality of care. Lack of an adequate number of health workers; attitudes towards the patient - lack of "initiative to deal well with them"; shortages of even the most basic of items, so that patients must purchase; sterilization of delivery packets - sometimes the only one in the facility; were all mentioned as common constraints to quality care.

"Lack of treatment equipment, gas, transport. Getting anesthesia or doctor or *other staff." [S68]*

"Enough staff in each facility. We get only one day off per week which demotivates personnel. Operating theater, doctors, qualified health workers like gynecology, pediatrician. Equipment, water, an autoclaving machine. Means of transport."

"Hospitals should be equipped with things that patient requires health workers should change their attitudes towards patients. At times there is no linen, patients share beds." [S61]

"Building staff houses, building a maternity wing, deploying more staff." [S71]

"Being realistic, what kinds of skilled care can we expect to be available in this district? We are not badly off for emergencies, because we have equipment. We should be upgraded in case of management of gynecology, trained more to handle emergencies, have vehicles stand by, money prepared for emergencies, employ more nurses and doctors, to have enough equipment. Deal with emergencies first and ask for money later. Talk to relatives to prepare for delivery, transport to be available. Consoling, staff should not be reluctant. More cleanliness in facilities."

" The nurses we are very few, especially in the hospitals. Like now, we are two my colleague has gone for tea. And I have left only one student nurse in the ward. We don't have most things like gloves." [S67]

"Lack of staff because I am only one person so they come and get nobody cause I can not work everyday." [S71]

Most skilled attendants had very clear ideas about what they themselves could do to improve obstetric care. The need for improved "caring" behaviors toward women and families was almost universally acknowledged by skilled attendants themselves.

"Humble oneself when the mother inquires about something, serve patient quickly, talk to her politely. Keep them clean, giving them bathing water, get them something to eat after delivery. Have enough supplies and equipment, patients should be provided with everything they need. Sterilize used equipment, prepare them for delivery."

"Give health education, tell them about the need for hospital delivery, the need to come on time when labor begins. When they come here, they say the attitudes of nurses, say nurse is harsh, how we talk to them so…"

"Maybe professional attendance, you use kindness, and many patients need privacy."

"Can't find privacy…private room. Accumulate required items so we can spare families buying." [S73]

Deciding to Seek Skilled Care

Who decides?

Once an obstetric complication is recognized as severe enough to require treatment outside of the home, a complex pattern of decisionmaking begins. Many categories of respondents agreed that the husband/male partner is the key decisionmaker regarding use of emergency obstetric care.

"Who decides? The husband, as he is the one to meet the cost but in agreement with wife as she cannot be forced." [P37] [P5]

"(Chorus) Your husband makes the last decision for you to go to the hospital." [W74]

Sometimes however, often in the absence of the male partner, the co-wife or EFFI decides. In many cases, a chain of family members and trusted community members participate in the decision to leave home for care.

"Who decides? The woman cannot she is sick, so husband or mother-in-law. In fact at last delivery I and her both decided she should deliver in hospital." [P77]

"Me decide? This option may be there or it may not sometimes it reaches critical moment when those who are around you are the ones who will decide for you where you are going. You wake up to find yourself at Got Kojowi and you will wonder how you reached there." [W74]

"If the husband is around she will first let him know, but in his absence, the mother-in-law who in turn would report to the father-in-law."

"Men's attitudes must be changed because we are the decision-makers." [P28]

"If the TBA doesn't know? Call other family, you call around and send the first to come to get you or other responsible persons, or you run around yourself if you are strong enough, with the message that TBA is defeated and hospital is needed." [E4]

"I want to talk about negligence on the part of caretakers (in the home). Sometimes a wife wants to deliver but the husband is not taking action, he is just observing. So much time is wasted until death becomes inevitable." [RLL33]

Sometimes the advice of EFFIs is followed, but often not.

"Yes, they do as I advise. My daughter-in-law and even the daughter-in-laws of my co-wife, some decide not to because your advice is old fashioned, or she can follow others blindly." [E54]

Daughter-in-law must do as I want, as they are under my responsibility, but yes, it will depend on the lady's character. [E4]

"Women have different understanding. These are some who get information and plan with it. They reach the hospital early enough. There are those who are tough headed. They give all sorts of excuses like…the labor was abrupt etc". [E53]

"Yes, the women of today are difficult you can advise her but she does not take your advice". [E78]

Many TBAs said they are the ones who decide about where women with complications should deliver, but this type of referral decision is often made **during** pregnancy based on detection of potential problems like abnormal lie or twins. Many TBAs are aware of the legal and policy limits to their practice, and many stated that they observe these limits.

"We were told that the first and the fifth birth we should not deliver, but second and fourth we are allowed if no complication." [T15]

"(I am) aware of the first and the fifth births as not for us…" [T61]

"If it's the first born we don't deliver, that's why hospital is good in case she's anemic." [T58]

"A mother should take twelve hours with labor. After that, take her to hospital sometimes we delay because we are trying to help so we have to delay." [T13]

"Women who put on shoes size 4 are very short and must go to hospital, as well as women who have given birth many times."

Often the TBAs advice is not heeded when labor actually starts. Some respondents placed much of the blame for non-use of skilled care on women themselves.

"When you examine and you see this is impossible for you, you tell her. Maybe you get that she has twins so you tell her to go because it is something you cannot handle." [T13]

"Delays? Woman slow in action have weak senses and in many cases it is the husband who pushes them to go to hospital." [P28]

"Delay – you as a TBA, you must talk to the woman when the husband is present. She can be problematic and does not listen, just takes for granted. You be humble and tell them the goodness of the hospital." [T15]

The rapid onset of complications, the need to determine the severity of the complication, and inability to take quick, decisive action contributed to delays in seeking care.

"Slowness of decisionmaking by husband causes household delay …." [T36]

"Delays? One comes when it is at home, the decision is like bargain - decide what do we do? Can we try this one or this one, the decisionmaking can cause the delay." [S65]

"What causes delays in the homestead or delays to go to hospital to see a nurse or a doctor, is "what is wrong or what is not wrong with me to go". [R36]

"If she is serious, not talking, rush her to hospital". [P6]

Who Accompanies Women who Develop Obstetric Complications?

A key element of birth preparedness is advance planning for a "chaperone" or appropriate person to accompany a woman who develops an obstetric complication to a facility for skilled care. In Homa Bay District, responses to this question varied.

Most women and TBAs see it as part of the role of the TBA to accompany a woman she has attended to a skilled care source. Currently, almost all TBAs accompany a woman with complications to the skilled care source, but usually only after she has attempted to resolve the complication herself. Often if a TBA accompanies a woman with complications to a facility, receipt of skilled care is facilitated.

"They (facilities) do admit women, but only with the TBA...for them to open the door at night, is usually quite different unless a TBA is near." [E4]

"TBAs help skilled attendant? Yes, TBA accompanies and tells skilled attendant that "she is my patient in the community, so please assist her and action is then taken quickly." [T64]

"….why do you bring her now? Where have you been? But when you get a nurse who is gifted to help she will welcome very fast, that a TBA has brought a patient. She will assist her very fast." [T14]

"Mostly it's the TBA. When she can't assist anymore, her husband, mother-in-law or brother-in-law. One family member can accompany her to where she needs to go."

"TBAs must accompany, it is duty and she (the woman) can get problems along the way." [T64]

Some TBAs do encourage use initial use of skilled attendance, before complications occur.

"TBAs try to help these women to go to hospital by telling them that delivering at home or on her own can cause problems, because no one can give/add you blood if you bleed so much. We also advise them to plan their births not to give birth always/daily so that they are healthy." [T14]

"We need to talk to women and TBAs. Some TBAs don't tell their clients to go to hospital. Some are very encouraging, they declare to their clients that their role is over, what is remaining is for skilled attendants. They encourage them to go to Sisters without delay, more so when they find that the baby is not lying well or there is some disease or when the uterus is weak." [E53]

Some feel that husbands should also accompany the woman with complications and her TBA.

"It is the husband who takes the wife to hospital because, this is his burden." [T36]

"When it reaches that kind of level we don't treat – we refer because we have tried and the problem – we are defeated. So you take action with that person until where her life will be saved. So she can survive or she can die. So that is your job, you have to take her, not her husband only. The husband follows you when you are going. So the husband just looks and says the TBA has been defeated, but he should accompany the TBA with the wife to Homa Bay District or Ranen because he is the husband." [T13]

"The person who accompanies the woman to hospital is the husband. He's the one who knows the wife and should be concerned. Also he knows how to assist the wife when she arrives in hospital and also because the wife is like the husband's "child". [R36]

Men were asked if it was true that sometimes husbands contribute to delays in careseeking, or even forbid use of skilled care in obstetric emergencies. They emphatically denied this, although a few men said perhaps there might be some men who behaved in that manner.

"Men keep woman from care in complication? Those are not men. They don't care for the life of the woman..." [P37]

"Do some men prevent skilled attendant when there is a problem? Here I think only mad men may do something like that." [P20]

The effects of obstetric complications reach far beyond the woman herself.

> *"It is a burden to the family. There is trouble when the woman develops complications after birth. The baby will not be all right, the husband will be troubled, the whole house suffers, as the woman is the overall owner of the household". [P37]*

> *"Problems? Retained placenta, too much bleeding, infections - they are bad. How can they not be bad, even you as a husband, when a woman is sick even you are sick also (laughter); because your wife is sick and maybe you only have one wife….it is you who will do all the duties." [P77]*

> *"The one I have experienced that I really sympathize with was from our neighborhood. The amniotic fluid burst. But the woman continued doing her work and went to fetch vegetables. She was now not wearing her pant. The water or amniotic fluid was drizzling. We tried to take her to hospital but she continued working, lamenting that "mine is this way". She was still courageous." [W18B]*

Reaching Care

Cost and Transportation

Significant delays result from last-minute efforts to obtain funds to cover the cost of transporting a woman with complications to care, and to cover the well-known costs of care once she reaches a facility.

> *"When a complication occurs, it's money that is looked for. I will call people to come and make a decision." [E4]*

> *"If you don't have money it's a big problem that's why we're dying very much." [E78]*

The well-documented barriers of distance from and transport to facilities where skilled care is available are also important barriers in Homa Bay District.

> *"What might delay or prevent a woman from getting to a hospital? Distance." [T63]*

> *"We may look for a vehicle, or if she is not badly off, we may look for ngware, (bicycle taxi)" [T63]*

> *"Delay? Rain may inhibit the walking or the pain. The community members will find a bicycle to take her to hospital once a complication arises." [T53]*

> *"The men will be called upon to carry the lady on the bicycle, as we are far from the main road. The bicycle will take her to the health center. When she is not able to sit, she will be carried on a bed or in a wheelbarrow to hospital." [E4]*

> *"On the way what can delay her? She can delay because there is no vehicle or bicycle (ngware), or flooded river. Also lack of roads and bridges when it rains." [T14]*

Social support

Many women expect support from their husbands in meeting costs and finding transport when complications occur. But in the absence of husbands, some women receive social support from the extended family.

> *"Me, when I talk on help, the first person I expect help from is the husband. The first person who helped me was my husband, but in my second birth, I got help from my grandmother (mother to my husband). My grandfather has helped in six deliveries. My husband was always on employment and therefore my grandfather took all the responsibility from feeding to clothing my children. I relied on my grandfather for any meaningful help. My husband also helped me to get access to family planning clinic at Ndhiwa." [W74]*

> *"The community can help push the bicycle to hospital". [P77]*

Some of the traditional community mechanisms for social support are eroding.

> *"Other members of the village in case there is a problem? They normally don't help. Here in our village, mothers just die here. One suddenly heard that a woman is giving birth but she died…to us who believe in saving life, when we get such news, we just say too bad but it is just too late! Death has taken place you can do nothing." [E53]*

> *"In the past, a woman belonged to the family, she was peoples and community property…the community knew the pregnancy was happening and was happy about it. At delivery people would assist. They would wash them. There was no payment...People have adopted the ideas of no love for mankind. One can die. Your Homa Bay Hospitalor may have a vehicle and if you can go to him he will ask for 2000 ksh for him to help you and he will not wait to be paid later." [CL32]*

In some communities, alcohol creates problems.

> *"We have problems with drunkards. They become too drunk even to give church members information about a sick person. Too drunk to take action (tak thiwg)." [RL33]*

Established religions think that churches and religious leaders are aware of, and perform a role in, social support for pregnant women and new mothers in the community.

> *"We see it as a serious problem but it is because we are far from where we can get assistance quickly. The church can pray together so that they get assistance so that they won't die."*

> *"If we have to contribute money to help the problem, we do so, and if it's for the death we collect money and help the bereaved family. "*

> *"If it is discovered that there are signs of complications, then the woman should quickly be taken to the hospital, so that even if she is to be operated on, then it is done when she is strong. There should also be preparation for materials that may be needed and if at all she has to be taken for operation; you should buy materials such as gloves and cotton wool. [RL31]*

The Complication Narratives

In addition to the in-depth interviews and focus group discussions, a set of complication narratives (CN) was also conducted. The complication narrative interview was specifically designed to provide detailed documentation of the steps in household-level careseeking decisionmaking when obstetric complications and emergencies occur, according the “Three Delays” and the “Pathways to Survival” models described earlier.

The complication narratives were conducted with families in which a major obstetric complication had occurred within the past six months. Despite initial difficulties locating respondents, more than a dozen complication narrative interviews were conducted. The narratives were conducted using a semi-structured, group discussion method. Whenever possible, all of the participants in the complication-related decisionmaking were interviewed together. This allowed a variety of perspectives to be elicited, and gave dimension to the interviews.

Initially, it was challenging for the community interviewers to systematically gather the required information while still allowing the respondents the freedom to explain in their own words and in their own way. However, after some additional discussion of the CN information objectives and some methodological review, the interviewers gained additional confidence. Some of the most informative interviews resulted when the community interviewers revised their interview techniques themselves, and allowed respondents more control of the flow of discussions.

“Detours and Delays” on the Pathway to Maternal Survival

The “Pathways” model describes a sequence of four key steps that women and families progress through in order to receive quality skilled care when an obstetric emergency occurs - recognizing the complication, deciding to seek care, reaching care and receiving quality care once arriving at a facility. It is a linear model, and suggests that women and families move directly through these steps. In fact, as documented in these complication narratives, the behaviors of some women and families do conform to that model.

However, in many cases, both in Homa Bay District and other maternal care settings (91), it has been shown that rather than following this linear path to skilled care, there are often multiple, circuitous “detours” along that pathway. These “detours” contribute significantly to the globally-accepted three delays in seeking, reaching and receiving care.

Table 8: Round 2 Complication Narratives Overview

Inter-view#	Age/ Pari-ty	Problem/ Diagnosis	"Pathway"				Total Time	#Provider/ Caresites Visited	Delivery Location	Birth Outcome	Cost
			Recognize	Decide	Reach	Receive					
2:1		"Late Doer"	Sat. 7pm Labor Begins Sun 2am "Trigger" Husband	Sun 4 am TBA, Mother-in-law, Co-wife	Sun 5 am Leave for District Hospital (trek)	Mon 8 am Arrive Mon 10 am Admitted Mon 5 pm C-Section	46 hrs	3	HomaBay Hospital	Mother still sick. Twins, one died at birth.	35,000 Ksh
2:2	age 17	"Partial Doer"	Sat/Sun Mon 5 am	Consult TBA 3 times	TBA takes to hospital Reach hospital not admitted. Tues 7 pm Goes home.	Never received hospital care.	72 hrs	2	Home	Maternal death at home. Baby died later.	
2:3	G1 P1 age 20	"Doer"	2 pm Husband	Family Helper, TBA	2 pm HomaBay Hospital Delivered	Prayer Home after Birth	24 hrs	4	Home, TBA, HomaBay Hospital		2,000 Ksh
2:4		"Hands-First" presentation VVF	Sat 8 pm Family transports to TBA home Sun 6 am TBA says "wait"	Sun 11 am Transport to hospital	Sun 2 pm Reach hospital Sun 5 pm C-section performed		24 hrs				35,000 Ksh
2:5			Husband sought, TBA "slow" Off-duty nurse (neighbor) in woman's home	Mother to private clinic. Return home. Back to private clinic.	1 pm Mission hospital Midnight - Died				Home - Private Hospital - Mission Hospital	Newborn died at home 6 hrs post-partum. Later, maternal death at mission hospital.	11,400 Ksh
2:6	G8 P8 5 living	"Doer" (near)	4 pm - 6 pm Complication noted by family friend	7 pm Reach hospital	4 am Reach HomaBay Hospital 10 am C-section performed		30 hrs		HomaBay Hospital		30,000 Ksh
2:7	G8 P8 6 living	Prolonged/ obstructed labor Vacuum aspiration Retained placenta	10 am Leave for hospital	30 minutes arrive at hospital	Vacuum aspiration performed at hospital				HomaBay Hospital	Alive, Severe Hemorrhage	1,870 Ksh
2:8	G6 P6 5 living	Non-doer	10 pm Go to home of TBA.	8 am Sent to private doctor.	3pm Regained consciousness.	2 weeks post-partum referred to district hospital by private doctor.			Home of TBA		

Several of the complication narratives from Homa Bay District clearly illustrate these detours and delays, the non-linear, zigzag, back and forth movements of women and families between multiple care (and prayer) sources. The complete translated text of two particularly eloquent narratives and a schematic diagram of the findings from these two interviews are included as Appendix VII. Understanding these deviations from the pathway provides an information base on which to design interventions to "repattern" skilled care seeking behaviors, through more informed and efficient decisionmaking.

Several of the respondents in the complication narrative group discussions were particularly eloquent in describing the often poignant details of their attempts to obtain emergency obstetric care. A few of these complications resulted in death of either the mother, the newborn, or both. Unfortunately, there are some missing details in the narratives that more skilled probing might have elicited. This may be because the community interviewers did not have technical health backgrounds or extensive previous interview experience. However, there is an element of complete openness and an atmosphere of genuine rapport evident in several of the interviews that may not have been achieved through use of a highly trained external interview team with more technical expertise in maternal survival. The result is a compilation of complication "stories", told by and from the perspective of the families themselves.

Table 8 attempts to summarize key elements of each of the complication narratives – the diagnosis/obstetric complication; a component-specific breakdown of the "pathway" to care; approximate time from onset of labor to receipt of appropriate treatment; number of providers/care sights consulted; delivery location; birth outcome; and cost as reported by the respondents. It was not possible to cross-check the family perspective with skilled provider perspective and/or hospital records due to time constraints and difficulty in tracking cases in hospital records.

Delay in Recognizing Obstetric Complications

The patterns of delay in recognition of obstetric complications documented in the complication narratives were consistent with descriptions in other published accounts (75, 91, 110, 177). Some of the delay was due to women themselves, who were not prompt in informing even close family members about their pain or problems around the time of birth.

> *"She was shy, she feared to say….(that she was experiencing a complication, two days after onset of labor)" (2:8)*

Recognition of severity of a complication, and attribution of cause are not timely, accurate or "scientific".

> *"The way we were seeing her in agony and pain, not like any other day, we decided it is only better to give birth in the facility where somebody can be assisted in case of any outcome. So when it was realized that the blood was inadequate, we had no alternative because it is only hospital where transfusion can be done. "(2:1)*

Delay in Deciding to Seek Care

The family decisionmaking process is often time consuming, requiring permission or authorization from several individuals before concrete action can be taken. An intermediary, usually one or even several TBAs, were frequently consulted by the family before the move toward skilled care was initiated. Reconciling differences of opinion within the family, and among family members and "TBA consultants", regarding appropriate care source was often an additional element of delay. Often, due to a combination of these factors several days would elapse between the onset of labor and the decision to seek skilled care.

> *"People do come with different ideas. Some people came and told me she might be bewitched, they thought it was the devil." (2:1)*
>
> *"It took three days, and on the fourth day in Migori...she stayed at home for two days and later she was taken to Migori for operation". (81).*
>
> *To the TBA: Did you have any problem? "Yes it is normal, when your fellow woman is in problem, I was a woman, I was also feeling the pain. When I realized the time was advancing gradually, I went to the father and told him that the problem was running out of my hands, he should get an alternative...It is not good to keep quiet, something may go wrong and you will be there for blames. ...We were staying far from the hospital." (80)*

Sometimes the TBA does recommend referral to a family in a timely manner, but there is resistance **within** the family.

> *"I started telling them that the government does not allow TBAs to handle a delivery that has taken over six hours, so I came back to my house. The next day, I quarreled with them for looking for me in the bush when they could have taken her to Asego or Asimbi (facilities), and there were also skilled attendants at Rangwe." (2:2)*

Detours and Delays

In many of the complication narratives, women, families and TBAs exhausted all other possible care options before finally resorting to skilled care.

> *"She thought she had rariu, so the first decision we made was to take her to a more expert TBA than the first one, so we went to the TBAs home." (2:1)*
>
> *TBA: "I told them the next day was Sunday and so I was not allowed to touch any herb. Then in the evening they came back and I told them I could not walk in the darkness. They again came for me at five in the (next) morning. After the woman had finally delivered at home (four days after onset of labor), they called again because the placenta had refused to come out. She took the herbs, she chewed it and I sprinkled it on her vagina. I told them the medicine I tried was not effective, and asked them to go and call another woman with a different kind of herb and try hers. When this woman (TBA) arrived, she (the woman) turned, bid her husband goodbye and died. She only said "goodbye Makadero", she said bye to her husband. ...According to Luo custom, someone with the placenta still in place cannot be buried, maybe they called a doctor to take it out."* (2:2) (This same TBA told the family initially she could not deliver the woman because of prolonged labor)
>
> *"By now, I think it (returning to hospital) is the last resort and that is where I think we will take her now." (2:1)*

Strong belief in the healing value of prayer among adherents of some religions, and belief in traditional spiritualists, posed major barriers to use of skilled care. Religious influences have an unexpectedly strong influence on care seeking decisionmaking in obstetric emergencies. Although the major religions are well established in Homa Bay District and have many followers, there appears to be strong influence on non-traditional religions that some respondents referred to as “cults”. Praying for women who develop complications, **as an alternative to seeking skilled care**, was a common and disturbing finding.

> *“Sometimes the wife prays with us, the husband not, husbands can order us out of their houses (ni kamama egima ne okeh to ch? Ema ise ketho chiegu)”. [RLL33]*

> *“Together with my brother, we set out to the hospital, but on reaching the road she (the woman) told us it is better to be taken to prayer people. So we decided to take her there. She was in deep pain (3 days postpartum after release from hospital) so she thought at least prayers could reduce the pain, so when going to the hospital (after praying) she would be a bit better.” (2:1)*

> *“It’s the sister in law who told us about the spiritual healer. He was brought, and he removed things from the house and from her body. On that day she felt well, and ate so he left. When he came back he decided that the lady to move to his home. After prayers the stomach has reduced, the pain is still there but not much.”(16)*

> *“In one case, a woman with complications was first taken to TBA, who referred the woman to a private clinic. From there, she was sent to Homa Bay District Hospital, and then on to the regional referral hospital in Kisumu. The baby died. After release from hospital, she was still not well, so the family took her to a prayer camp, where she was still staying, sick, at the time of the interview. The cost was very, very high, 56,000 shillings. He, the husband, sold all his cattle” (16)*

Some TBAs consider it their duty to remain with a woman in trouble until the very end, despite insurmountable barriers helping her to reach skilled care.

> *“When the other woman left, you were still brave enough to stay by her side? You know, when you are attending to someone you don’t leave her side, because she believes it is you who can help her. So I could not leave her side.” (2:2)*

Delays in Reaching Care: Cost, Distance and Transport

The conventional barriers of cost, distance, and transport are recurring constraints in Homa Bay District as well. Wheelbarrow, bicycle or “trekking” (walking) are often the only means to transport in areas far from health facilities.

> *“It’s only that she gave us a lot of difficulties on the way because she could not walk properly...she would just walk and sit, walk and sit... she was sitting down all the times and sometimes we were just holding her to walk. So that made us take a lot of hours in the way before reaching district hospital - three hours.” (2:1)*

Delays in Receiving Quality Skilled Care at the Facility

Quality obstetric care, particularly emergency care, is not always readily available at health centers or hospitals in Homa Bay District. Again, this is consistent with other findings in Kenya (101) and in other countries (108, 177). One study in Western Kenya documented an average of 3 hours between arrival at a facility and receipt of caesarian section. (101)

> *"It started at 4 PM (labor), I arrived at 8 AM. The doctor examined me and said to wait until tomorrow morning. I was on I.V. (intravenous fluids) until the next day around 9 AM. I was in pain and bled through the night. I was taken for operation about 10 AM. ...It was good care because there are good people and bad people, we fared well." (2:6)*

Lack of supplies, equipment, and blood for transfusion are commonly encountered even when families do succeed in reaching facilities.

> *"That is because donating blood is not easy, nobody accepts to donate blood unless you are very close, and that is why only relatives can volunteer, and they must be very close relatives. That is why they came immediately after me and my brothers.... Unfortunately my blood was not compatible with my wives' she had A+ and I had B-, so they told me I had to get somebody else, but by then my brothers had gone." (2:1)*

Satisfaction with Care

In Homa Bay District, women and families still rate the quality of emergency obstetric care received at a facility as good or high quality, despite reporting multiple errors of technique and judgement that would not be tolerated in more regulated health systems or by more affluent clients. If the mother and baby live, or sometimes if even one of them survive, respondents still often said they received "good care overall".

> *"I got good care. I got free medication, but the bill came when I was discharged and then we paid. The good care they gave me is they kept on visiting me and bringing me food." (2:7)* (This woman had CPD, prolonged labor, vacuum aspiration, retained placenta).

> *"The quality of care we received was good, because according to her complication, she could have died" (2:1)*

> *"I was given proper care, because I was given medicine" (2:3)*

Detours and delays do not stop when the actual birth has taken place. One family, where the woman reached hospital very late with prolonged labor and developed VVF, was discharged after eight days. She and her husband returned to the hospital as requested for follow up, were not seen, but instead referred to Kisumu Regional Hospital, with referral letters for VVF repair. There, they were told to wait three months, so he left the women with relatives nearby to Kisumu for those three months. He brought the woman again to Kisumu Hospital at the appointed time, was told the doctor was attending a funeral, returned again after a week, waited in hospital a week for surgery. The patient remained in hospital sixteen days postoperatively. The newborn had died at birth. Total cost was approximately 35,000 shillings (about 500 USD).

> *"At Homa Bay District? I can't say the care was bad, simply because in this facility her life was saved... the care we received in Kisumu (regional hospital) was very good because*

even the place which was interfered with in Homa Bay District (where the vesico- vaginal fistula, VVF became apparent) was corrected." (2:4)

"Testimonials": Advice from Families Who Have Experienced Complications

The community interviewers ended each complication narrative by asking the women and families what they had learned from their experience, what they would like to share with other families, and what they might do differently next time.

"If there could have been no delays right from home to the hospital, I hope the baby could not have died. If we could have gone to the hospital straight away..." (2:4)

"I can say take her to hospital. Even if I could have given birth at the TBA, they could not have added me blood. I would tell them go to the hospital because even me, after leaving the hospital, I had pains and I went to the prayer house and they just prayed for me but there was no change. When I went to the hospital I was treated and I felt better. (Israel Church of God)" (2:3)

"I could have died if I didn't reach the facility. If something similar to this happened to anyone, then I would like that person to reach the facility as soon as possible. I would give such advice because I have been a victim. So If I was having this problem and was just at home it could have been worse" (2:8)

"Do different? If the woman had been taken immediately it started, the baby would not have died. If she could have informed us of her labor pains...She could have informed us early and if we had roads near, if we had cars and also if it was not at night...We delayed because we could not get money (for hospital) at night.
When she started to labor, we should have just taken her to hospital, instead of going back home. She stayed out in the cold, she stayed the whole night laboring, so all these can bring problems."(16)

"You can advise us on what to do when something like this happens again, so that next time we know the right procedure to follow. Because maybe this one we started badly."

D. OTHER ELEMENTS OF CARE

Early Postpartum Care

Traditional Concepts and Practices in Early Postpartum Care

The early postpartum period (EPP), the first two weeks after birth, has now been recognized as a time when many maternal and newborn deaths occur (2, 80).

There are special names given to both the new mother and newborn in Luo culture.

> *"Is there a special name people use to call the woman during that time? Yes, she's called Manyuru. For the new baby? Malaika (Angel)." [W22]*
>
> *"New baby – malaika, angel." [W62]*
>
> *"Nyathi mayom - soft baby." [W24]*
>
> *"Bongo. The baby who has just been delivered is called bongo." [W18B]*

There are traditional concepts about new mothers and traditional practices during the early postpartum period. The EPP period is seen as a time requiring special care.

> *"A woman who has given birth is called "Minyuru", is put on bed, not to come out of bed." [T63]*
>
> *"Epp? You are still as light as paper." [W23]*
>
> *"Immediately after birth I give porridge and apply oil on her body and give water to bath." [T55]*

Many husbands are aware of the special needs of women during the postpartum period, particularly reduction in workload.

> *"No heavy lifting, "nyatong tong" for about 3 months till she recovers. [P37]*
>
> *"If a woman works right after birth, expect nyatong tong. [P37]*

Some traditional restriction on movement is still practiced during the EPP period, but this varies widely.

> *"What is good is when helped by TBA. You know when a woman gives birth according to Luo culture there are number of days you are suppose to stay in the home before coming out - four days for a boy, but in hospital you only take one day for discharge." [P77]*
>
> *"You may not be able to leave the compound because you are still weak immediately after birth. Luo tradition recommends that the mother stays at home for at least four months." [W74]*
>
> *"When can a new mother leave the house after birth? After one month." [W22]*
>
> *"You can leave the house after 2 weeks epp." [W7]*

"When can new mothers leave the house after birth? How soon after the birth? She takes 8 days. Sometimes if she is a baby girl it takes three days, and if it's a baby boy four days." [W7]

"Two weeks epp, you can leave home but only to go to clinic. After TBA birth you immediately go back to your house. But we prefer epp care from skilled attendant." [W10]

"About 2 weeks PP, some family and friends celebrate and bring gifts."

"Family brings gifts about 2 weeks after birth." [P20]

"Friends bring him/her clothes, nothing else. Some maybe can be baptized depending on someone's religion. Sometimes you can sympathize with some in the village. Long time people valued the sex of babies, if you gave birth to girls only if there was a woman who gave birth to girl, the husband mistreated her. No food was given to her. She could fetch for food in the shamba, weed with the baby in the shamba. [W18B]"

TBAs and EFFIs play a major role in household support during the early postpartum period. Some TBAs visit the new mothers during EPP, or keep new mothers at the TBAs home if she delivered there.

"They need warm water for their birth, massaging with warm water minimizes ojiwo." [T36]

"Epp, I cook ugali you can give her some herbs to take home in a bottle immediately and the pain finishes." [T38]

"After she has given birth and she has gone back home, you give her food and also you boil water and use the hot water to clean the cut (vagina) and slow massage for her body. If she has "Ojiwo" (pains after delivery) after leaving the hospital, you give her herbs to drink." [RL36]

"Is there care which you give women? Yes, ugali (corn porridge), bathing, clothes." [T58]

"Warm water and massage." [T15]

"After birth we should prevent diseases that come, like lack of food that brings dizziness, and lack of blood which brings headache. "

"After birth, the elder woman should take care of her daughter-in-law who has just delivered. She should help in domestic work because "minyuru" is still too weak." [S55]

"Once the doctor has advised your daughter to do this and that, you as the mother-in-law must make them be fulfilled." [E53]

"Washing of napkins (diapers), infant clothing, and collecting of water should be done by elder women." [E53]

"What do you do for the new mother after she has given birth? To see that they eat well and to see if she delivered well." [T43]

"If she delivered during rainy season, you know our place here has a lot of mosquitoes, I would try and purchase a mosquito bednet for the newborn" [E4]

"Who came in to help you soon after you gave birth? TBA"

"Yes, we do visit even a day after delivery. Sometimes when you visit her she may report that she has abdominal pain, muscle ache, some babies are too big during birth. You have to visit her and ask; if you find she is not well you look for a bicycle or a family member to transport her to hospital for help." [T15]

"When you deliver in your area, after delivery you must go and inquire her status from her." [T15]

"What assistance do TBAs give after birth? It depends on the person if she is unable you can even provide her with assistance like baby clothing and food to the mother, like any of your own dependents." [T15]

Husbands also see themselves as important sources of support during EPP.

"Who do women like to help them during birth? God. And after delivery the husband, because when a woman delivers, if not for God she may develop complications, so if God is on her side she delivers well. After, you as husband become responsible, as there are now some things women can't do, the husband will now do those." [P77]

"*From operation we prepare food and hot water for her." [P28]*

Some EFFIs remember receiving EPP care themselves.

"Long time ago they were examining us (postpartum), they took our blood pressure and weight; but I hear they no longer do that." [E4]

Any household member can be informed by a new mother if problems occur.

"Who does "minyuru" tell when she thinks she has a problem? She tells the husband she stays with, or any woman she stays with that she gave birth but she's just not feeling well, so that she can be taken to hospital."

Many TBAs try to treat EPP problems themselves first; others defer to skilled attendants.

"Thick secretions in the newborn the hospital and the TBA can remove TBA has herbs". [W23]

"What would you do if a problem happens? I should advise her to go to the hospital because if you have delivered well and something else has cropped in, what should one do? Take her to the hospital. Who is the best person to help her? The best person to help her is a doctor. If a woman gets problems after birth she should go to the hospital." [E53]

Very few women receive any skilled care during the early postpartum period. Routine EPPC is widely perceived as unnecessary, especially if mother and baby appear well.

"Here you are not sick why go back when you have delivered well you just go back and do your work because you are well. "

"Did anyone come in to help the last woman who gave birth in your household right after birth? No."

"Check up? I don't check. After? No more dealing with her epp." [T38]

"After delivery, everything ends; there not even the TBA comes." [E4]

"After delivery they can go to skilled attendant for epp because the TBA's work is through." [P6]

"After birth do TBAs see the women again? Yes, you have to see your TBA to advice you what to eat. Why do you visit the women after delivery? To advise them to take the baby to the clinic. What kind of work she should do. What kind of food she should eat. Breastfed for six months." [S58]

Is check-up after birth done well in the hospital? No, but they do it with an aim of helping you."

"Should the new mother and baby get check up after birth? Yes they should. If so how soon? After delivery."

"After how long should they be checked? After three or four days after normal delivery. When's she leaving". [R36]

"Epp? After 3-4 days."

"You visit them after how long? Every day."

"Should "Minyuru" and her baby be examined after birth? "Ndiyo" (yes) they should be examined. As soon as, say, after how many days? She should come to clinic after 2 days. Who is the best person to give the check-up? Sister."

"When a woman delivers well is their need for routine early postpartum? She must go for check-up because family planning is after 6 weeks."

According to some respondents, the newborn, more than the new mother, seems to be the focus of preventive care after birth.

"Care after delivery? Ahhh. That they will not get. It's not even there. How would you get the care? You have already delivered and now in the home and mother is fine well. Your job now is to take the baby to the clinic. Who would examine YOU? You are not sick and you are examined? You just delivered well. Who would examine you? [E4]

"The new mother is not examined but the baby must be examined. The new mother is not examined after giving birth." [T14]

"Epp, the baby is the one to be checked." [T64]

"We weigh the newborn immediately the scale was given." [T55]

"At hospital newborns get immunized immediately this we can't do." [T55]

"Some people put medicine in the baby's noses to sneeze. They put medicine in their nose to make them sneeze? Yes, grannies (mothers-in-law) do it; some boil herbs, even I, if the baby is sick for the stomach (colic). Me I give grippe water and boil water." [W18B]

"Baby? Washed immediately, cord cut weighted at facility. Who helped? Co-wife, for one week epp." [W62]

"We cover the newborns properly to keep them warm." [T15]

"There is someone to weigh the baby, writing and vaccinating (at the facility where she delivered). Were you checked after delivering? No, only the baby, they checked my temperature and BP only." [W18B]

Skilled Attendants on Early Postpartum Care

The recommended content of routine early postpartum care and counseling is well known by most skilled attendants. Many are aware that early postpartum care overall is underutilized. Others acknowledge that in-patient EPPC may not be adequate. Uncomplicated deliveries are usually discharged after 24 hours.

"ANC is where they come, EPP is negligible." [S73]

"What is women's general understanding of postpartum care? Very low, to take care of themselves, personal hygiene, they only think of food."

"Take care of self, of baby, proper feeding." [S68]

"Good postpartum care and timing after normal births? We prevent complications like pph, … help their health status, good diet, prevent infection, taught hygiene and family planning, nutritional status, to take child to clinic."

"And what about the time immediately after delivery? Immediately after childbirth we can tell them why to put the child on the breast, so that it can help on the involution of the uterus and also it prevents the atony." [S42]

"This care, you have to teach them about personal hygiene. Especially first within these two weeks, because that is the time when it is, there is blocking. They need to clean up themselves and also to observe the kind of lochia they have." [S66]

"At home, to check on proper hygiene, good feeding. At facility, we don't advise for normals, they take a day and go home."

"They come to this facility. For home delivery I don't think they come to clinic. If one comes we check and advise accordingly." [S73]

"Those who have been to theater have catheters, which are checked daily. In facility routine care, changing pads, checking and reporting any abnormalities. Give advice. Normal births don't take more than 24 hours in a facility. Take good care for themselves at home. Women with lochia keep changing clothes when wet." [S67]

"At home, when they go home we also encourage them, to see that they should be changing the clothes, the inner clothes, when they are wet...mother and her child" [S66]

"It is given to mothers up to 42 days but it is very poor in my facility because I am alone." [S71]

"Enough delivery coach. Water for bathing and you keep them clean. Get them something to eat after delivery". [S52]

"You bath them. And even advise then in family planning. I follow them up at home. "[S71]

"Once the mother has delivered, we clean up the mother and we reassure her to rest, then you encourage this mother to observe, and also the child, the cord. Then you encourage her and also teach her how to expose the breast but not to leave them just like that and then you give them warm water." [S66]

"All women, personal hygiene, avoid cross-infection to baby, report abnormalities, bed bath, and vulvar toilet first and second day." [S68]

"After delivery clean her up. Put her in bed. Teach her how to clean herself (episiotomy). Give her clean gowns. Give advice. Teach diet/hygiene, family planning/taking child to clinic. Normal delivery doesn't take more than 24 hours in a facility due to congestion. Advise her to pass urine frequently, report any changes in the body. Watch out for pph, give good meals, they bring children after six weeks."

Although some skilled attendants stated that care was required during early postpartum, the most widely recognized form of postpartum care is still the conventional forty - day visit.

"Immediately." [S52]

"After six weeks. For family planning also." [S71]

"Come after six weeks after a facility delivery. Immediately come after a home delivery." [S67]

"After six weeks. Soon as possible for check-up, immediately after two weeks."

"After six weeks after a facility delivery. Immediately after a home delivery."

"And for facility deliveries we don't detain them here for long, because after delivery they only take a day and go back home. [S42]

"After two weeks to check if the uterus has gone back to the right position. They come to the hospital after delivery."

Some skilled attendants, but not all, knew time when most maternal and neonatal deaths occurred.

"When do the most maternal and neonatal deaths occur? Maternal, before 28 days, days 0-28. In this facility if there's slight evidence of complication we refer. Maternal – within a month of delivery, neonatal – not seen any, rare. They occur at night because most staff are not on duty."

"Neonatal, first week. Maternal death, second week." [S68]

"*Below six months from day 0-28." [S66]*

Many skilled attendants reported that most maternal and newborn deaths occurred at home.

"Most occur just after a mother gives birth, when the placenta comes out." [S73]

“Those who come late, when the baby is already dead. Some mothers come with infection. Most of neonatal deaths comes from home. This year there have been 10 deaths.” [S67]

It may be that deaths that occur in the community are underreported, and the information does not reach facility-based skilled attendants.

“*The last 2 years we haven’t gotten any deaths.”*

Some skilled attendants suggested ways to improve delivery and immediate PP care. Some wanted to know more, to update EPPC skills and capability.

“Providing enough staff so that her patients are less. Knowing sometimes staff are few and patients are many.” [S73]

“What I can say is that you see, we still have a lot to do to improve the hospital deliveries and postpartum care, because as much as I know postnatal care has been very poor …because we don’t care for postnatal (women), but we care for the children. We normally bring them for immunization but the postnatals they are not normally thought of. And maybe in case there is something to be done about it, I think we should be informed, and also the upgrading, yani, in case of any change in the management (of EPPC), we should be informed. Because we deal with the patients at the highest level, and we should be well equipped with the recent information, so that we can have the good care of the patient.” [S42]

E. BEHAVIOR CHANGE ELEMENTS

Acceptance of the Concept Of "Linkworkers" – Repositioning TBAs as Links to Skilled Care

One of the biggest challenges facing programs that promote skilled childbirth attendance in areas where home delivery by TBAs is high is convincing women, communities, **and TBAS themselves** of the need to change current careseeking behaviors. Qualitative research in some countries where home births predominate have demonstrated an overwhelming, unyielding resistance to change, even when reasons such as increased safety were well understood (77).

Acceptance of the Concept

In Homa Bay District, almost all categories of respondents **accepted the concept of repositioning TBAs** as "links" to skilled care – even TBAs themselves. Clear "conditions of acceptability" for accepting linkworkers were given, many of which could be difficult to implement. However, in concept, there is a widespread willingness to consider new childbirth care options.

We have been thinking that now, in these times TBAs could be useful to help all women to get to a hospital, instead of actually delivering the baby herself. What do you think about this? Would that work?

> *"Yes. It's good for them to be the takers. Because they don't have things for assisting women with problems. It's good." [W22]*
>
> *"Yes we would accept the change of role, because this would even facilitate the improvement of our health seeking. We would accept because of distance to the nearest health facilities, which might be too far. Yet the TBAs live amongst us and so they are the best people to be used to link us with the facilities in the shortest and fastest means." [W74]*
>
> *"Would health workers agree to link? They would, because they would get the records on expectant women. TBA has these records." [E4]*
>
> *"We need that because should that linkage be there, it will be very useful." [E53]*
>
> *"Reposition TBAs? To me its good, we only don't go to hospital because its far. Effis think its good to take her to hospital instead of TBA, because in hospital she gets good treatment and her life is saved." [E54]*
>
> *"Yes, TBAs should link. If you visit them and they have tried and failed they are able to refer you to hospital, starting what they have undertaken and giving the skatt. Easier time." [W23]*
>
> *"If they refuse, it's bad because giving birth is like dying. Because if the TBA can't assist and the woman dies people feel bad with the TBA." [E78]*
>
> *"TBAs should be links between pregnant woman and skatt." [W45]*

"They act as a link to skilled care providers. That can be very good, and can really help. They can talk to those who go to them for delivery and encourage them to go to the hospital." [W2]

"TBAs would do linking, and no one else can link the client and the health facility." [E26]

Even many TBAs themselves were receptive to the concept of repositioning. Some TBAs still wanted to try and deliver first, then link.

"What we think, we want and we think, but it has not happened, because if we can get one who is close to us, a doctor or a sister close to us. We were just requesting if we can get a place, a maternity or a clinic nearby to get help so that we don't have problems of walking far." [T13]

"We are willing, women should give birth in hospital because they are experienced, but us TBAs we can help if there is no big problem. I can't keep someone here to develop problems, families will agree because it can be worse at home. "[T38]

"We support reposition, as (we are) often not paid by clients." [T34]

"Yes, I can accept that because the baby gets help immediately, she can be vaccinated to prevent other disease." [T14]

"Though people are different some will view it as good, some not. We wish to link because we will be happy to bring help to our home and communities." [T15]

"Ok you as TBAs would you prefer? We accept! (In chorus) [T15]

"Link? We must agree!" [T61]

Link? Yes, the TBAs would, they could even help conduct delivery. What the TBA can do she will do and what she cannot the healthworker will." [T53]

"Link? We think the hospitals help people. TBAs just link to skatt? Pause…I would like it for we are tired of delivering them." [T55]

"How would family of pregnant women feel about this idea? Feel? We teach them to take them to the hospital. They would feel ok. Would staff at facilities accept TBA as link care providers? Yes." [T63]

TBAs as Links to Skilled Care

Some respondents expressed reservations about repositioning TBAs.

"Only it might not work, cause the pain starts at night and the hospital is far so we think first in the community, it can help more than going far. So it depends how far the hospital and when the labor starts." [E54]

"A TBA should not take a woman to hospital when there is no problem because that is why she is called a TBA. Some women visit the TBA just when the time for delivery reaches, so she should just deliver the woman." [E53]

"Reposition? They must feel bad because before they were helping and now they will not." [E78]

"Repositioning TBA? The TBAs deliver the mother and get pay or token…and if you now want them to be escorts, what will they get then? For what they would get from me is now not there… what would the hospital staff think about their getting some income for escorting a mother, there is no return...you must give TBAs a thought then on what else to do." [E4]

"TBAs can't accept reposition, neither clinic, because TBAs are for the community and only when they are defeated they go to skatt." [E54]

"What do you think of the idea that TBAs routinely help women get to hospital to deliver instead of actually delivering them? That idea long time TBAs could not accept. They would say, "what do you know in her pregnancy that will be a problem if she doesn't deliver in hospital? If you don't know the problem, then I will deliver her as long ago". [R36]

"If they help a client deliver they get money. If they find that the client could have normal delivery then they would wish to assist her."

"They would like to deliver them when clients are taken to them; they don't like referring to hospital for delivery." [E26]

"TBA shouldn't be paid for link, but paid for herbs." [W7]

"I would not want TBAs to be repositioned." [E78]

"*Not for link providers, because TBAs help"* (This EFFI left the interview before finishing to attend to her cows and never came back.) [E54]

I do not understand - repositioning of TBA". [P37]

"Do you think this would be possible to have them only as link persons to the hospital? It can be possible after consultation. If they are paid. You can't just be told to surrender your job and leave it that way. They don't like referring them to hospital unless there is a complication."

"Normal births skatt? No, I can't agree because I know I can help." [T39]

"She cannot allow women to give birth at hospital, at her place unless there is a complication."

"The TBAs deliver mothers and get pay or token this they use for sustainability; if you now want them to be escorts, what will they get there?"

"Link provider, there must be a reason why she's a link... something she's gaining from, it must be seen by community as a promotion. Community will think she is boasting as link, and doesn't like to work with community." [T49]

"In escorting a mother, there is no return. What does the hospital staff think about their (TBA) income?

"Clients will not agree with reposition." [T36]

"No, not happy with repositioning. Clients will not allow." [TBA36]

"Me, I have a different opinion. It will only be good if we continue to get what is motivating us to continue working hard. If we are not made happy through token payment, then I do not know and that is my view." (Laughter) [T15]

"They should refer only what they cannot handle. Margina is very far, we can't agree unless it is a complication."

"Skilled attendants welcome TBA? Yes." [T35]

"They will be very grateful if the woman gets quick and good attention. Sometimes through your persuasion they take to hospital after long and the lady ends up getting help, they appreciate your efforts." [T15]

"Linkworker? They can accept because of courage and giving themselves to the job, they can do it sincerely and with love. We accept the job, me I'll accept to be one." [T15]

"How will it be as a new role? We do not know. We TBAs have agreed to assist, it may be good, they will view us as doing a good work, as we will be taking expectant woman to facility and we will be bringing feedback on how women are progressing."

"Because we are trained by skilled people. They're more experienced than us. So when we're defeated we have to refer to the people who can assist better. Yes, they can assist because when doctors know there are TBAs in the community, any problem he knows will be reported because they have a coordinator who links them." [T14]

"When they visit your home they find you are a role model, so as linkpersons we will be role models in the community." [T15]

Some TBAs suggested that the new "link" role be negotiated/planned closely with skilled attendants.

"What we should do is to agree on these ways with skilled attendant. They would like to be advised now and then to have a broad mind." [T4]

"The thought or the requests we can have as you have come here, if you are going to arrange for us this, to be ready. You could call us there and we can also assist them (skilled attendants). Help them with work. That is my thought and request to you." [T13]

Some TBAs felt that they are already well accepted as "links" by skilled attendants.

"Would staff at facility accept TBAs as link careproviders? They accept it daily. They try to link with them so much, by telling then to encourage take babies for immunization." [T14]

"Skilled attendants accept link? Yes because they are the ones who advise, is they said if we can't manage take her to them." [T38]

"*Yes, because they meet daily and advise them." [T43]*

"They should be together as only they should not have any division." [T15]

"We as TBAs should be in harmony with a doctor in the community or even hospital. We are seeing that they are good, as they are helping by offering to give us gloves." [T15]

"Would staff at facility accepts TBAs as "link care providers"? Yes, it's good to them in one way. There can be an emergency, or a poor man's wife who doesn't have the

money, you can assist. It has happened to me like this – a woman was in labor they went to Asego to call the nurses and they also called me. When the nurses arrived they found I'd delivered her because she had delivered the whole night. So the nurses were paid for the petrol used and they went back." [R36]

"When a woman goes for treatment of a birth problem at a facility, what happens? TBA quickly communicates with sister who in turn quickly informs the doctor. Do staff there welcome TBAs. They do. Nurses know TBAs so they immediately attend to a patient escorted by a TBA." [T63]

"Do staff there welcome TBAs? Yes, they welcome them very much because they work together." [T43]

Some TBAs were not sure the community would accept the linkworker idea.

"Can TBAs increase issue use of skilled care? There is no help that comes from hospital for those at home." [T15]

"Yes, we accept. Would the women and family accept new role of TBA? They will not accept, because some wait until the last minute… some might accept. If the hospital will provide us with bicycle it will be good. Sometimes where you go there is no paraffin. So TBAs have tried when they are called to assist. A lot of problems will arise because you have to take the woman to hospital because you're a link provider. To save lives care provide things like ambulance, gumboots." [T58]

Some TBAs wondered, justifiably, how they would be able to make a living if they were changed to "linkworkers." Many respondents were concerned because TBAs currently only receive payment for successful delivers.

"What will families of the pregnant women think about this? Yes, the families of these pregnant women will think that TBAs will be telling then where they should go. What they will ask is when will these TBAs be paid or helped, and they have worked for many years." [T14]

"Will families agree? They will agree but only if they see the TBAs doing well (continuing to earn a living) as they are the ones who selected the TBAs to be trained and perform their job." [T15]

"Pay TBAs for link? Yes, because that is a great job she is doing." [W62]

"We accept link, but should be explained so community understands." [T25]

"We appreciate and willing to do everything possible to support, as long as we are going to be RETAINED FOR SAME (they proposed a fee for linkworker)." [T13]

*"Agree to link and wonder if we would be paid." [T65***]**

Some EFFIs wondered if TBA "links" could work at night due to constraints of costs, distance, and transport.

"Only it might not work cause the pain starts at night and the hospital is far, so we think first in the community it can help more than going far. So it depends how far the hospital and when labor starts." [E54]

Some respondents felt that government would have to reverse laws/policies in order for TBAs to become links.

> *"How can we link? Only if government would link us which they have not done like now how you are giving me information that is how we link." [T55]*

> *"It can happen if it's a policy." [E26]*

Skilled attendants on TBA links

Some skilled attendants think CBD/CHWS TBAs are already serving a useful role in linking women to skilled care. Many skilled attendants thought communities might accept TBA links.

> *"They would feel ok. It will give easy time and they would know the care they would get." [S71]*

> *"They are just good." [S73]*

> *"The people selected they know them better so what they say they would understand."*

> *"They are experienced and skilled." [S73]*

> *"Feel good; good because they would reduce the risk of mothers and babies at birth; improve proper care; mothers feel free and feel protected. "*

> *"You see, like these TBAs and CBD, we can teach them on the right people to deliver and the right people to bring to the hospital and the ones who they are supposed to deliver. And teach them the importance of hospital deliveries and importance of coming to the antenatal clinics and even the importance of child care clinics. And these people we found them instrumental because some of the cases, which they bring here, those mamas they don't even know that they are supposed to come to the hospitals. They are our eyes outside because even those complication they normally detect for those people and bring them here." [S42]*

> *"They normally accept the TBAs because you find that these are big mamas, who have been delivering them all through. They know that they know these people." [S42]*

Some skilled attendants had different ideas regarding who might be the best "links" to skilled care.

> *"Family members; community members; encourage the mothers; they accept the TBAs because they are experienced from time immemorial; nurses and PHTs."*

> *"CBD community based distributors; village elders; Jodong gneng; village health committee." [S71]*

> *"The old mothers can be accepted. Nurses/PHT." [S52]*

> *"Community based organizations, encourage women to deliver in hospital by visiting women in the villages." [S68]*

> *"CHW people/TBAs." [S52]*

Some skilled attendants were not enthusiastic about TBAs as links.

"Many of them are trained, for our case you find the distance which the TBAs are bringing are very many, and they come from far. But there are some that are abusing the link. They are cases they are not suppose to attend to, instead to bring to the hospital. They delay them at home and when they delay the complications at home it becomes very complicated and the situation ends up badly."

***"**Not possible in the district. Poverty would affect the preparations in the majority of the population." [S68]*

There is already some collaboration in some facilities between TBAs and skilled attendants.

"TBAs are called weekly (Thursday) to the health center on new issues. We organize seminars." [S52]

"With monthly meetings and with the CBDs, in anything coming up so that they can go and inform the community. And the TBAs we normally meet weekly so that we can see the progress which they are making and give their supplies." [S42]

Some skilled providers expressed other ideas about what they now tell women about linking with skilled care and how to help women and families prepare for skilled attendance at birth**.**

"Stress skilled care attendance for emergency detection." [S73]

"Seek advice or attend nearest hospital facility." [S68]

"Through CHW/TBAs; giving talks in ANC clinic; by talking to CBD and TBA about the right people to deliver; teach the importance of hospital delivery; they should refer women to hospital; when they attend mobile clinics give health talks."

"We also go to outreach clinics. P.H.7 goes to inform, motivate, educate. If we can be given the mandate to visit them." [S73]

"It can, through like now you get them through the clinic. If they come to the clinic from the first visit then you talk to the mother from then it will give me easy time at least I can trace where these mothers comes from and how the mother is living." [S66]

"To have positive attitude; educate community about caring for pregnant mother and child; fully participate; every visit monitoring the mother."

"Home visits (follow-ups); give free medication; depend how close she is to relative; through people who attend mobile clinics and seminars."

"If information is given by someone familiar enough, community mobilization, healthworkers, addressing the women at village level. Outreach sent, as we have once per week, will increase women to come to hospital." [S68]

"Visiting the people at home (follow up); Free medication will attract many people."

Potential Effects of Linkworker Concept on the Current Earning Capacity of TBAs

As discussed above, although the fees of TBAs are often much less than the costs associated with skilled care, there are still costs involved. There were a wide variety of responses about the cost of using TBAs as childbirth attendant. There appears to be a "sliding fee scale", where cost is based on amount of services rendered and the difficulty of managing the specific case. One of the most widely appreciated aspects of TBA costs is that most TBAs were willing to "extend credit"- providing the services first and then working out payment with families.

> *"It depends on the agreement. It can be ksh 350 to ksh 500 "100 or 200 ksh I will take. For herbs only, 100." [T38]; "500 for TBA" [W7]; "TBAs are paid 350, 500 ksh." [E4]; "500 ksh for TBAs." [T61]; "How much? Ksh 500." [W8] ".* (At the time of this research 78 Kenya Shillings (ksh) are equivalent to 1 US dollar.)
>
> *"When you give birth at Ndhiwa center, it is less expensive than at home, since sometimes one is required to pay up to one thousand Kenya shillings at home. The charge varies. Sometimes it is as little as one hundred and fifty Kenya shillings. Those who charge higher claim that they are using some herbs." [W74]*
>
> *"They are not paid, anything you have for appreciation. What kind of payment? Foodstuff, chicken, money, any small thing." [T43]*
>
> *"Paid? They pay for soap." [T64]* ("Soap" is not meant literally here. Rather, it is common vernacular for a small amount of money that would only be enough to purchase small items, such as soap.)
>
> *"Yes, but a few people don't pay them. What kind of payment? Since TBAs are just volunteers, somebody can decide to give them soap." [T63]*
>
> *"No, but sometimes you have been delivering a woman several times, maybe for the fifth or sixth time without problems, there you can request the husband to give you a goat or cow for appreciation. This happens but it's not a must." [R36]*
>
> *"If TBAs succeed in delivering a complicated case, the higher the remuneration. The more the complication, the more the pay."*
>
> *"High parity brings more fees, and sometimes even a goat." [T36]*

Many TBAs accept payment later, after care is provided.

> *"TBAs get something small which depends on agreement made after birth, usually we handle the birth first." [T36]*
>
> *"We do not require money first because we may be defeated to handle the case. No, I should not get paid if I accompany (the woman to a referral facility)."*
>
> *"Yes, we get but not much because even now if you bring your wife and you don't have money, I just deliver her. Some people are good, they go and when they get money, they come and pay you. Some don't pay so you wait until one day he/she comes back and you turn they away." [R36]*

Almost all categories of respondents, including TBAs themselves, agreed that if a TBA accompanies or refers a woman to a facility for skilled care, she is not paid. This is a

critical issue in development of an acceptable method of "repositioning" TBAs as linkworkers, key to promoting skilled care for all women.

> *"Do TBAs get paid to assist births if there are problems in the delivery? During delivery, don't pay, why should you be paid and you can't manage the problem? So if you take the money, that's a big issue." [R36]*
>
> *"If a TBA helps by getting the woman to a doctor/nurse, but does not actually birth the baby, should the TBA be paid? She/he should not be paid."*
>
> *"You are not paid if you did not birth her. "[T38]*
>
> *"When we refer not given anything." [T38]*
>
> *"No they only pay the person who delivers, then we give free advice." [T36]*
>
> *"You are paid if birth is in your house but not in hospital." [T39]*
>
> *"No, she's not paid for doing nothing. That is free money. They only pay someone who has assisted her." [R36]*
>
> *"Could only pay to deliver, not to accompany." [E4]*
>
> *"If TBA completes everything she gets paid, when she refers to hospital no pay." [T55]*
>
> *"What if you refer? You only pay the hospital." [T43]*
>
> *"If TBA links? No, hospital staff should be paid that money because TBA didn't assist." [T65]*
>
> *"When a TBA does not conduct the delivery but helps refer? There we don't pay. We only pay when they do the delivering."*
>
> *"I think most TBAs are paid little, so if they become link providers they cannot be paid for not assisting." [W18B]*
>
> "*Paid to accompany woman? No, in my opinion we should as we have left all our other duties to go there." [T55]*
>
> *"Do you think families should pay TBAs who help in the birth by getting the women they stay with to a skilled attendant? (Silence). But so not deliver the baby? She/he's not supposed to be paid." [W22]*
>
> *"She should not be paid because the people who have offered services are at the headquarters. "*

Some TBAs, and a few other respondents, feel that TBAs **should** be paid to link.

> *"Yes, because she has provided the service of taking you to the hospital." [W8]*
>
> *"TBA should be paid even if accompanies." [T39]*
>
> *"TBA paid for link? Yes, because she has assisted the woman to react. Without TBA, she would not have reached there." [W60]*

User Characteristics

"User characteristics" is a term commonly used in social marketing and commercial advertising to describe those "ideal qualities" that a specific target audience attribute to the type of people they think are likely to use a particular product or service. Marketers then use characters who exhibit those "ideal characteristics" as spokespeople in their promotional advertising.

Part of The CHANGE Project's approach to increasing utilization of skilled care includes "marketing" skilled careseeking. This is often done by convincing husbands that "responsible" men encourage their wives to use skilled care; that "good EFFIs" make efforts to get their daughter-in-laws to facilities for delivery; or that TBA "leaders" willingly accept the role of "link". Therefore, the qualitative instruments contained a section to investigate user characteristics, the perceived ideal qualities, of each of those segments. These characteristics can then be incorporated into behavior change messages and materials.

Men/Husbands

Men clearly defined what characteristics they perceive as "ideal" in a husband or father.

> *"The goodness in other husbands is if they look after their children well and wives. And his child can dress and eat well and also go to school."*
>
> *"A good husband gives good food, gives shelter and clothes."*
>
> *"Gives a foundation to the family."*

"Investing in the family" was a frequent characteristic men admired in other men.

> *"Certain husbands invest in their children so they don't suffer when they grow up. Others they have a goodness that comes from god, they teach their children how to live in this world."*
>
> *"'Investing' in one's children."*
>
> *"Admire men? I admire men who have invested for their children animal rearing is also good and providing food and education for child and wives." [P28]*

Taking responsibility for family is an admired characteristic in men.

> *"A good husband bears responsibility for his household." [P28]*
>
> *"Responsible husband? Some children are left to beg from other houses, therefore take care of these children properly." [P21]*
>
> *"Takes the household responsibility divides a piece of his land for his sons." [P28]*
>
> *"Responsibility to provide for the family."*

Men admire the way a man keeps his homestead, a neat appearance and well-fenced.

"Admirable husband qualities? How somebody has organized his homestead, fenced nicely, planted nicely, kept cattle nicely, and also the way he is caring for his wife and children; and the respect he gets from his family."

"Good husband? Has fenced his home." [P37]

"A clean yard and a fenced homestead."

A "peaceful nature" and cooperation with neighbors is admirable in men.

"A peaceful nature."

"When he has peace, the way he approaches what he might come across, how he receives what might crop up with a neighbor. For example if a neighbor's wife has a complication, the way he will respond to the problem matters a lot. When he responds well that is something admirable." [P37]

"Harmony in the household not quarreling with wife."

"A good husband should know when his wife is expecting and when to go to the clinic at the right time. You should not quarrel with her. You should look for money. If you see it is her time you should not be empty handed because in today's world you have to have money." [P28]

"Responsible husband avoids quarrels." [P21]

A man who assists his neighbors in times of trouble is admirable.

"One who comes to rescue at a time of emergency is a good person. He can be your husband, your grandmother/grandfather, brother-in-law. Anybody who may be around at time of emergency can assist because these emergencies are unexpected. One of these people can take you to the hospital." [W74]

The role of "head of household" commands respect in Luo culture.

"It is important in this world that I have a place that I am the head and everyone is under me. [P28] According to our Luo customs, to be determined important you have a wife and children so as to have people you can rely on." [P28]

"If you are blessed with a child you become a family. And the children will one-day assist you. You become responsible you have to think of what happens to the child now." [P37]

"Children are like flowers to me." [P28]

Some men clearly defined their role in birth preparedness and complication readiness.

"Should know time of conception of wife. Ensure clinic attendance, proper nutrition, relieve heavy duties." [Q28]

Even us men we can help during emergencies. Me, I especially help my wife." [P28]

"Husbands should work hard to see that women reach hospital." [P37]

Some men felt showing too much concern or affection to wife might indicate weakness to other men.

"Responsible husband will give her love make her feel happy. Friends? They might see you as a failure you are being controlled by a woman. Others I hope they might appreciate it." [P6]

What could good husbands do more? People are different but for myself, I thought I did my best.

"What would responsible man do? You can only do that one if you have, but if I don't have (money), I don't see." [P20]

"I have not inquired much about their secrets, women."

Elderly Female Family Influentials (EFFIs)

EFFIs have clear ideas about the characteristics of "good" EFFIs.

"What is good in elderly women that make them care for women at home? Words. Sweet words continuing putting someone on track, so that they practice good health." [E53]

"Good effis…that I see or that people see in me? What they see good in us? We too are of help, when the women are away and the baby is left sleeping in the house, begins crying I will hold the baby, the baby may be in other danger I will care for them. Something else too may also not be going well in that house, and I will help put it right." [E4]

"Good effis give food, advice." [E78]

"What good things do elderly women do in their homestead? The young women visit them so that they share birth experiences and how they are tackled."

"What good things do young women see in elder women? We help them in decisionmaking. They come for consultation when ever they problem so they ask for advice."

Traditional Birth Attendants

TBAs have clear perceptions of the ideal characteristics of a TBA leader.

"Is there someone TBAs listens to? Yes. (In chorus). Do TBAs have leaders? We have, everyone must have a leader."

"Because there are kind of people if you approach, the response you get is very harsh voice, but if you are a leader…ooo, you must get a way how to soothe people." [T15]

"Quality work can promote a TBA in many cases. I have traveled as far as Lango, Kadem etc." [T36]

Identifying acknowledged leaders is one way of using social networks to accelerate diffusion of new ideas by "focusing initial efforts on convincing leaders to accept change. TBAs defined their leader, and the reasons why they respect her.

"Who do TBAs listen to? We have a chairlady for TBAs and when she says something we have to listen/ if she calls a meeting we attend. Like now if she could have known we are here she could have been with us."

“She is a leader because she knows how to talk to people, a leader must be humble, must not be harsh and should not have a rough voice must have a soft voice and know how to talk to people how to soother people and talk to people nicely.” [T15]

“Who is the person you respect so much? Is she here? Yes, chairman. Why do you like the chairman? She has personality coordinator, she’s flexible, she’s a decision-maker, she’s respectful, she’s loveable, truthful, and ready to go anywhere should be young. Speaks many languages like Swahili, English, Dholou. Can write well, read, welcome visitors, hardworking, influential.” [T58]

“Is there a leader? There is! There is depending how we chose or we elected a secretary, treasurer and a chairman. Treasurer is the one who has our things for the baskets. Ok money? And there is a secretary who writes the minutes and she also wrote the people who gave their contribution.”

“Among the TBAs here, is there one of you whom you respect as a leader? There is there is. Mama Pascalia Agloa. Why do you respect her? Because she has been trained. She has really done the job even when she was not trained. She has a wide range of experience. Ok. Is there any other reasons why you like her? She loves people, she’s jolly and she gives a lot of advice. She can never chase you if you don’t have money. She helps you and she is god-gifted. So we love her. Laughter. This mama helps people with one heart and she prays. Lastly the way she has been helping people there have not been any problems between her and the people she has helped.”

“Even when you go and if the baby is lying badly, she can turn the baby to a good position. If the baby has a problem in the womb, she can tell you this is not possible because the baby’s lying in a wrong position so you better go to a big hospital where you can be assisted and truly when this pregnant woman goes to hospital she is told the same. She had the right to tell you, this baby of yours, your tummy is full of water. And when you go to hospital you are told the same. So this is why we are saying she is very experienced in this work. More than all these people here.” [T13]

TBAS have a strong sense of identity as their own community, and meet regularly among themselves and with others. Many TBAs have well established mechanisms for exchanging ideas among themselves and with women.

“Yes TBAs have a group, sometimes we plant sweet potatoes, we have also started contributing money to open a bank account. We have a group in Magina once per month.” [T15]

“How do you identify yourselves? TBAs have a uniform and a badge for CBD and a bag. But we don’t have a bag at the moment.” [T58]

“As I had told you we have rules and regulations we meet at health center and discuss our needs and problems and solve if we can.” [T58]

“How do TBAs associate with other TBAs? They put aside a day to gather together to review their performances. Each one shares her experience. How do TBAs associate with other women in the village? They meet at the chief’s camp to collect themselves together.” [T63]

“TBAs? We join together in our work and we are as one.” [T55]

Some TBAs confer with other TBAs during obstetric complications.

"Sometimes there is a mother but I feel she cannot deliver normally, then I contact a fellow TBA. But realizing we have taken a long time without progress we take her to hospital." [T15]

"We meet in facilities and we can also meet when there are complications." [T36]

"Sometimes you get a mother who is afraid…it becomes a problem so you call another TBA and she can hold her arm or ankle." [T15]

"Yes, we help each other sometimes when the fetus is not lying properly in the womb. I call a neighboring TBA so we can help each other we always do it that way." [T15]

"As such we are constantly consulting like me I would consult Roselida and Getti will consult Anyango." [T55]

"When one on the other valley or hill is defeated she will escort the mother to the next experienced TBA." [T55]

Many TBAs have monthly meetings.

"*We meet here in the Health Center. Do you have a group you belong to? We agree in the group to open an account so that when we get funds from out we can save. We meet once a month. We meet and discuss about other groups and see how to help each other in case they lack something e.g. gloves. Every month we give reports as TBAs on what we've done." [T58]*

"We just started an AIDS group recently. That is where we weave the baskets. But the basket leader is not here." [T13]

"Currently we participate in weekly meeting and this is for passing information." [T15]

"As TBAs we give advice in bazaars church and anywhere we meet how they should prepare because nowadays there are many diseases even when you are pregnant." [T48]

"TBAs have committees and very good leadership." [T25]

"We meet twice a month. We hold these meetings at specific homes based on meeting resolutions. There is none unless we meet Sister to educate us on those issues."

Communication Channels/ Social Networks

Behavior change interventions should be based on a thorough knowledge of the social networks, particularly illness networks, and of the routine communication channels that are available and utilized by women, families, and communities. Often specific population segments and networks must be reached through the use of different channels. This seems to apply in Homa Bay District.

EFFIs think women, particularly younger women, have little knowledge of routine pregnancy/birth or complication. Unlike other categories of respondents, young women were felt by all categories of respondents to be particularly difficult to reach with information about safe birth and skilled care.

"What do young women know about pregnancy, childbirth, and the time after birth before they give birth? Young women just know that they are pregnant. They know they will give birth to a child. They don't know that pregnancy can bring problems. Only elder women know that pregnancy can bring problems." [E53]

"Younger women only talk to themselves." [E78]

"Young women, there is nothing they know in all these things." [E54]

"They know nothing." [E26]

"They have their groups. It is from these groups they learn things…" [E53]

"What do younger women know? They don't know anything." [E78]

"Very few of the young women have groups most do not." [E4]

"Don't know much about community but there are women groups where they can be reached." [S67]

"Peer groups in MCH/FP. Womens groups for older women exclude the young girls. I don't know how the young women would be catered for." [S68]

Women have regular meeting places.

"Gossiping river, market." [S71]

"Meeting in markets, funeral homes, meeting in hospital churches, meeting in women groups, counseling room."

Men also have regular meeting places.

"We meet at football clubs." [P77]

"What do they do? I like playing "Ajua" game played by men." [E26]

"Football centers good place to reach men." [P5]

"Men – they only go watch football." [E78]

"Men meetings should be organized during weekend, as men are busy during week." [P77]

Some men said men are not concerned about women's birth-related problems.

"How do men find out about women's health problems? After impregnating, he don't think about it anyway." [P21]

"Mostly socializing here in car park because I am manamba (car tout)". [P21]

"Men, what do they do? They have many duties/jobs, but I myself have not seen them attend to any (laughs)." [E4]

Radio listening is highest among EFFIs and men.

"What things do you always listen to the radio? There are many things in the radio but in most cases I always don't like listening to the radio. But you know that in the morning, even if you didn't want to listen to the radio it will always attract you. Newspapers? I read the ones in the market like the Daily Nation. I used to buy the Parents magazine. I always read books like bringing up a child, home at its best, the making of a mother." [W18A]

"Merry-go-round" is an existing community fundraising scheme used by women.

"We do meeting merry go-rounds. We do them twice a month." [E26]

"We have small groups, like today we are going to have some small fundraising which we use to purchase items for sale and the capital plus profits is kept on one place and withdrawn for use when one of us is in need (merry go round). We are an example in the community as others like to refer to the ladies from Sakwe. We meet every Monday." [E4]

"Merry go round." [W45]

"Yes, I am. The group I am in is called a merry go round, and when you are pregnant they are usually not bothered (to go there)." [W18A]

"I have a group Merry go round (mm). So the merry go round has connection (laughter). If they come to see you, it is on a friendly basis." [W18B]

EFFIs attend group meetings weekly, but do not discuss birth-related topics. [E78]

"*Yes, women's group, two times per month." [E54]*

Some EFFIs complained that younger women no longer consult them.

"Some young ones will not join us in our meetings, claiming that elder women have "heads that do not eat". Meaning those who don't click with "cold head" no thinking or reasoning capacity." [E4]

Some EFFIs would like to participate in more organized groups.

"My age-mates? We may sit together and discuss, but our main discussions are not on childbirth. It is not easy to take their time and move from one house to the other to talk about childbirth. Some community member may view you as a gossiper who is lazy and deterring other women from carrying out their duties; adding that "what is so new in pregnancy and childbirth that people do not know"…you may have good intentions, only to appear bad. If we had organized groups it would be easy." [E4]

"How I encourage them? I attend barazas so I get women there. I go to church. I attend women groups, anywhere. Gather in funeral, all these places are where you can give advises to them. You can also go to their houses as a TBA to talk to them. Going home to home."

EFFIs radio listening preferences are clear. Nighttime listening is most popular.

"I listen to Dholuo program. What time do you listen? Dholuo is at 8 PM. What plays do you like? Buth-jo-dongo (Abila-me's meeting). Mothers teaching (puonj mine). Pwonjrwok mar jomadongo (adult program)."

"So you discuss with other people what you get from the radio? Yes. Adult program teach us how to behave like an adult. Adults misdirect the youths these days." [E53]

"There are plays, the last one the father was going to have his sick daughter discharged." [E4]

"Radio. Beat time plays and greeting programs." [W24]

"Radio, gender equality where they emphasize that boys and girls are important and AIDS Prevention." [W45]

"Listen to play – arindi." [WMN1]

"I like to listen to teachings of Mambo (teachings on etiquette)." [W2]

"Radio – I listen to Dhuluo very much and matters concerning women, I listen until it ends 2:30-10 o'clock arindi is favorite program." [E78]

"I like the program called Neno (Christian Bible Study)." [W22]

"I listen to radio at night, morning and at 7 o'clock."

EFFIs regularly discuss what they hear on radio with others.

"At seven o'clock morning one o'clock afternoon and seven o'clock at night. Which programs do you wait for in the radio? She likes "Jee huu ni ungwana." [E26]

"Yes we discuss what we hear on radio a lot more so on these new diseases which we hear on the radio…and world news...people like discussing among themselves what they have heard on the radio." [E4]

"Culturally we Luos we like talking about issues. When something bad has already happened is when majority contribute the discussions, of what should have been done and by who." [E4]

"*Talk with others about radio." [E78]*

"Radio – during the day we are busy so we listen at night, the doctor's health education programme, Dr odhiambo of New Nyanza Provincial Hospital on Russia Kisumu Dholuo broadcast station." [E4]

"Radios can broadcast to many people, if you know the time it is aired you just tune in and listen organization can give talks and this can save batteries."

"Radios are reliable but not everyone has time." [P28]

Some EFFIs said men and women often meet together.

"TBAs yes I always hear that they have meetings at Magina that they attend. Men? Most men and women group together though there are men only groups. Currently most prefer to group together." [E4]

There are some cultural limits to discussing childbirth.

"You can only talk to your own women you can't talk to someone else's wives about birth even a preacher he can talk to a congregation about birth but not to one woman." [P26]

In the AIDS era, one quarter of ANC clients in Nyanza are HIV+, funerals are now common meeting places.

> *"Funerals new meeting places." [P6]*
>
> *"Funerals now common meeting place. "[E54]*
>
> *"Reading is less widespread than radio listening, but many respondents do read, often the Bible."*
>
> *"I read the Bible. How often? I read the bible a lot. Luke, Zaburi, Isiah – I get a lot of teachings from those books." [E53]*
>
> *"We read mostly the bible but only at night, as we are so busy." [E4]*
>
> *"I read once in a while. The books I like reading are Bring Up a Child. Home at its Best, and Making of a Mother. Those are the books I like reading. I have bought them. I read when I finish I repeat. [W18B] I read newspaper rarely because it's hard to get."*
>
> *"I read the magazine called Parents."*
>
> *"Sources of info for men are home science education and family elders." [P76]*
>
> *"Training should be for both men and women in these things." [P5]*

Assistant chief was widely mentioned as the best way to give/get information.

> *"Just penetrate into the village through assistant chief and he will get them to baraza." [P6]*
>
> *"I connect them with sister. We connect at the chief's baraza where we meet all mothers in order to get all news." [T63]*
>
> *"As per now, we easily get information through Assistant Chief. This is because he is closer to the public than the others and can easily pass information to the community." [RL31]*
>
> *"Barazas" for the Chief and Assistant Chief, but you will find that only about five to ten public members will be present in this baraza and so they are the only ones who will benefit from many information that is to be passed on. Another thing is that whenever there is an outbreak the public health officers have been telling people about what is going on but then they just announce it on PA system a long the road and anybody in the interior parts can't get to know what is really happening." [RL31]*

Clan elders were also suggested as good community information.

> **"***Or the information can be given to the clan elder who will make the announcement to the adjacent homes and this information will be received by the mothers. It is just like immunization. When there is immunization the clan elder will always announce it. Therefore in these two places we will get information faster than the radio." [W74]*

Churches play an important role for some women and families.

"The announcement can be made in school and the pupils will spread it wherever they go after school. About health we get from many ways, like now you have come here through Public Health. Also get it on Saturdays through church." [W74]

"Also through Provincial Administration – baraza. Through church leaders also. So we announce in church that on such and such a day there's a meeting like this one we announced it in church."

"Baraza, radio, TV, church, loud speaker. (Advertising)." [T58]

Churches also play an important role as gathering places.

"Churches, radio." [P27]

"Church, schools, clan elders who are in charge of ten homes, we get the information very fast." [CL32]

"In addition there are churches that play a big role in helping pregnant women in terms of teaching them. This does not mean that am trying to praise some Churches, but what they do is great. Secondly, the heath sector has its offices in the hospitals where thy also offer teachings."

"We (church members) have meetings a week does not pass before we meet. And if we don't see one of us in meeting we dig deep to find out about his/her health. We visit we have visitation. This allows us to take health messages to the people." [RL33]

"Like our churches especially SDA, they fall under Women Ministries so they're given time to teach Family Life Programs. They teach mothers about matters of assisting themselves. Delivery and taking care of children. Because TBAs are trained they come back to their churches. Sometimes we call women from Nairobi, they teach us how to care for our families how to care for pregnant wives. In our church we don't let them (TBAs) teach. I've never seen their names are written down. So they are advised to advise the women. In SDA we have apartments like Family Life and Health and Temperance."

Skilled attendants also have regular channels of communication and networks.

"How do health workers communicate with one another in the district? Writing, sending someone to communicate, telephone, through association – KENNA NAK through the chairman, seminars."

"Through meeting by monitor per month. DPHN (District Public Health Nurse)." [S70]

"Others, the DPHN visits other districts to get along the information to." [S18]

"Through letter writing." [S71]

"We have to Association CENNA, NNAK, communicate through chairman in the district." [S67]

"Reports issued, seminar if you go for pay you meet people." [S73]

"Nurses welfare, hospital welfare general hospital workers welfare, barazas, seminars, and meetings."

"Yes, getting together at end of year for staff." [S68]

"Meet during social working in the district, social welfare, work activities." [S70]

"Nurse's welfare, hospital welfare, from general workers in the hospital." [S67]

"Gatherings getting addressed, birth issues relevant to sharing information." [S18]

"How can these network be used to spread information about birth related issues? Giving feedback to each other after attending meetings, meeting with people concerned and talk."

"After learning you can disseminate information to mothers. You can create posters." [S73]

"Collaborate with community based providers to improve access to skilled care for birth and early postpartum? Leading seminars accordingly…" [S43]

"They have monthly meetings, meet with CBD on any report they have. TBAs are called weekly (Thursdays) to health centers on new issues. Organize seminars, health education."

"Chiefs. Jugong gueng – village elders calling meetings, and telling women to go to the clinic." [S71]

Skilled attendants had some thoughts about their potential participation in the use of a birth preparedness card, should one be introduced.

"How would health workers participate in such interventions? It is the card, the mother would present to you first, and you would know of emergency automatically in the records." [S71]

"How can health workers, families and communities increase awareness of the need for skilled care? Only if they came to clinic. Teaching them health education. Chief at baraza. Calling meetings." [S71]

Respondents Suggestions to Improve Use of Skilled Attendance/Birth Preparedness

All categories of respondents interviewed had suggestions and recommendations to improve birth preparedness and use of skilled attendance.

"First to organize more seminars for women, because health has reduced. Secondly, as a member of Location Development Committee, we have requested to upgrade Ombo Dispensary to a Health Center, which can have a maternity facility with a clinical officer who knows about delivery, instead of referring to Kakraw or Homa Bay District Hospital. This will make us have enough drugs and accommodate pregnant women." [RL12]

"Well, near Asumbi where I come from, my view on preparedness suggests that awareness should be brought to the people." [RCL33]

All categories of respondents seemed truly interested in learning more and participating more to prepare for safe birth.

"We would like to be taught or advised from center or sub center. We should get a skatt to come and give us a health talk, so the EFFIs can attend such talks, and then advise the community on what they saw and heard." [E54]

"Yes, we have interest, we want seminars, radio programs, awareness training, field technicians." [P28]

"If trained people walk around sublocations, they can make people know what is going on". [P28]

"We need family planning clinics and seminars about gapping (family spacing). And elders meetings, elders used to teach norms. Norms were control, no more." [P28]

"Husbands don't have good source of information and would appreciate any initiative." [P50]

Some respondents offered suggestions on how to address the delays in transport.

"Community/family could help by harambee for transport." [P21]

"How can skilled attendance be made easier for women? Just get a vehicle that can collect them from their village." [P6]

TBAs would like more support from government.

"What would make TBAs to know they're supported is to work with them as coordinator, to respect them, praise them, all the time to be seen as workers to provide them with what can help them. What to use when a woman has an emergency." [T14]

"We are like the doctor's assistant in the village, and why can't government recognize this and appreciate by rewarding us with a little plot to become a facility." [T36]

"Hospital is good because you can be examined and if you have any disease it can be treated in time and you can give birth to a healthy baby. Because nowadays we have treated many STIs. We are thankful to the government for training TBAs, because in some areas people are far from hospitals. So the hospitals should not forget training TBAs because they assist women who are far from facilities. So am thankful for today's meeting. So see how you can assist the women soon."

"Add more trained TBA to assist so that this part of the country can be developed." [T63]

"I wish I got more skills to work better. So if the government can decide to give me a place to work in or any facility, I'd be happy. Everyone in Asego knows me." [R36]

"What would help TBA? Assistance from government so they can work better." [T55]

"AMREF just visited… got flashlight, overalls, gumboots, I wanted gloves and scissors." [T39]

"I would advise women to be TBAs and continue with their work. I would like to say there are so many diseases, so the government should allow TBAs their work when they are free. The skilled attendant should also do home-visits, not to wait until they take a sick person to them. The chief, assistant chief, and elders should know TBAs to provide and let people know what they do, (TBAs) not to be seen as people loitering looking for money which is not there." [T13]

"I have something to say about what can happen if better things are done to change the image of your skilled care facilities. First of all the TBAs should be trained so that they can help the people." [RL31]

"Our dispensaries, here Ombo, sometime they go to Magina Health Center. They were trained to come and enlighten the community about good health like, teach women the goodness of going to hospital to deliver and attend ANC, how to take care of their families. But of late this year they have not gone to any seminars. They were so helpful and enlightened us well."

"The population of this location is very large that a dispensary cannot accommodate them so if the ministry can upgrade it like Ombo and to bring qualified personnel, the death rate of pregnant women will decrease. In this community you get a woman transported in a wheelbarrow to Magina, reaching there there is no medication, so they look for another place if she's unlucky she dies. They can also bring us satellite clinics, which can help women." [RL12]

"What I can also say is that there are women whose husbands have died, and so they are unable to afford whatever is needed, so such cases should be considered." [RL31]

"Could organize seminar so that they are able to tell the community about pregnancy and childbirth. Patients lament that Homa Bay District Hospital is in bad shape, doctors can only be seen in their private clinics. Patients don't want referral to Homa Bay District Hospital. Most women like delivering at TBAs because of proximity. Men don't accompany their wives for delivery. Men are not allowed in maternity during delivery."

Skilled attendants offered their own suggestions for improvements.

"Yaah. If at all there is something, which will come out from this survey, because you see we normally have surveys but they are not effective." [S42]

"What can be done to improve the situation? Free service apart from admission fee. Talking nicely to them. Showing humanity. Providing what they need, Hospital should be equipped. Health workers change their attitude. No sharing beds, linens. Good supply. Improve the services. Mobile clinics. Talk with TBAs. Women should avoid TBAs and deliver in hospitals. Availability at emergency equipments." [S42]

"Staff should be enough in each facility we get only one day off. One gets very tired because we get only one day off in a week because of the shortage. There should be enough personnel, we get demotivated after a long period of time without proper rest." [S67]

"What can be done to improve the situation? Attitude can be improved on handling of mothers in labor. Update to staff. Counseling of staff due to stress."

"Generally, I think we should be upgraded in case of any change in management of obstetrics and gynecology, we can take those training. We are always here we can be taken for registering so that we can handle complications. Then, we can have a standby vehicle in case of an emergency. We can run with it and in our community we can talk so that we can work hand in hand, so there is money spared for any emergencies not only even maternity cases. Even other cases, so that we can be in a position to hand out these things spontaneously we don't work alone. We can work together." [S42]

"Should employ more health workers. Enjoy enough facilities. Like now we don't have basic things like suction machine. Urinary catheters." [S67]

“Share equipment, then keep surplus in store. When the project will be implemented, let it reach the grassroots, which is the target for safe motherhood.” [S70]

“(Long silence) Have enough supplies and equipment. All the needs we require for good care should be available, for example some things patients share. Patients buy things. Patients should be provided with their things.” [S67]

“Work hand in hand with private hospital and government; hospital and NGO. Improve our collaboration for quality service.” [S70]

“Link with the community. Create awareness for the women to come to hospital. Tell them to seek help from hospital. Mobile health workers to inform families and community about importance of facility delivery. Barazas. Through workshops and seminars.”

“Organize health talk, not to mothers only. By knowing the economic status of person. Telling the women the risks of delivering with TBA or at home. Mobile clinics. You just tell liaison to come to health facility for safe delivery.” [S73]

“They just end up delivering at home without the help of a TBA or the nearest health facility. But it is at great risk. I think the way we do this outreach, at least they should be able. At this moment we are assuming that even those who are not able to come because of the long distance, at least the outreach clinic reaching them. At least in one way or another you have to get these mamas to the low cost hospital.”

“We help convince mothers to get skilled care. Sometimes visit with them and educate them. PH7 also goes round to educate them.” [S73]

“Try to improve. To the project, I recommend that stop working until TBA is informed about health seeking behavior steps.” [S68]

III. DISCUSSION

A. DEVELOPING A RESEARCH-BASED BEHAVIOR CHANGE INTERVENTION STRATEGY

The results presented above, as much as possible, are expressed in the words of the people of Homa Bay District themselves. Although there are several intriguing and unexpected findings that have contributed new dimensions to the current understanding of childbirth careseeking behavior in Homa Bay District, for the most part the results are not unique. Over the past decade, since the earliest inquiries into factors influencing use of obstetric care, qualitative research has clearly demonstrated that the overarching barriers to timely receipt of obstetric care are universal. Yet it has also been demonstrated that planning program interventions according these broad generic categories, without delving more deeply into the local contextual factors within which obstetric careseeking occurs, does not often produce the desired results. It is the detailed understanding of the specific sociocultural and other underlying factors, and the distinctly local interaction of these factors, that allows the development of truly effective behavior change programs (108, 110).

The results from Homa Bay District provide an example of behavior-based research to support behavior-based programming. What is perhaps unique about this work is the inclusion of areas of inquiry in the research itself that can be directly applied to BCI development, and the method through which the application of research results to BCIs takes place. Working directly from research verbatims, the analysis method groups verbatims into behavior-based clusters, and systematically identifies the behavior change implications of each set of findings. These detailed results, particularly the verbatims, are used to develop specific content for program materials, messages, strategies and activities. They form the basis for the BCI strategy formulation.

Using the Behavior Change Intervention (BCI) Strategy Formulation Grid, the analysis of the research results is then strategically applied to develop a comprehensive BCI strategy. The completed strategy formulation grid provides a foundation and format for group discussions to develop a comprehensive behavior change strategy - strategy formulation workshops. These workshops, with minor modifications in content and depth, can be conducted at various levels – national maternal health program planners, community leaders, maternal care providers, and community members. An example of the generic format of the strategy formulation grid is in Appendix IV.

Behavior Change Implications of Key Research Findings

Past qualitative research has shown that families and communities are not always willing to accept new ideas and behaviors that would require them to alter firmly established childbirth traditions. In Homa Bay District however, respondents expressed an unusually high degree of willingness to change current behaviors toward the increased use of skilled attendance. There were a few ”hardcore” resistors to use of skilled care among many categories of respondents, who may never be convinced to accept new careseeking behaviors. But many respondents eloquently expressed realistic, constructive suggestions for change, and a willingness to try to improve skilled careseeking behaviors despite the difficult circumstances that exist in Homa Bay District for both clients and providers.

The presence of a high level of amenability to change toward a given practice - in this case skilled attendance - increases the likelihood of rapid, measurable behavior change. The CHANGE project has developed a tool, described above, to help programs quantitatively assess the readiness or “stage-of- change” of communities in which they are working to improve birth outcomes.

“Typical” findings

Many of the research results confirmed findings that are common to rural Kenya as a whole, and to remote rural areas around the developing world. This section discusses several of the key findings. All of these findings have implications on the content and structure of the BCI strategy.

For example, despite high ANC attendance, birth preparedness according to the accepted elements of global safe motherhood programs is almost non-existent in Homa Bay District. As in many similar settings, household careseeking decisionmaking is uninformed, excruciatingly slow, and often with many instances of careseeking from multiple unskilled sources before even considering skilled care.

With the more complete understanding of existing current patterns of skilled care use and the underlying factors that this research provided, there is a real opportunity to improve advance planning and household dialogue to avoid the confusion and uninformed decisionmaking that commonly takes place when labor begins. Some existing role models for interfamilial dialogue about BP were documented in the research, and these verbatims can be directly applied to the development of messages and materials.

In Homa Bay District there is an unusually high existing knowledge of obstetric complications among the general population, even among male partners and religious leaders. Also, there were few “absolute” constraints to improving intrafamilial dialogue about childbirth related matters.

There was an unanticipated finding of common and often lengthy “detours” to consult unconventional prayer groups (sects), that added to life-threatening delays in receipt of skilled care. The patterns of interaction of women and TBAs in Homa Bay District are also important. In some countries where TBAs often have little contact with women except at the actual time of birth, and where TBAs go to the home of women to assist them, in Homa Bay District, women consult TBAs throughout pregnancy for a variety of reasons, and laboring women are frequently taken to the homes of TBAs for care, sometimes remaining there for several days after birth.

Another finding that can be exploited to promote more rapid skilled careseeking is the widespread dread of vesico-vaginal and recto-vaginal fistulae (VVF/RVF). Women and families can be encouraged to recognize that prolonged labor is a major contributing factor to VVF, and that their own rapid action to reduce household delays can reduce such sequelae. Messages that families themselves can play a major part in avoiding VVF by timely use of skilled attendance, especially for primiparas, should be included in promotional activities.

Changing social norms to make skilled attendance the accepted practice requires a multi-level behavior change strategy. Such a strategy includes presentation and

discussion of the research findings to women, families and community influentials; providing research-based examples of the lifesaving nature of timely skilled care; and convincing those who wish to continue initial consultation with TBAs to **demand** earlier TBA referral of complications. TBAs must be actively included in efforts to repattern care. The research identified role models ("doers") within the TBA community for TBA preferred behaviors, and "nodes", or key influentials in TBA social networks. These TBAs can be used as spokespeople for promotion of early referral and links to skilled care.

Clearly, leaders of both conventional and unorthodox "religions" have been shown to demonstrate concern about maternal mortality, and already play an active part in providing social support to improve care. And many respondents suggested churches as potential centers for community activities to support improved birth preparedness. Based on the findings of the research in Homa Bay District, CHANGE suggested that FCI include a new category of respondent in the qualitative research in neighboring Migori, which is the comparison area in their program. This will provide further essential information on how the current avoidance of skilled care recommended by these "prayer leaders" and observed by their followers might be repatterned.

Other Elements of Care

One of the secondary objectives of this research was to explore behaviors in the early postpartum period, the two weeks after birth when many maternal and newborn deaths occur (2, 80). Despite the fact that many of the complication narratives demonstrated a high occurrence of serious obstetric complications continuing into the days and weeks after birth, early postpartum care (EPPC) is virtually non-existent in Homa Bay District. The importance of continuing to observe women and newborns to detect complications during the first weeks after birth and the need for routine EPPC are underappreciated. Home-based, skilled early postpartum care is virtually non-existent, and what EPPC there is at facilities is underutilized.

However, skilled attendants were well-versed in the elements of routine EPPC for those women who deliver in facilities (about 15%), and expressed a strong interest in learning more about the new emphasis on early postpartum care. Efforts can be made to work with the majority of women in Homa Bay District, who still deliver at home, and their families to increase awareness of the need for and develop realistic mechanisms for delivery of EPPC. Some TBAs already visit women they delivered a few days after birth. This practice could be more widely promoted to both families and TBAs. The existing tradition of family visits and bringing of gifts to new mothers two weeks after birth could be linked to promotion of EPPC. For example, EPP promotion to communities could suggest that all 2-week visitors to the new baby inquire "have you had your EPP check?"

Malaria/STIs/Family Planning

Based on the expressed needs of respondents, several individual elements of care should be included in the program. Malaria is widely perceived as an "obstetric complication", and was mentioned by many respondents as a worrisome threat during pregnancy, birth and postpartum. Assuring the availability of ANC-based malaria prevention or treatment for all pregnant women, insecticide-treated bednets and active promotion of these products and services might encourage even more women to use ANC.

When asked about obstetric complications, many respondents expressed high levels of concern about sexually transmitted infections during pregnancy, including AIDS, and their effects on pregnancy outcome. Undoubtedly, this is due in part to the high prevalence of both STIs and HIV/AIDS in Homa Bay District (5). Many of the inappropriate careseeking behaviors respondents described, as well as inappropriate treatment and quality of care documented on the part of skilled providers could be repatterned to address this concern.

Although resistance to family planning use and limiting family size remains strong among Luo elders, there appears to be a substantial unmet need for FP in Homa Bay District. Since family planning is one of the most effective ways to reduce maternal deaths, reducing barriers to FP use could be included in the context of promotion activities. Some trained TBAs appear to support FP use, and include FP topics when advising women on other issues during pregnancy. Efforts to increase FP use could build on this, as TBAs were listed as a well accepted childbirth information source by all categories of respondents.

Typical Barriers to Access: Cost, Distance, Transport

The typical barriers to access to skilled care - cost, distance, and transport - were found to be important constraints in Homa Bay District as well, particularly in the most remote areas where even the most basic public transport is unavailable and unreliable. Addressing transport availability and cost reduction through community mobilization and resource allocation are standard interventions in safe motherhood programs. However, several recent program evaluations have suggested that truly allowing community members, TBAs and providers to shape the design and content of community mobilization strategies, rather than relying on pre-designed externally-driven ideas, may yield better results (60, 81). Use of “assets-based” or resiliency methods have helped design realistic, feasible improvements in communities and at facilities. Existing community structures such as “merry go round” savings schemes can be used as a foundation in Homa Bay District to promote obstetric emergency funds.

The high level of expressed acceptability of the “linkworker” concept is encouraging. Promotion of the repositioning of TBAs as linkworkers must directly and specifically address all of the stated conditions of acceptability expressed by respondents – especially developing an acceptable alternative means of compensation for TBAs who agree to link instead of deliver care. The research demonstrates that in some areas, TBAs already **do** link to skilled care. It is important to identify these “doers” - facilities where skilled providers are already actively encouraging TBAs as linkworkers, and TBAs who are already providing timely referrals - and use them as models to extend the “links” concept throughout Homa Bay District.

TBAS, skilled providers and communities can collaborate to establish incentives for TBAS who provide rapid referrals, to replace the income usually earned by TBAs for successful management of obstetric complications at home. One possibility might be to involve TBAS in the production and sale of “birth supply kits”, the basic supplies patients are required to purchase on arrival at hospital, as an income-generating activity. This could help to reduce the documented delays caused by time required for families to purchase these items after reaching care, while at the same time providing alternative income for TBA “links”.

Motivators

Respondents expressed several factors that motivated use of their preferred source of care. The kindness and "caring" care provided by TBAs is a huge factor motivating women to continue to use TBAs. These characteristics of TBA care were in stark contrast to the characteristics that respondents ascribed to facility-based care from skilled providers. Creating a more "caring" care environment at facilities, and community-promotion of this improvement in care could substantially increase timely use of skilled care. Skilled attendants used the word "comfortable" when describing why they thought women preferred TBA care at home. If facilities could be made more "comfortable" through simple changes that are realistic within current financial and infrastructural constraints, this might also be promoted as a service improvement. "Injections" for newborns and mothers at birth were also mentioned by many respondents, particularly EFFIs and TBAS, as strong motivators for facility birth. Eye drops for newborns were also mentioned as a benefit of facility-based delivery. Availability of such treatments at facilities can also be promoted.

Responses from some EFFIs indicated that they thought that some of their advice to younger women was perceived as "old fashioned", and therefore disregarded. Perhaps promoting use of skilled care as "modern" might increase use. Some respondents said that stories and rumors of TBA successes, even with difficult deliveries, had convinced them to choose TBAs. Disseminating "success stories" of skilled attendants could be equally effective in encouraging facility-based births. The "testimonials" in the complication narratives - advice to others from non-users and late-users of skilled care about how to avoid the negative outcomes they experienced - can often provide compelling, believable reasons for more timely use of skilled care

Perhaps the most potent motivator for use of ANC was the desire to obtain the antenatal card, available only at facilities where skilled ANC is provided. This was also noted in Western Kenya (101). All categories of respondents acknowledged the critical importance of having an antenatal card. Many verbatims clearly expressed their perception of the card as a "passport" to skilled childbirth care, particularly emergency obstetric care.

This perception of the ANC card as a "passport to skilled care" can be exploited in several ways. The potential benefit of more rapid receipt of care when in possession of an ANC card, which seems to be a reality, can be emphasized in promotion of ANC use, as it is a documented priority of women and families. Once women do attend, ANC can be "loaded" with other essential elements such as malaria prophylaxis, STI screening, VCT, iron folate supplementation and birth preparedness counseling. These are essential aspects of the new, focused ANC approach, despite the fact that they may not as yet be widely sought by women.

Equally important is to discourage the widespread behavior among skilled providers of delaying or mistreating women who come for EmOC without an ANC card. Once this negative practice has been successfully changed, messages can "advertise" that it is acceptable to seek skilled attendance even without a card, and that women will not be punished for doing so. ANC cards could also be made available through other mechanisms, or a "birth preparedness" (BP) card can be developed that will be widely community-available. Providers must be involved in all aspects of development and

distribution of birth preparedness cards to assure ownership, and that the BP card will be accepted as a ”passport” to care.

Many women and families use the little money they have available to purchase layettes for the baby. The purchase of a layette was one of the most common responses as an action taken to prepare for birth. These baby layettes are a prized and valued birth-related item. Identifying the points of purchase of layettes can provide a distribution point for BP cards and information through an already established channel. It might also be possible to link the sale of mosquito nets at a discounted price to the purchase of a layette.

Barriers

One perplexing finding is that there appears to be an overall faith in the technical competence of skilled providers among all categories of respondents. This faith in skilled providers persists despite clear documentation, **from the same respondents**, of widespread and serious inadequacies in both provider factors and system factors of quality of care, as measured by Western standards. This points out the need to continue investigating the differences between the relative importance given to various elements of quality care as measured by “community-perceived” factors versus Western “evidence-based” standards (60, 81).

The complication narratives documented significant provider-related factors contributing to poor overall quality of care, particularly long delays in receipt of required emergency obstetric care. This means that even if women **do** manage to reach skilled care in a timely manner, there are frequently life threatening delays receiving care once they arrive. These delays are not unique to Homa Bay District. Similar delays have been documented in other countries, and are encountered in Western Kenya as well. In Western Kenya, it was shown that up to five hours frequently elapsed between the arrival of a woman requiring a caesarian section and the actual receipt of operative care (101).

Many of these provider and systems delays can be addressed, even within the constraints of the current health system, if creative behavior change strategies and interventions are applied. The research results point to several obvious (non-communication) BCI strategies to improve the “enabling environment” for both providers and clients alike. Several skilled providers suggested ways that the availability and cost of basic obstetric supplies that patients must now buy after reaching facilities could be reduced. Often, a separate trip to a nearby pharmacy is required to obtain basic supplies for emergency care. Providers suggested that these supplies, as well as the delivery packs that are now in short supply at facilities, be pre-packed. These could then be sold at low cost, either by TBAs or any other community-approved source. If TBAs are involved, it could help to replace income lost if TBAs “link” instead of provide care.

The “Misbehavior” of Skilled Providers

As with so many other findings of the research in Homa Bay District, the nature and magnitude of poor treatment of clients by skilled providers is not unique. Such “misbehavior”, including both verbal and physical abuse of women during labor and delivery, has been widely reported, both in other parts of Kenya (69, 94, 101, 104, 105, 128, 183) and other parts of the world (9, 10, 13, 30, 79, 130).

In Homa Bay District, skilled providers definitely need an “attitude adjustment”. All categories of respondents consistently described situations of actual abuse; as well as instances when widely-circulated stories about the abuses of patients cause women and families to hesitate to seek skilled care. Strong descriptive terms like “fear”, “despise”, “disrespect”, and “war” were used repeatedly by community respondents to describe their feelings about client/skilled provider interactions. Even skilled attendants themselves recognized that their behavior toward clients was a significant barrier to use of skilled care. Almost all skilled providers interviewed mentioned the need for improvement in their own attitudes and behaviors toward obstetric clients and their families.

The CHANGE Project has developed and tested (in Kenya and Bangladesh) a tool to assess the “caring” behaviors of skilled obstetric care providers. Preliminary results of the pretests indicate that providers value a tool that provides objective external and self-assessment of “caring” behaviors during labor and delivery. Simply testing the tool helped to remind providers of the importance of “caring” as well as “curing(11).”

One aspect of the discussions with providers in Homa Bay District that must not be overlooked is the expressed “felt-need” of skilled providers themselves for more attention to not only the excessive physical demands, but also the psychological demands placed on them by their difficult conditions of service. Providers repeatedly used the words “stress”. Reports from skilled providers of stress on the job must be actively addressed as part of interventions to improve not only the working conditions but the morale of maternal health workers. As with communities, assets-based resiliency methodologies can help overworked, underpaid providers to develop realistic, incremental improvements that they themselves can accomplish even within local system constraints (122).

“Rariu”

The research documented the local terms for, and beliefs regarding, the major obstetric complications. In addition, the interviews uncovered a wide range of other “obstetric complications” that differ substantially from the Western medical belief system in terms of both attribution of cause and mode of treatment. The most intriguing among the “locally-perceived” obstetric complications, “rariu,” was described in detail above. The behavior change implications of this condition, however, warrant further discussion.

During the preliminary analysis phase of the research, the Luo interviewers and CHANGE consultants inquired about “rariu” among many skilled obstetric care providers and Luo residents in Nairobi, seeking more information about this mysterious ailment that had been described by respondents in so many different ways, to try and determine the “definitive” equivalent according to Western diagnostic classification. At that time, we were not aware that there was published literature about rariu that provided a medical anthropology perspective (84, 85). This literature concludes that rariu is not, in fact, a single disease entity but rather a “disease cluster” that Luo women use to refer to a variety of perceived obstetric maladies.

There is an almost universal community perception of the efficacy of herbal treatment for rariu by TBAs, and an equally widespread belief that rariu cannot be successfully treated by skilled providers. This presents a huge barrier to the use of skilled care when actual

obstetric complications, locally interpreted as rariu, do occur. Skilled providers are reported to treat women complaining of rariu with disdain and disrespect, if they treat them at all. Rariu doesn't "rhyme" with Western medicine (85).

Rariu and the beliefs surrounding it provide a perfect example of a "cultural mismatch" between the belief systems of clients and skilled obstetric care providers, and an ideal focus for the behavior change approach of negotiated behavior change. Negotiation between clients and providers, to develop modified obstetric practices acceptable to both traditional and medical "cultures," has been successful in changing the practices of doctors in Bolivia and increasing use of skilled care (27). Based primarily on the Bolivia experience, CHANGE has developed a framework for a series of activities to identify gaps and negotiate culturally-acceptable obstetric practices with communities called WORLDVIEW. These methods can be used to negotiate improved careseeking for and treatment of rariu in Homa Bay District.

Fear and shame, although not widely expressed, were also mentioned as barriers to skilled care use. There was also a perception that if a man demonstrably cares for his wife by supporting birth preparedness and use of skilled care it might be interpreted by others, particularly other men, as "weakness". These findings can be creatively addressed in the behavior change messages and materials.

Communication Channels / Social Networks

The research clearly identified "network nodes," individuals central to setting community norms and facilitating the spread of information, within each category of respondent. These central figures within social networks and illness networks can provide a focus for community behavior change interventions, and speed diffusion of new ideas. Particularly for TBAs, specific respected leaders are already in place.

"User Characteristics"

A set of "ideal" user characteristics was elicited from EFFIs, TBAs and husbands to determine their perceptions on what makes a "good" husband, EFFI, etc. The specific terms used by respondents – experienced, skilled, caring, kind, etc - can be woven into promotional messages and materials to convincingly promote new or improved behaviors.

Radio was the most widely cited media with the widest audience reach. Thus it is the most logical communication channel, to provide support to less expensive face-to-face community activities. Each category of respondent stated clear preferences for specific radio programs and listening times. Current community meeting places and preferred "messengers' (particularly assistant chiefs) were also clearly described by respondents.

B. LESSONS LEARNED

Fostering Successful Organizational Partnerships

The CHANGE project was not designed or funded to implement programs directly. Rather, CHANGE works with partner organizations that are implementing field programs that have common desired health outcomes and shared behavior change goals. The collaboration between FCI and the CHANGE Project has provided insights into several important areas about the development and maintenance of partnerships. Most important among these are the time and technical assistance required to "translate" innovations in behavior change into easily understood, simply applied approaches, and that NGO partners must have adequate absorptive capacity not only at headquarters level, but locally as well, in order for capacity building efforts to truly succeed.

The Research Process

The decision to use community interviewers was debated extensively before a decision was finally made. Perhaps with good reason, there was concern that the research results would be compromised, not "up to the standards" of the global safe motherhood community. Undeniably, there are information gaps in this research that might not have occurred if professional interviewers with medical backgrounds conducted the interviews. However, the benefits of having a community interview team that is now informed about the benefits of, and barriers to, use of skilled obstetric care in the district in which they reside may outweigh the consequences of any missing data. Many of the community interviewers have expressed a willingness and commitment to continue to assist their communities with the development and implementation of community interventions to increase use of skilled care.

Locating appropriate respondents proved challenging at times. Finding women who had given birth within the past six months, either at health facilities or at home, particularly women who had experienced major obstetric complications required much more advance planning than was anticipated. Women who gave birth in facilities were often not able to be located through review of hospital records alone. Many of these women, as well as women who gave birth at home, had to be identified by key informants in the community. In the case of Homa Bay District, it is now clear that assistant chiefs maintain records of all births in the community. Adequate time should be included in research planning to allow for this.

The Research Design

The experience working with FCI in Homa Bay District has provided valuable insights into the utility of CHANGE's generic qualitative instruments, and about aspects of their use to investigate factors underlying the use of skilled care in safe motherhood programs. Along with lessons learned from application of the generic CHANGE qualitative research instruments in two additional country programs, the experience working with FCI in Homa Bay District will provide a basis for modification of the current format and content of the tools. Several changes were recommended to FCI based on the preliminary analysis of the results from Homa Bay District that will hopefully provide additional information and fill some "gaps" from the Homa Bay District study.

These recommendations included: reducing the total amount of interviews per category of respondent; adding two categories of interviews to further investigate the beliefs among religious “sect” leaders and their followers that inhibit use of skilled care; quickly eliminating areas of inquiry from interview guides once it was determined that the responses were similar to those from Homa Bay District; allowing the interviewers the flexibility to suggest and add new areas of inquiry based on daily review of results; devoting more attention to probing unusual or interesting findings; de-emphasizing the IDIs with women, as they did not yield much new information in Homa Bay District; and adding the additional methodology, projective techniques, planned but not implemented as part of the Homa Bay District research.

Working with the “seasoned” community researchers from the Homa Bay District study, the research in FCI’s comparison area, Migori, has already been completed and, at the time this report is being written, is in the process of being transcribed and translated. Those findings will surely add not only to what has been learned from conversations with the women, families, community members, TBAs and skilled providers in Homa Bay District, but to the global understanding of factors influencing the use of skilled obstetric care as well.

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