COMMUNITY INITIATIVES FOR CHILD SURVIVAL IN SIAYA

(USAID Child Survival Grant XV)

CARE International in Kenya

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ACRONYMS

APHA	American Public Health Association
AIDS	Acquired Immunodeficiency Syndrome
BI	Bamako Initiative Pharmacy
CBA	Community Based Advisor
CBD	Community Based Distributors of Contraceptives
CCHI	CARE/CDC Health Initiative
CDC	Center for Disease Control and Prevention
CHW	Community Health Worker
CICSS	Community Initiative for Child Survival Project in Siaya
CMCI	Case Management of Childhood Illnesses
CMR	Child Mortality Rate
DHMT	District Health Management Team
DMOH	District Medical Officer of Health
FHC	Field Health Co-ordinator
FY	Financial Year
HIS	Health Information System
HIV	Human Deficiency Virus
IGA	Income Generating Activity
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
M&E	Monitoring and Evaluation
MOU	Memorandum of Understanding
U5MR	Under Five Mortality Rate
VAC	Vitamin A Capsule

INTRODUCTION

The CICSS II project is intended to build upon the foundations of the impressive results realized by the CICSS I project between 1995 and 1999. Its goal is sustainable reduction in the mortality and morbidity of children under the age of five in the divisions of Boro, Karemo and Uranga of Siaya district in Nwanza province of western Kenya. The project also aims at improvement of the health status of women of reproductive age. The key theme for the CICSS II project is "sustainability and community ownership". The strategies are designed to increase the capacity of Mothers and other care-givers, Community Health Workers, community committees, other local institutions and the Ministry of Health to sustain the project gains beyond the project life.

The project focuses on the management of the most common causes of childhood morbidity and mortality with the main areas of concern being the management and prevention of malaria, pneumonia, diarrhoeal diseases, promoting immunization, family planning and HIV/AIDS control activities. The project has integrated vitamin A activities into its implementation strategy i.e., dispensing of vitamin A capsules as part of case management protocol and promoting consumption of vitamin A rich foods in the community.

CICSS II has adapted the WHO/UNICEF Integrated Management of Childhood Illnesses (IMCI) algorithms for community use in conjunction with the Bamako Initiative approaches for establishing community pharmacies. To this end, the project has developed training material employing IMCI guidelines for cough or difficult breathing, fever and diarrhea, counseling mothers on home care, when to return to the CHW and for appropriate referral.

The project is located in an area with high Infant Mortality Rates (IMR) and Under Five Mortality. The IMR in Siaya is 102/1000 compared to 62 nationally, and the U5MR is 210 as compared to 96 nationally (MOH report). Factors responsible for this include poverty; inadequate knowledge; inadequate hygiene and sanitation; inadequate health infrastructure and poor quality of health services. HIV/AIDS, including transmission of HIV from mother to child is emerging as a major problem in the region. Moreover, poor roads and sparsely located health facilities result in poor access to services. The majority of residents in the project zone have to walk three to15 kilometers in order to access health facilities. In this context, improved home care and easy availability and accessibility to basic health care services through trained CHWs has resulted in significant (49%) reduction in the CMR.

Project interventions target 40 communities, each consisting of approximately eight villages, for a total of 320 villages. The estimated population is 193,000 rural residents with potential beneficiaries numbering 41,000 women of 15 – 49 years and 36,000 children aged below five years.

A. MAJOR ACCOMPLISHMENTS AND CONTRIBUTING FACTORS

In the year under review, the project has effectively carried out the activities listed below:

A.1 Assessment of Clinical Skills of CHWs

In the year under review, the project completed an assessment of clinical skills of CHWs. The exercise was aimed at assessing the impact of the first refresher training course carried out between November 1998 and March 1999. The study was also aimed at the identification of general strengths

and weaknesses in clinical skills of CHWs. The results of the study are being used in revising the curriculum for the second refresher training of CHWs.

The study was carried out amongst 108 of the 120 CHWs eight to 12 months after training. It revealed that CHWs performance in counseling improved and their skills in management of most of the illnesses was maintained (see Annex A).

As a result of this study, CICSS staff has developed a revised training curriculum placing emphasis on clinical skill enhancement, including:

- Assessment of danger signs, chest in-drawing, signs of dehydration
- Practice to measure respiratory rates
- Recording classification of all conditions including mild conditions
- Treatment of severe pneumonia, dysentery and measles
- Referral of children as required
- Counseling mothers on the importance of (1) returning immediately if the child's condition worsens, (2) returning for follow up care.

A.2 Assessment of Bamako Initiative Pharmacy performance

In this year the project completed an assessment of the performance of Bamako Initiative Pharmacies. The assessment was essentially intended to identify six sub-locations from which the project would phase out based on their varied strengths. Subsequently, the project would phase into six other sub-locations. Though all sub-locations were found to have fully functional BI pharmacies, the study identified financial management as a major weakness for all of them. As a response the project developed a financial training curriculum which has been used to train officials of the BIs. Presently, the project has put into place a system that allows monitoring of the BIs progress. Initial data indicate that financial management has improved tremendously. Progress on this matter will be reported in subsequent reports.

A.3 Strengthening of Health Information System at the community level to facilitate decision making by community

In the final evaluation of the project, one of the main issues identified was the inability of communities to interpret and use data generated by the project for answering questions and solving problems. It was recommended that a system needs to be developed to address the issue of information collection, aggregation, analysis and communication in a sustainable way (i.e., shifting primary responsibility for supporting project activities shifts away from CARE).

As a response, a Community Based Health Information System workshop curriculum was developed through collaboration between the project, MOH and an Emory University intern. This workshop would focus on designing a system to be utilized now and in the future by the community. Two specific objectives of the workshop were:

- To build a sustainable data driven decision-making system based on the goals, objectives, and interventions of the CICSS project
- To develop the skills and knowledge required to effectively collect, extract, aggregate, interpret, and disseminate data in order to identify problems and come up with solutions to these problems.

The workshop was held in 2 sub-locations of Sigoma-Uranga and Nyajuok. They were composed of eight sessions spread out over a four-day period. Various participatory learning methods – analogies, pictures, case studies, mapping exercises, demonstration, discussion, lectures and brainstorming were employed. The action plan developed by the participants at the end of the workshop was the culmination of the four-day workshop. This plan is the basis of the monitoring system for the VHCs. And similar workshops are planned for others sub locations too.

A.4 Dissemination of lessons learnt

The project received wide recognition because of its impressive success in reducing CMR using community-based IMCI approaches. The project staff received repeated invitations to speak about the lessons learnt at different forums. In the workshop hosted by UNICEF/WHO in Durban, South Africa on "Improving children's health and nutrition in communities" CICSS was provided a separate presentation slot for sharing successful examples on community-based IMCI. CARE was represented by the Project Manager and Western Region Coordinator, and the presentation evoked great interest among participants .It was an excellent opportunity for CICSS to gain more global exposure in the field of Child Health. Other presentations described different countries' experience in implementing IMCI. However, these experiences were government or UN agency experiences. CARE Kenya provided virtually the only NGO case study.

The innovative approach that the CICSS project is using for training CHWs on case management generated a lot of interest during the workshop. Many participants wanted to access the project-developed training materials and the numerous studies done. It was very gratifying and motivating that participants continuously made reference to CARE's model during plenary as well as group and private meetings throughout the duration of the conference.

CICSS' experiences were also shared at CARE's Fifth Annual International Child Survival workshop organized in Peru and during the Micronutrient Workshop held in Toronto, Canada. Abstracts from the project had been submitted for PVO CORE group IMCI workshop in Washington in January 2001 and for the APHA meeting.

In addition, the project's Monitoring and Evaluation Officer is currently attending a course on Epi Info at the CDC headquarters in Atlanta. Epi Info – a computer application for analyzing public health data developed by CDC and WHO – will improve the project's monitoring and evaluation by enabling easier handling of epidemiological data and organizing study designs and results into text. Epi Info will also facilitate data analysis.

A.5 Addressing HIV and AIDS in the region

In response to concerns raised by USAID/BHR/PVC and the technical reviewers of the DIP on the problems of HIV and AIDS in Siaya, CARE has managed to obtain separate complementary

funds for specific HIV/AIDS related activities. These synergistic activities will be under the multi country 'Leadership Initiative for Fighting Epidemics' (LIFE) project. This project ostensibly aims at "reduction of the spread of HIV through STI management and adoption of prevention methods." The project - funded through CDC's LIFE initiative - targets young people between 10 - 29 years of age. The secondary target group includes community leaders, opinion leaders and the general community who will be sensitized to support STI/HIV programming. The project will further target health service providers with a program that will enable them improve their range of services, quality of care and provision of youth-friendly services.

The five-year project has been established as an add-on component of the CICSS project and will benefit from CICSS' already established infrastructure. The project will have 13 dedicated staff who serve as resource specialists and will provide training to CICSS staff, as well as CHWs, stakeholders and participants. The project will look at expanding the base of community level volunteers and workers by inducting peer groups and other health care providers. This project is expected to significantly contribute to addressing problems associated with the AIDS pandemic in Siaya.

A.6 Factors contributing to accomplishments

- **Goodwill generated by CICSS I Project**

As indicated in the CICSS I Final report, the project successfully reduced under-five mortality: A fact that was widely recognized by the community. For example, in individual interviews, three out of four chiefs, nine out of 10 assistant chiefs and five out of seven village elders mentioned that fewer children were dying in the project area. This observation was also mentioned in every focus group discussion with community health workers. This has generated tremendous goodwill for the project, not just from the community but with other stakeholders as well. This goodwill is exemplified in the reinvigorated cooperation provided by the community. The high level of community involvement in planning and implementation of project activities including joint problem solving are cases to cite.

- **Improved implementation support from MOH**

Throughout the year, MOH staff have very actively participated in the activities of the project. At the community level, MOH staff have participated jointly with project staff in training of CHWs. They have also actively supported CHWs in practicing their skills by allowing them to practice at the health facilities. At a higher level, members of the District Health Management Team are involved in supervision of CHWs. In addition, key members of the team are actively involved in managerial aspects of the project. MOH support, especially at the community level, denotes both government acceptance and collaboration – which augurs well for the project in the eyes of the community.

- **Technical support**

The project has benefited from technical support from the CDC, particularly in the areas of OR on: i) community health workers assessment, which has enabled the project to improve quality of care provided by CHWs; ii) development of health information systems, which has helped to refine the community based health information system. The CDC has also introduced the use of epidemiological techniques to improve management of information systems in the project.

The project also benefited from the assistance provided by two Emory students, Kristie McComb and Peter Olyoe, who spent their summers at the project and worked on CHW retention and Community Information Systems. The report of one of the students is included in Annex B.

B FACTORS IMPEDING PROGRESS TOWARDS ACHIEVEMENT OF OVERALL GOALS

B.1 High Drop out Rate of CHWs

The project has continued to lose CHWs for various reasons. However, the major reason for the high drop out rate has been singled out as lack of incentives for CHWs. During the year, and in an attempt to find solutions within the community, CARE has held several meetings with the various committees to seek possible solutions to the problem. To this end, the communities put forward several suggestions on which the project intends to follow up. These include setting up of merry-go-rounds for community health workers where each month community members served by the CHW will contribute some cash for her upkeep. The village health committees will organize this activity. Secondly, the community suggested holding of fundraising activities for CHWs. In this activity, the people invited for the fund raising are not limited to those served by the CHW. The funds raised during such activities will be divided equally among CHWs.

It is prudent to mention here that this is a problem that CARE and other development organizations have noticed in most of their programmes in Kenya and other regions. It is therefore an issue that has raised considerable concern within the organization. In order to sufficiently address the issue, CARE has set aside US$ 10,000 to be utilized within FY00 in seeking lasting solutions to the problem.

B.2 Problem with Drug Supply System

Problems with drug supply center are a result of the fact that the main drug suppliers are unable to directly supply community BIs, since they only deal in large quantities of drugs. The project identified mission hospitals within the project areas as intermediaries. These hospitals acquire drugs in large quantities and sell them in smaller quantities to the BIs. Some of the hospitals are undergoing cash flow problems and therefore unable to supply the BIs, though they have the money to buy them from hospitals. The project is currently seeking alternative suppliers. Though the area has sufficient private pharmacies, the project is reluctant to deal with these since they have no quality control –a fact that may lead to sub-standard drugs being supplied to BIs.

C RESPONSE TO TECHNICAL DIP REVIEWERS COMMENTS

The matrix below lists some of the issues reviewers of the Kenya DIP highlighted as needing to be addressed. To consider the opinions of the DIP reviewer, a DIP dialogue meeting was convened in Kisumu from 10 to 14 October 2000. Before the meeting the reviewers' comments were distributed to all stakeholders and project field staff who then discussed many of the issues highlighted with communities. The workshop brought together all project field staff, CARE Kenya senior management staff from Kisumu and Nairobi, HQ backstop person, a local technical consultant and

the consultant who had worked on the initial DIP. In this intense four-day meeting all reviewer comments were considered and an action plan was prepared in response. The following matrix outlines CARE's responses to the issues raised.

Reviewers' Comments	***Response***	***Action***
1. Monitoring and Evaluation	Project team assisted by the CDC technical team have revisited the indicators	New indicators measuring what the project is actually doing and is useful to the project
2. HIV/AIDS Explore CICSS II for HIV/AIDS.	CICSS II has secured funding for LIFE initiative to address HIV/AIDS/STI in the district.	Needs assessment to be done in the first quarter of second year of the project .
3. Address neonatal mortality	Project team has reviewed maternal and child registers to improve follow up of pregnant mothers through to postnatal period with emphasis on prevention of neonatal illnesses.	The revised maternal child registers are already in use in the project area.
4. Linking of National IMCI strategy for the country with the Community Based IMCI	Inclusion of an advocacy plan to lobby for inclusion of Siaya District training in the national program	CARE Nairobi to carry out advocacy.
5. Use of other community resource persons in STI/HIV/AIDS activities	The LIFE initiative will address this.	Included in the DIP
6. Management of malaria and anemia	DIP review has incorporated anemia component	Develop strategy to deal with Anemia.
7. Why project does not address neonatal mortality	Project has improved follow up of pregnant mother postnatal period with specific messages to promote the health of the new born	Improved child and mother register already in use
8. Use of TBAs to distribute anti-malarial and vitamin A capsules	Project will identify existing TBAs within project area	TBAs to be oriented in distribution.
9. Involvement of private retailers in the provision of ITNs	Accepted by project team	Identify existing and willing retailers to take up distribution
10. Project should measure reduction in malaria prevalence		Project will discuss with a locally based research institution. This includes provision of additional method of vector control

D Future Technical Assistance

In the coming year, the project will need technical assistance in the areas outlined below:

D.1 Technical support to work out project cost per beneficiary

In this phase, the project's focus is on sustainability. In order to address this effectively, the project team will require technical assistance in cost efficiency and cost effectiveness analysis. This will improve the ability to analyze project (direct and implied) costs to provide useful information for MOH and communities and will provide tangible costs involved in transfer of project to them beyond the stipulated project life and will help in facilitating the sustainability of the project.

D.2 Technical support for developing training package for traditional healers and private health care providers

The project team recognizes the potential inherent in other community resource persons in addition to the already identified and trained CHWs. This is an issue that was highlighted by the DIP reviewers and discussed at some length in the recent planning meeting. The project team needs technical support for developing a training package that will enable effective training of traditional herbalists with knowledge and skills in early recognition and simple home level treatment of common childhood illnesses, amongst others.

D.3 Community based information system follow up from CDC

The chalk board system that allows data analysis and participatory decision-making has been introduced in the project. Given that there have been modifications in the program that are still on-going – with assistance from CDC – there is need for technical input to ensure that this is carried out efficiently to its fruition.

D.4 Support-a-vision training curriculum

The project identified supportive supervision and attitudinal training of the MOH personnel as well sub location committees as an area of paramount importance. The project will need external assistance in developing a curriculum and training guide for this.

ANNEXES

Annex A CHWs Assessment Report

Annex B Student Report on Constraints to Creating Sustainability in the CARE CICSS-II Project

Annex A

Community Initiatives for Child Survival in Siaya

Second evaluation of the quality of case management by community health workers

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Abbreviations and Acronyms:

CICSS:	Community Initiatives for Child Survival in Siaya
CDC:	Centers for Disease Control and Prevention
CBA:	Community-based Advisor
CHW:	Community Health Worker
CMCI:	Case Management of Childhood Illness
CSA:	Child Survival Activity
FHS:	Field Health Supervisor
GS:	Gold Standard
IMCI:	Integrated Management of Childhood Illness
M&E:	Monitoring and Evaluation
MOH:	Ministry of Health
OPD:	Out-patient Department
USAID:	United States Agency for International Development

1. Background

The CARE Kenya Community Initiatives for Child Survival in Siaya (CICSS) is a USAID-funded project located in Siaya District, western Kenya. The project began in September 1995 and was recently awarded extension until September 2003. The project currently covers a total population of about 64,000 persons in 201 villages. When fully implemented, the project will cover approximately 140,000 persons in 332 villages in the Boro, Karemo and Uranga Divisions of Siaya District, Nyanza Province. The under-five childhood mortality rate in Nyanza Province which includes Siaya is 199/1000 live births[1]. To reduce childhood morbidity and mortality, CARE Kenya designed and implemented the CICSS project using community-based resources that are managed, owned and sustained by the community. The project has trained a cadre of about 300 voluntary community health workers (CHWs) to use simplified clinical algorithms to recognize and treat childhood malaria, pneumonia and diarrhea. The CHWs are provided with medicine kits that are replenished through a cost recovery system at community pharmacies, established with assistance from the project. The CHWs are trained and provided technical and administrative supervision by 8 community based advisors (CBAs) and 2 field health supervisors (FHSs).

All CHWs received an initial 3-week training from January through July, 1997. In February 1998, clinical skills of 100 randomly selected CHWs were evaluated. The findings of the 1998 evaluation were used to guide development of curriculum for a one-week refresher-training course, conducted from November 1998 through March 1999. Training of CHWs was preceded by a refresher training of CBAs and 21 Ministry of Health (MOH) staff. To standardize the content and methodology of training, a trainer's manual was developed. The CBAs used the trainer's manual to train the CHWs assigned to them. In all, a total of 289 of the original 336 CHWs were trained. Specific areas of emphasis in the refresher training included: measurement of respiratory rate and recognition of general danger signs, chest indrawing and signs of severe dehydration. Also, CHWs were oriented to the use of a newly developed treatment/counseling job aid. Training methodologies included case studies, group discussions, role-plays, written exercises, practice drills, lectures and home assignments. Compared to the initial training, more time was devoted to practical sessions in small groups.

2. Purpose of the evaluation

The current evaluation was undertaken to identify areas of strengths and weaknesses in clinical skills of CHWs and to assess the impact of the first refresher training on quality of case management. The results of this evaluation will be used in revising the curriculum for the second refresher training of CHWs, in an effort to continuously improve quality of care provided to sick children in the CICSS project area.

[1] Demographic and Health Survey, Kenya, 1998.

3. Methods

Study Design

This was a cross-sectional study to evaluate the clinical skills of trained CHWs in assessing, classifying, treating and counseling sick children under the age of 5 years by comparing CHWs' performance to a gold standard (GS) clinician's assessment. The protocol followed for the study was similar to the protocol used during the 1998 evaluation.

Duration of field work

The fieldwork for the study was completed from November 1 through November 26, 1999.

Sampling

CHWs who received the initial and refresher training, and who were currently active, were considered for the evaluation. To include a representative sample of 100 CHWs in the evaluation, and to account for 20% no-shows, a total of 120 CHWs were selected by systematic random sampling, with the sampling frame ordered by sub-location. CHWs who did not present for the evaluation were not substituted. The 120 selected CHWs were given appointments over a two-week period starting from November 19. On an average 10-15 appointments were given per day. Arrangements were made to pick up the CHWs from their residence for an overnight stay at Siaya. The CHWs were dropped back to their residence after being assessed at the Siaya district hospital.

Pretest and data collection

The evaluation activity started with a review of the algorithm by the CBAs and FHSs, which was co-ordinated by the CICSS training officer and IMCI-trained clinical officers from Siaya and Vihiga district hospitals. Following the review of the algorithm, the training officer along with the CDC consultant reviewed the tools used for data collection in the previous evaluation. For the purpose of comparison of results to the previous evaluation, changes made in the tools were limited to the addition of new classifications: severe dehydration, some dehydration, bloody diarrhea, persistent diarrhea and complicated measles. The tools used for data collection are listed below (Appendix-I):

1. Clinical registers for recording CHW findings.
2. Study observers' observation checklists used by observers to record counseling messages given by CHWs to caretakers.
3. Inpatient and outpatient GS re-examination forms used by the GS clinicians to record their findings of re-assessment of sick children.

To pretest data collection tools and to identify observers and gold standards for the CHW evaluation, all CBAs and FHSs were assessed for their clinical skills. The clinical officer from Vihiga and the CARE training officer served as the gold standards for this exercise. Based on their performance scores, 4 CBAs were short listed to be observers/ gold standards. The four CBAs who were short listed, were further evaluated to check their concordance with the gold standard clinicians' findings. Because none of the CBAs reached a 100% level of concordance with the gold standard clinical officer, it was decided to retain the CICSS training officer and the Clinical Officer from Vihiga District as the gold standards for the evaluation of CHWs. Of the 4 short listed CBAs, the two with the highest scores were selected to serve as observers.

The evaluation began each day at the sick child OPD and was completed at the pediatric in-patient ward of Siaya district hospital. Prior to beginning the activity, CHWs were told that the purpose of the activity was not to test their skills, but rather, to determine what weaknesses existed in the program so that a refresher-training program could be developed. Verbal consent was obtained from the caretakers prior to the activity. CHWs were asked to manage the children seen at the OPD and in the inpatient ward as they would in the community, and record the assessment, classification, treatment to be given, referral, and the return date. The CHWs were asked to refrain from administering treatment since their classifications and treatments identified were not verified until later. However, they were advised to counsel the caretaker as though they were administering the treatment. The study observer recorded on the observation checklist, the advice that the CHW provided to the caretaker. The Study observer did not interrupt the interaction between the CHW and the child unless there was a risk to the child if the interaction continued. Following the observation of CHWs' performance, the child was re-examined by a GS clinician to establish a GS classification and findings were recorded on the GS re-examination form. The child was then provided treatment and the caretaker received counseling appropriate to the child's GS classification.

After examination of a sick child in the OPD, the CHW was directed to the inpatient ward. Inpatients were pre-selected to participate in the evaluation and verbal consent was obtained from their caretakers. Earlier in the morning the selected children were examined by a GS clinician assessment findings for each child. The CHWs assessed, classified and identified treatment for an assigned child while recording assessment, classification, treatment identified in the CHW register. In this case, the child was not counseled since he/she was already receiving treatment and advice in the ward. Consequently, no direct observation was made, although a GS clinician was stationed at the inpatient ward so that she could assist the CHW if needed.

Data entry and analysis

Each day the GSs and observers checked the forms filled out during the day, for completeness and any other obvious errors before handing them over to the data entry operator. To assess the quality of care being provided to sick children in the community, we entered the following 15 records from each CHW's clinical register: the 5 records immediately before refresher training, the 5 records immediately after refresher training and the 5 records immediately before the current assessment activity. All data were entered in an Epi Info database. Several check features were introduced in the data entry screens to minimize data entry errors. In addition, the CARE monitoring and evaluation officer compared 25% of the electronic records with the original questionnaires to identify missing values and other errors. Feedback was provided to the data entry operator on a daily basis. All the original questionnaires are stored at CARE Siaya office. Electronic copies of the data sets were sent to CDC, Atlanta for further analysis. Data were analyzed using Epi Info version 6.04.

A timeline of the key activities till date is provided in Appendix – II

4. Results

In all, 108 of the 120 selected CHWs were evaluated at the Siaya District Hospital. Each CHW assessed two sick children, one each in the outpatient and inpatient departments. Key results of the evaluation are provided in Appendix 3 (Tables 1-9), and summarized briefly below:

Assessment of sick children : Table 1 compares CHW assessment findings with a gold standard clinician's assessment findings, before and after the refresher training.

Danger signs: Compared to a GS clinician, CHWs failed to identify one out of every four children with a danger sign. Children with danger signs are at the highest risk of dying. Failure of CHWs to identify children with a danger sign is a missed opportunity to prevent a potential childhood death. CHWs' skills in identifying children with a danger sign should be close to 100%. CHWs correctly ruled out danger signs in 87% of the children who did not have a danger sign. Since the previous evaluation, CHWs' are doing much better ruling out danger signs when danger signs are absent, thus avoiding unnecessary dispensing of co-trimoxazole and unnecessary referrals.

Cough or difficult breathing: Overall, CHWs' skills in assessment of respiratory signs and symptoms have declined since the previous evaluation. Despite special emphasis on measuring respiratory rate during the refresher training, CHWs identified only 62% of cases with fast breathing (pneumonia). Since the previous evaluation there is a significant decline in CHWs' skills for assessment of chest in drawing. CHWs have difficulty both identifying and ruling out chest indrawing. Lack of enough opportunities to observe sick children with chest indrawing may be a reason for the poor performance of CHWs in assessment of chest indrawing.

Diarrhea/dehydration: CHWs correctly identified 69% of the children with diarrhea. Since the previous evaluation, there is a slight improvement in recognition of diarrhea cases; CHWs are doing much better ruling out diarrhea. However, CHWs should be able to correctly identify almost all cases of diarrhea, since failure to do so could result in missing opportunities to prevent deaths due to dehydration. Although special attention was given to assessment of signs of dehydration during the refresher training, CHWs are still doing poorly assessing for signs of dehydration i.e. skin pinch, thirst, irritability.

Fever: Since the previous evaluation, CHWs are doing slightly better recognizing and ruling out fever; however, scope for further improvement remains.

Classification of childhood illnesses: Tables 2 and 3 present results on CHW classifications according to a gold standard clinician's assessment, and according to their own assessment, respectively.

Compared to a gold standard clinician's classification, CHWs maintained their skills in correct classification of very severe disease. CHWs' skills in classification of malaria have improved due to improved assessment and classification of fever cases. There is also marked improvement in CHWs' skills for classification of mild illnesses i.e. no pneumonia, cough or cold and no dehydration. CHWs' performance in classifying severe pneumonia and dehydration remains poor mainly due to their poor skills for assessment of respiratory rate, chest indrawing and signs of dehydration. Based on their own assessment, CHWs' classification skills have improved since the previous evaluation (Table 4).

Seventy-five percent of the CHWs referred to the algorithm while examining sick children. Overall, CHWs' assessment and classification skills did not differ, whether or not they used the algorithm (data not shown).

Treatment: Tables 4 and 5 present results on treatment skills of CHWs according to a gold standard clinician's classification, and according to their own classification, respectively.

Compared to a gold standard, CHWs dispensed the correct medication for 76% of all severe illnesses and 65% of all moderate illnesses. There is significant improvement in treatment of children with fever. In the current evaluation, CHWs correctly dispensed an anti-malarial to 62% of children with fever, in comparison to 45% of children during the previous evaluation. Similar to results of the previous evaluation, CHWs did well, identifying treatment according to their own classification. (Table 5).

Seventy one percent of CHWs used the treatment card while treating children. Overall, no differences were observed in treatment practices, whether or not CHWs used the treatment chart.

Referral: Based on a small number of sick children seen at the outpatient department that required referral, it is noted that CHWs often do not refer sick children when required. Failure to refer very sick children when needed is a serious lapse in case management. In the current evaluation, referrals were made in only 13% of all severe illnesses, compared to 55% in the previous evaluation. A possible reason for failure to refer very sick children may be due to CHWs' perception that mothers may not accept referrals, or that drugs may be out of stock at health centers. Also, the artificial hospital setting may have interfered with CHWs' decision to make referrals. Data from CHWs referral books (not collected in the current evaluation) may provide a more accurate estimate of referrals made in the community setting.

Counseling: Tables 6 and 7 present results on the frequency of counseling messages given when required, according to a gold standard clinician's classification, and according to CHWs' own classification, before and after refresher training.

During the refresher training a counseling chart was introduced to help CHWs provide key messages to caretakers. Overall, CHWs' counseling practices have improved markedly since the previous evaluation. In general, the main omission that remains is counseling caretakers to return for follow up. Also, few caretakers of children with cough or difficult breathing are counseled to return immediately if the child developed chest indrawing or fast breathing.

Performance of CHWs in the community setting based on clinical register records: Tables 8 and 9 provide results on trends in classification and treatment skills of CHWs based on their own assessment, before and after refresher training.

The clinical register data provide an opportunity to note the actual performance of CHWs in the community setting. In general, CHWs' performance in the community setting was similar to their performance in the hospital setting under observation. CHWs are not doing very well classifying mild illness conditions i.e. no pneumonia, cough or cold and the no dehydration classifications. Overall, performance of CHWs in the community setting as observed from the clinical register records shows similar areas of strengths and weaknesses as seen in the hospital setting. An additional area of weakness

identified in the community setting is the management of measles cases. CHWs are not correctly identifying treatment for measles cases.

Data from the clinical registers also provided an opportunity to observe trends in classification and treatment skills of CHWs over the past two years. Overall, performance of CHWs has changed little over the past two years.

5. Limitations of the study

The results of the study should be interpreted considering the following limitations:

1. The hospital setting of the evaluation may have biased the results of the evaluation in either direction. While the unfamiliar hospital setting may have unfavorably affected CHWs skills, being observed by supervisors during assessment may have enhanced their performance.

2. CHWs' skills in some areas could not be meaningfully evaluated due to the small number of illness conditions e.g. complicated measles, severe dehydration and persistent diarrhea.

3. The reported results are based on data recorded in CHW clinical registers. Missing data could mean either failure to perform the task or failure to record. Results reported here assume either scenario as failure of CHW to perform the task, thus underestimating CHWs' clinical skills.

6. Summary and Recommendations

In summary, 8-12 months after refresher training, CHWs maintained most of their clinical skills. Notable areas of improvement since previous evaluation include treatment of children with malaria and counseling caretakers of all sick children. The most serious lapse in case management that needs to be addressed urgently is the decline in appropriate referrals made by CHWs. Upgrading CHWs' assessment skills is essential to improve overall quality of case management. Post-training supervision and on-the-job training are critical in further improving quality of case management by CHWs. Specifically, the following next steps are recommended to further improve quality of case management:

1. Revise training curriculum: The following areas should be emphasized in the next round of refresher training:

    a. Assessment tasks: danger signs, signs of severe pneumonia (measuring respiratory rate, chest indrawing), signs of severe dehydration (skin pinch, thirst, irritability); assessment for main symptoms- diarrhea, fever, cough or difficult breathing.
    b. Counseling: messages to caretaker to return for follow-up.
    c. Referral: indications for referral, effective communication when referrals are made, recording referrals.

2. Use supplementary training methods: Similar to the previous trainings, more time should be devoted to practical clinical sessions, rather than to theoretical lectures. Despite special emphasis during the first refresher training, assessment for signs of severe dehydration and severe pneumonia remain the key areas for improvement. Because children with signs of severe pneumonia and dehydration are not commonly seen, additional methods for enhancing CHW assessment skills should be explored. The WHO-IMCI training course uses videotapes for training health workers. The CICSS training course should also consider including video as a training tool. The video can be shown to CHWs at the Siaya district hospital during their practical clinical sessions. The estimated cost of $1,000, for purchase of a television and a video cassette player, is a small investment in comparison to the potential returns in improving case management. The training equipment would be useful to the MOH for training of CHWs when CARE funding ends.

3. Update clinical skills of trainers: Before initiating refresher training of CHWs, the trainers, i.e. CBAs, FHSs, and MOH staff should receive refresher training. The refresher training of trainers should be used as an opportunity to present the results of the current evaluation, and to emphasize the areas of weakness in CHWs' clinical skills that need to be targeted during CHW refresher training.

4. Provide post-training supervision and support: Existing literature indicates that training ***alone*** is not sufficient to improve performance of health workers. The community health workers with a limited educational background, required to use a rather complex algorithm, particularly need post-training support for maintaining their skills. The project-management team should give foremost priority on supporting and supervising the CHWs. Supervision strategies should include the following -

    a. CBAs should continue to provide on-the-job training to CHWs at health facilities by demonstrating key assessment signs and reinforcing classification and treatment guidelines. CBAs should use a supervisory checklist to systematically identify areas of weaknesses in CHWs' performance and provide feedback. The health facility staff should also be involved in such training encounters. Each CHW should receive at least one in-service training each quarter. FHSs should provide back-up support to CBAs in supervising CHWs.

    b. CBAs should continue to check clinical registers and provide feedback to CHWs about correct classification, treatment and referrals. For future reference, CBAs should record in the clinical registers, the date of supervisory encounter and their comments on CHW's performance.

    c. Every opportunity should be used for conveying key messages to CHWs for improving case management. Group discussion during monthly meetings at community pharmacies is an example for such communications.

    d. The CICSS training officer should be responsible to ensure that supervision occurs as planned.

5. Use data for quality assurance: Supervision provides an opportunity to collect and use data for assessment of training needs as well as to monitor if supervisory visits are occurring as planned. The quarterly project planning meetings should include a technical session to discuss training issues. Based on CBAs' inputs on noted areas of weaknesses in CHWs' clinical skills, the training officer should provide directions to CBAs for targeted training in the next quarter. CBAs should incorporate a plan for supervision in their quarterly work-plans. A suggested tool is provided in appendix IV. Also, CBAs should link referral-chit data with the clinical register records to identify the proportion of children correctly referred by CHWs. The M&E officer should use data submitted by CBAs to generate the following indicators on a quarterly basis-

   -Proportion of CHWs receiving one-on-one supervisory support at a health facility once in a quarter
   -Proportion of children correctly referred by CHWs

6. Involve MOH staff in planning and conducting training: To date training has been a CARE responsibility. For training capacity to be sustained, MOH staff will have to assume the responsibility of training CHWs. The up-coming refresher training, beginning June, 2000, provides an opportunity to test MOH involvement in sustaining training and supervision of CHWs. The MOH staff with the highest score during evaluation, Dr. Richard Ogutu, is a resident of Siaya and could potentially assume the role of a training co-ordinator when CARE funding ends. The CICSS training officer should start grooming Dr. Ogutu in the planning and implementation of training. Similarly, CBAs should work together with staff at health centers in the training of CHWs.

6. Future activities, timeline and responsible person/s

Activity	Timeline	Responsible person/s
1. Revise training curriculum	April, 2000	Osamba, MOH
2. Develop, procure training materials	May, 2000	Osamba
3. Conduct refresher training of CBAs	June, 2000	Osamba, MOH
4. Conduct refresher training of CHWs	June-September, 2000	Osamba, MOH, HSs, CBAs
5. Conduct supervision, on-the-job training	Ongoing	Osamba, FHSs, CBAs
6. Conduct third round of evaluation	March 2001	Osamba, CDC

Appendix – I: Data collection Tools

CHW clinical register

Date	Name of patient	Age	Chief complaint	General danger signs				Cough or difficult breathing			Diarrhea, dehydration						Fever					Classification	Treatment
				Unable to drink	Vomits everything	Has had convulsions	Lethargic, unconscious	How long	Chest indrawing	Respiratory rate	How long	Blood in stool	Diarrhea for 14 days or more	Irritable or restless	Drinks thirstily or eagerly	Skin pinch goes back slowly	How long	Thick pus from eyes	Deep sores in mouth	Gen Body rash	Red eyes runny nose		

Observer's Form

Observation of the child seen at the outpatient department

CHE/CHW ID_____ Observer ID _____

CHE/CHW NAME_____

Name of the Child _____ Child ID number _____

Date_____/_____/_____
day month year

Observe the CHE/CHW counseling the caretaker. Circle "Y" for yes or "N" for No
YOU MUST CIRCLE "Y" or "N".

Does the CHE/CHW tell the caretaker to:

1. Keep the child warm?	Y	N
2. Increase frequency of breast-feeding or feeds	Y	N
3. Return if the child stops breast-feeding well?	Y	N
4. Increase home-based fluids?	Y	N
5. Return if the child develops difficulty breathing?	Y	N
6. Return if the child develops severe chest indrawing?	Y	N
7. Return if diarrhoea increases?	Y	N
8. Return if diarrhoea becomes more watery?	Y	N
9. Return if blood appears in the stool?	Y	N
10. Return if vomiting increases?	Y	N
11. Return if the child looks sicker?	Y	N
12. Return for follow-up the next day?	Y	N
13. Did the CHW/E refer the child?	Y	N

Does the CHE/CHW tell the caretaker to:

Septrin

14. Give Septrin twice per day?	Y	N
15. Give Septrin for 5 days?	Y	N

ORS:

16. Give ORS after each loose stool? Y N

17. Give sips of ORS on the way to the referral center? Y N

18. Give ORS to and reassess the child after 4 hours Y N

Paracetamol:

19. Give paracetamol 3 times per day? Y N

20. Give paracetamol for 2 days? Y N

21. Does the CHW use the CARE algorithm Y N

22. Does the CHW use the treatment card Y N

23. Record the drugs identified to be given to the caretaker by the CHE/CHW.

Circle all drugs given by the CHW to the caretaker	**Circle** if 1/4, 1/2 or 1 (whole) tablet(s) provided	**Circle** the total number of tablets provided or circle stat
a. Septrin	1/4 1/2 1 N	1 2 3 4 5 7 6 8 9 10 11 12 13 14 15 + 1/4 +1/2 Stat N
b. Fansidar	1/4 1/2 1 N	1 2 3 4 5 7 6 8 9 10 11 12 13 14 15 + 1/4 +1/2 Stat N
c. Paracetamol	1/4 1/2 1 N	1 2 3 4 5 7 6 8 9 10 11 12 13 14 15 + 1/4 +1/2 Stat N

d. ORS:	No. packets provided: 1 2 3 other _____
e. Vitamin A	No. of capsules: 1 2 3 other _____
f. Comments on a-e:	

INTERVIEW WITH THE CARETAKER

24 Assess the caretakers understanding of how to give the drugs at home: Circle the name of each medication received by the caretaker from the CHW, then show the caretaker each medication. **Ask each question for each of the medications. Record "DK" for a response of "I don't know".**

Name of the drug	Ask: How much will you give each dose? (eg.1/2 tablet or 1 tablet or 2 tablets)	Ask: How many times each day will you give the medicine? (eg. 2 times per day)	Ask: How many days will you give the medicine? (eg. 5 days, or until finished)	Record: Does the mother correctly describe how to give the drug?
a. Septrin	1/2 1 2 3 4 other____	_____times/day		Y N
b. Fansidar	1/2 1 2 3 4 other____	_____times/day		Y N
c.Paracetamol	1/2 1 2 3 4 other____	_____times/day		Y N

d. ORS:				
How much water will you mix with 1 ORS packet?	**a)Equal to 1/2 litre**		**b) other**	
How often will you give the ORS?	**a) After each loose stool**		**b) other**	**Y N**
How much will you give?	**a) 2 cups (100-200 ml)**			
	b) 1 cup (50-100 ml)		**c) other**	
How long will you give it?	**a) until diarrhea stops**		**b) other**	

e. Vitamin A				
After how long should your child receive vitamin A	**a)7 days**	**b)14 days**	**c)30 days**	**Y N**
	d)3 months	**e)6 months**	**f)1 year**	
	g) other			

f. Comments

Gold Standard Outpatient Form

RE-EXAMINATION OF THE CHILD SEEN AT THE OUT-PATIENT DEPARTMENT (OPD)

CHE/CHW ID_____ GS clinician ID_____

Name of the Child _____ Child ID number _____

1. Sex M F 2. Age _____months

3. Wt_____.___ Kg

Check for general **DANGER SIGNS:**

4. Is the child able to drink or breast-feed? Y N
5. Is the child vomiting everything? Y N
6. Has the child had convulsions during this illness? Y N

7. Is the child abnormally sleepy, lethargic or unconscious? Y N
8. Has the child stopped breast feeding well? Y N
9. Does the child have fever? Y N

Check for the presence of the **Main Symptoms**:

10. Does the child have **cough or difficult breathing**? Y N ➜go to question 15.

If yes,

11. Ask the duration of cough. _____days
12. Check a 60 sec respiratory rate. _____ breaths per minute
13. Is there chest indrawing? Y N
14. Is there stridor? Y N

---

15. Does the child have **Diarrhoea**? Y N ➜go to question 22.

If yes,

16. Ask the duration of the diarrhoea. _____days

17. Ask if there is blood in the stool. Y N

Circle GS findings:

18. Check a skin pinch. Very slowly (>2seconds)
    Slowly
    Not slowly
19. Check thirst. Unable to drink or drinks poorly
    Thirsty
    Not thirsty (normal)
20. Look at the general condition. Lethargic or unconscious
    Restless or irritable
    Alert

21. Look for sunken eyes. Sunken
Not sunken

---

22. Does the child have a history of **fever**? Y N

23. Does the child feel hot? Y N

24. Record the child s temperature. _____.__C

If the child has a history of fever, or feels hot, or has an axillary temperature ≥ 37.5C continue to assess for fever, otherwise go to question 34.

25. Ask the duration of fever. _____days
26. Is there a stiff neck. Y N
27. Ask if the child has had measles in past 3 months. Y N
28. Does the child have a generalized rash? Y N
29. Does the child have red eyes? Y N
30. Is there pus in the eyes? Y N
31. Does the child have clouding of the cornea? Y N
32. Does the child have a running nose? Y N
33. Are there deep mouth sores? Y N

---

34. Record the child s **GS classifications**. (Circle all responses)

a) Very severe disease

b) Severe pneumonia

c) Pneumonia

d) No pneumonia cough or cold

e) Bloody diarrhea

f) Persistent diarrhea

g)Severe dehydration

h)Some dehydration

i)No signs of dehydration

j)Complicated measles

k)Measles

l)Malaria

m)Others

Gold Standard Inpatient Form

Re- examination of the child seen at the INPATIENT WARD

GS clinician ID_____

Date_____/_____/_____
day month year

1. Inpatient ID No._____ (from the patient's bed)

Advise the CHE/W to assess classify and record identified treatment for the inpatient child, but not to provide counseling.

Re-examine the child and record your findings below:

2. Sex M F

3. Age _____months

4. Wt_____.___ Kg

Check for general **DANGER SIGNS:**

5. Is the child able to drink or breast-feed? Y N
6. Is the child vomiting everything? Y N
7. Has the child had convulsions during this illness? Y N

8. Is the child abnormally sleepy, lethargic or unconscious? Y N
9. Has the child stopped breast feeding well? Y N
10. Does the child have fever? Y N

Check for the presence of the **Main Symptoms**:

11. Does the child have **cough or difficult breathing**? Y N ➜go to question 16.

If yes,

12. Ask the duration of cough. _____days
13. Check a 60 sec respiratory rate. _____ breaths per minute
14. Is there chest indrawing? Y N
15. Is there stridor? Y N

---

16. Does the child have **Diarrhoea**? Y N ➜go to question 23.

If yes,

17. Ask the duration of the diarrhoea. _____days

18. Ask if there is blood in the stool. Y N

Circle GS findings:

19. Check a skin pinch. Very slowly (>2seconds)
Slowly
Not slowly

20. Check thirst. Unable to drink or drinks poorly
Thirsty
Not thirsty (normal)

21. Look at the general condition. Lethargic or unconscious
Restless or irritable
Alert

22. Look for sunken eyes. Sunken
Not sunken

---

23. Does the child have a history of **fever**? Y N

24. Does the child <u>feel</u> hot? Y N

25. Record the child s temperature. _____.__C

If the child has a history of fever,or feels hot, or has an axillary temperature <u>≥</u> 37.5C continue to assess for fever, otherwise go to question 35.

26. Ask the duration of fever. _____days
27. Is there a stiff neck. Y N
28. Ask if the child has had measles in past 3 months. Y N

29. Does the child have a generalized rash? Y N

30. Does the child have red eyes? Y N
31. Is there pus in the eyes? Y N
32. Does the child have clouding of the cornea? Y N

33. Does the child have a running nose? Y N
34. Are there deep mouth sores? Y N

---

35. Record the child s **GS classifications**. (Circle all responses)

a) Very severe disease

b) Severe pneumonia
c) Pneumonia
d) No pneumonia cough or cold

e) Bloody diarrhea
f) Persistent diarrhea
g)Severe dehydration
h)Some dehydration
i)No signs of dehydration

j)Complicated measles
k)Measles

l)Malaria
m)Others

Appendix II: Timeline of key activities

Activity	Dates	Responsibility
Development of protocol, sampling, questionnaires, data entry screens	October, 1999	Manjrekar, Osamba, Washington
Review of CMCI algorithm with CBAs/ FHSs, finalization of data collection instruments	November 1- 5, 1999	Osamba, Sabenzia
Pre-test and evaluation of CBAs at Siaya District Hospital	November 8-10, 1999	Osamba, Manjrekar
Concordance testing and identification of Gold Standards (GSs)Training of observers, finalization of questionnaires and data entry screens	November 11,12, 1999	Osamba, Manjrekar
Evaluation of CHWs at Siaya District Hospital	November 15-26, 1999	Osamba, Manjrekar, FHSs, CHEs
Data entry/ cleaning	November 26- December 7,1999	Manjrekar, Washington
Data analysis	December, 1999	Manjrekar

Appendix – III: Results

Table 1 Sensitivity (CHW identifies finding when finding is present) and specificity (CHW rules out finding when finding is not present) of CHW assessment findings compared to gold standard (GS) clinician-s findings when examining sick children, before and after refresher training

GS Assessment	Sensitivity (%)		Specificity (%)	
	Before refresher training	8-12 months after refresher training	Before refresher training	8-12 months after refresher training
Child has any danger sign	32/43 (74)	31/42 (74)	87/157 (55)	151/174 (87)
Child unable to drink	6/19 (32)	3/3 (100)	145/181 (80)	191/213 (90)
Child vomits everything	6/12 (50)	1/5 (20)	145/188 (77)	184/211 (87)
Convulsions during this illness	12/13 (92)	26/35 (74)	162/186 (87)	175/181 (97)
Child is lethargic	4/9 (44)	2/4 (50)	156/191 (82)	198/212 (93)
Child has cough or difficult breathing	163/178 (92)	148/176 (84)	18/21 (86)	30/40 (75)
Child has fast RR	60/87 (69)	70/113 (62)	56/92 (61)	55/63 (87)
Child has chest in drawing	78/87 (90)	7/37 (19)	67/91 (74)	12/61 (20)
Child has diarrhea	39/59 (66)	45/65 (69)	65/138 (47)	135/151 (89)
Child has bloody stool	5/9 (55)	1/9 (11)	49/52 (94)	55/56 (98)
Skin pinch is slow	1/5 (20)	2/8 (25)	46/55 (84)	51/57 (89)
Child drinks thirstily, eagerly, poorly, or unable to drink	3/6 (50)	4/15 (27)	45/54 (83)	43/55 (78)
Child is irritable or restless	2/4 (50)	0/5 (0)	48/56 (86)	56/60 (93)
Child has fever or history of fever	129/175 (74)	154/192 (80)	21/25 (84)	21/24 (88)
Child has measles or history of measles	1/2 (0)	1/1 (100)	153/174 (88)	105/107 (98)

Table 2. Sensitivity of CHW classification compared to a gold standard classification before and after refresher training

GS Classification	Before refresher training	8-12 months after refresher training
Very severe disease	28/44 (64)	27/42 (64)
Severe pneumonia	11/37 (30)	5/29 (17)
Pneumonia	17/51 (33)	36/66 (55)
No pneumonia, cough or cold	11/55 (20)	24/52 (46)
Severe dehydration	No cases	No cases
Some dehydration	3/7 (43)	4/16 (25)
Bloody diarrhea	No cases	2/7 (29)
Persistent diarrhea	No cases	No cases
No dehydration	5/45 (11)	21/40 (53)
Malaria	56/132 (42)	103/153 (67)
Measles	0/1 (0)	1/1 (100)

Table 3. CHWs ability to correctly classify a child according to the CHWs' assessment findings, before and after refresher training

CHW Classification	Before refresher training	8-12 months after refresher training
Very severe disease	71/103 (69)	45/56 (80)
Severe pneumonia	10/13 (77)	8/10 (80)
Pneumonia	19/25 (76)	50/59 (85)
No pneumonia, cough or cold	24/43 (56)	35/50 (70)
Severe dehydration	No cases	No cases
Some dehydration	2/3 (67)	6/9 (67)
Bloody diarrhea	No cases	No cases
Persistent diarrhea	No cases	No cases
No dehydration	4/21 (19)	18/33 (55)
Malaria	37/56 (66)	100/112 (89)
Measles	3/4 (75)	1/2 (50)

Table 4. Correct treatment given by CHWs according to the GS classification (Correct treatment defined as correct drug identified by the CHW)

GS Classification	Before refresher training		8-12 months after refresher training	
	Treatment	Referral*	Treatment	Referral*
Very severe disease	30/46 (65)	8/17 (47)	32/42 (76)	2/3 (67)
Severe pneumonia	33/38 (87)	5/6 (83)	22/29 (76)	0/12 (0)
Pneumonia	32/51 (63)	NA	42/66 (64)	NA
Severe dehydration	No cases	No cases	No cases	No cases
Some dehydration	5/7 (1)	1/2 (50)	13/16 (81)	1/4 (25)
Bloody diarrhea	7/8 (88)	7/8 (88)	3/7 (43)	1/5 (20)
Persistent diarrhea	0/1 (0)	NA	No cases	No cases
No dehydration	20/45 (44)	NA	22/40 (55)	
Malaria	60/132 (45)	NA	94/153 (61)	NA
Measles	1/5 (20)	0/5 (0)	1/1 (100)	0/1 (0)
All severe diseases	62/80 (78)	12/22 (55)	54/71 (76)	2/15 (13)
All moderate diseases	86/133 (48)	NA	100/153 (65)	NA

*Results based on children assessed in the outpatient department only

Table 5. CHWs' ability to correctly treat sick children according to CHWs own classification, before and after refresher training

CHW Classification	Before refresher training		8-12 months after refresher training	
	Treatment	Referred*	Treatment	Referred*
Very severe disease	56/77 (73)	25/39 (64)	36/47 (77)	5/7 (71)
Severe pneumonia	28/28 (100)	4/8 (50)	11/14 (79)	1/3 (33)
Pneumonia	37/43(86)	NA	59/63 (94)	NA
Severe dehydration	No cases	No cases	No cases	No cases
Some dehydration	8/15 (53)	4/10 (40)	0/3 (0)	0/2 (0)
Bloody diarrhea	7/8 (88)	7/7 (100)	1/1 (100)	1/1 (100)
Persistent diarrhea	No cases	No cases	No cases	No cases
No dehydration	8/10 (80)	NA	13/18 (75)	NA
Malaria	65/66 (99)	NA	114/ 116 (99)	NA
Measles /complicated measles	8/10 (80)	0/4 (0)	4/5 (80)	0/3 (0)

*Results based on children assessed in the outpatient department only

Table 6. Proportion of caretakers receiving the required counseling messages, according to Gold standard classification, before and after refresher training (based on counseling provided to caretakers of sick children seen in the outpatient department)

Messages	Before refresher training	8-12 months after refresher training
General home care messages given to all sick children without severe illness	**N=83**	**N=103**
Increase home based fluids	53	68
Increase frequency of breastfeeds or feeds	46	82
Return for follow-up the next day	31	51
Return if the child gets sicker	31	74
Counseling messages given to children with pneumonia	**N=30**	**N=33**
Give Septrin twice	37	46
Give Septrin for 5 days	27	49
Return for follow-up the next day	23	52
Return if the child gets sicker	27	82
Counseling messages given to children with no pneumonia cough or cold	**N=38**	**37**
Return immediately if the child develops difficult breathing	21	27
Return immediately if the child develops severe chest indrawing	18	11
Counseling messages given to children with no dehydration	**N=32**	**27**
Give ORS after each loose stool	47	63
Increase home based fluids	66	74
Increase frequency of breastfeeds or feeds	59	96
Counseling messages given to children with malaria	**N=79**	**N=97**
Increase home based fluids	52	69
Increase frequency of breastfeeds or feeds	46	84
Return for follow-up the next day	30	51
Return if the child gets sicker	29	71
Give paracetamol 3 times per day	51	74
Give paracetamol for 2 days	46	74

Table 7. Proportion of caretakers receiving the required counseling messages, according to CHWs' classification, before and after refresher training (based on counseling provided to caretakers of sick children seen in the outpatient department)

Messages	Before refresher training	8-12 months after refresher training
General home care messages given to all sick children without severe illness	**N=61**	**N=100**
Increase home based fluids	44	70
Increase frequency of breastfeeds or feeds	51	84
Return for follow-up the next day	38	53
Return if the child gets sicker	36	72
Counseling messages given to children with pneumonia	**N=22**	**N=30**
Give Septrin twice	77	83
Give Septrin for 5 days	55	87
Return for follow-up the next day	23	52
Return if the child gets sicker	36	87
Counseling messages given to children with no pneumonia cough or cold	**N=18**	**33**
Return immediately if the child develops difficult breathing	28	42
Return immediately if the child develops severe chest indrawing	28	30
Counseling messages given to children with no dehydration	N=7	N=18
Give ORS after each loose stool	86	72
Increase home based fluids	100	72
Increase frequency of breastfeeds or feeds	86	94
Counseling messages given to children with malaria	**N=44**	**N=72**
Increase home based fluids	50	72
Increase frequency of breastfeeds or feeds	48	85
Return for follow-up the next day	34	53
Return if the child gets sicker	34	71
Give paracetamol 3 times per day	66	83
Give paracetamol for 2 days	59	83

Table 8: Correct classifications made by CHWs in the community setting, according to their own assessment findings (Clinical register data)

CHW Classification	February 1998 (6-12 months after initial training N=273)	October 1998 (Immediately before refresher training N=531)	November 1998 to April 1999 (Immediately after refresher training N=434)	October 1999 (8-12 months after refresher training n=414)	Total (after refresher training) N=849
Very severe disease	17/32 (53)	48/86 (53)	23/40 (56)	10/25 (40)	33/65 (51)
Severe pneumonia	7/11 (64)	18/27 (67)	5/9 (56)	10/18 (56)	15/27 (56)
Pneumonia	37/43 (86)	73/85 (86)	74/79 (94)	55/60 (92)	129/139 (93)
No pneumonia, cough or cold	6/57 (11)	23/110 (21)	25/77 (33)	27/64 (42)	52/141 (37)
Bloody diarrhea	No cases	0/3 (0)	0/1 (0)	0/1 (0)	7/8 (88)
Some dehydration	0/2 (0)	0/11 (0)	7/11 (64)	2/5 (40)	9/16 (56)
No dehydration	8/25 (32)	36/72 (50)	43/80 (54)	36/68 (53)	79/148 (53)
Measles	2/4 (50)	No cases	1/2 (50)	2/3 (67)	3/5 (60)
Malaria	88/130 (68)	219/277 (79)	254/300 (85)	254/287 (89)	508/587 (87)

Table 9: Correct treatment given by CHWs in the community setting according to their own classification (correct treatment is defined as identifying the correct drug)

CHW Classification	February 1998 (6-12 months after initial training N=273)	October 1998 (Immediately before refresher training N=531)	November 1998 to April 1999 (Immediately after refresher training N=434)	October 1999 (8-12 months after refresher training n=414)	Total (after refresher training) N=849
Very severe disease	18/23 (78)	39/58 (67)	15/32 (47)	9/12 (75)	24/44 (55)
Severe pneumonia	8/9 (89)	24/25 (96)	9/10 (90)	16/16 (100)	25/26 (96)
Pneumonia	56/69 (81)	131/136 (96)	97/101 (96)	79/82 (96)	176/183 (96)
Bloody diarrhea	No cases	0/3	7/8 (88)	4/4 (100)	11/12 (92)
Some dehydration	0/1 (0)	1/1 (100)	12/12 (100)	1/3 (33)	13/15 (87)
No dehydration	8/13 (62)	41/44 (93)	46/51 (90)	37/41 (90)	83/92 (90)
Measles/ Complicated measles	No cases	6/7 (86)	0/8 (0)	0/8 (0)	0/16 (0)
Malaria	95/111 (86)	266/278 (96)	274/276 (99)	282/284 (99)	556/560 (99)

Appendix IV: Quarterly Supervision Plan

Name of community based advisor _____ Name of Sublocation _____

Name of CHWs	Month		Month		Month	
	Planned	Actual	Planned	Actual	Planned	Actual
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
K						
L						
M						
N						

Instructions: **To be used by CBAs to plan and conduct supervision of CHWs in their sublocations**
Record date of planned and actual supervisory visits
When supervision is at a health facility, record HF next to the date
Submit report to M& E officer at the end of each quarter

Annex B

“Chewing the bag” and Other Constraints to Creating Sustainability in the CARE CICSS-II Project Siaya, Kenya

A Preliminary Report
presented to CARE-Siaya on August 4, 2000

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Introduction

The Community Initiatives on Child Survival in Siaya, Kenya project began in 1996 with the goal of reducing the high infant mortality and under-five mortality rate in this Western district of Kenya which was nearly double the national average at the start of the project; 130 and 210 per 1000 live births respectively. The project was to specifically be conducted in two divisions of Siaya District, Nyanza Province which are further broken down into 40 sub-locations made up of approximately eight villages each. Though accounting for nearly 80% of the modern health care in the district, the government has not been successful at providing quality health care for the people of Siaya in regards to supply and access to quality care and drugs. Because these goals have been so elusive in the past, the government clinics are not highly regarded and poorly utilized (Ref: CARE-Kenya CICSS-I Detailed Implementation Plan).

The design of this project was to address these stumbling blocks to quality, accessible and affordable care. To achieve these goals, the original project set out to implement the WHO/UNICEF Management of Childhood Illnesses approach (MCI) via a cadre of community health workers (CHWs) supervised by village health committees (VHCs). The CHWs were trained to not only provide basic diagnoses and treatments for diseases that kill children under 5 but also to encourage mothers to follow-through on immunizations for their children as well as themselves. In cases that they could not handle themselves, the CHWs were trained to provide referrals to area hospitals. In addition to utilizing MCI at the community level—originally MCI was an approach developed to use at the health facility level—the project aimed to utilize the Bamako Initiative, an approach developed in West Africa to provide access to essential drugs at an affordable cost and bring the goals of Alma Ata closer to the people for which primary health care was designed. The Bamako Initiative was to address the sustainability goal of CICSS. Each of the 40 sub-locations was to receive an initial supply of drugs for free to start a community-based pharmacy. The profits from the sale of these drugs, which would subsequently be purchased at an affordable price by a locally-based NGO supporting the concept of the BI, were to be put back into a revolving drug fund that would grow over the course of four years and enable the communities to carry on with providing essential drugs for the treatment of the four major illnesses that routinely kill children in Siaya even after CARE was no longer involved in Siaya: diarrhea, malaria, pneumonia and measles.

Recognizing that it could not meet all of its goals in four years, the Community Initiatives on Child Survival in Siaya, Kenya project entered its second four-year period at the end of 1999 with a four-year extension grant from USAID. The goal of the second phase was "to continue to create and strengthen structures at the community level to manage and deliver quality health services targeting the major causes of under-five mortality and to promote key knowledge, care seeking and behavior changes in the project divisions" (CARE CICSS-II Detailed Implementation Plan).

Though there was a period of only five months between the release of the final evaluation and the DIP for the second phase of CICSS, the two documents were not in agreement regarding the issue around CHWs failing to continue in their roles as volunteer community health workers. The final evaluation, dated October 31, 1999 noted that while some CHWs had dropped out, that was to be expected and it did not seem that this was an issue truly threatening sustainability (Ref:

CARE CICSS-I Final Evaluation). However, the new DIP for phase two, submitted to USAID on March 31, 2000 remarked that "the CHWs and to a lesser extent SHC [former VHC] lack sufficient motivation mechanisms to maintain the high levels of activities required to bring about significant reductions in child mortality (human and financial)" and that "the financial solvency and sustainability of many of the CHW revolving drug funds and several BI pharmacy drug funds is in doubt (human and financial" (Ref: CARE CICSS-II Detailed Implementation Plan). These CHWs were originally trained by CARE to do a two-fold job of providing preventive and curative care within their communities but all of the work that they did was to be voluntary unless the communities themselves came up with a way to compensate the CHWs.

The revolving drug fund, as mentioned before, was implemented in this project with the goal of creating long-term sustainability. CARE also deliberately designed the CICSS project with the intention that these CHWs and VHC members were to serve as volunteers in carrying out their respective roles. CARE made it clear from the beginning that no one at the community level, outside of the CARE-chosen and-posted Community-Based Advisors, would be compensated for their work by CARE. The idea behind this decision was clear—there was nothing sustainable about paying community health workers out of money from a grant that would only last for four years to a maximum of eight years even if the grant was renewed.

The original detailed implementation plan (DIP) foresaw a scenario where there may be unsecured borrowing against the drug fund but predicted that this might take place as a result of VHC members or community leaders "dipping into the pot," not so much the CHWs (Ref: CARE CICSS-I Detailed Implementation Plan). While CARE anticipated this threat to the sustainability of the project, it did not foresee as clearly the dire financial state that the majority of BIs would face at the end of the start of the second phase. It was not simply a case of CHWs losing the motivation to serve as volunteers to provide life-saving services in their communities thus reversing the positive trends in reducing infant and under-five mortality. It was simply the case that the dropouts would then put a strain on the network of CHWs and force the remaining ones to cover wider areas with potentially less emphasis on providing quality care. Instead, it came to the attention of CARE-Siaya in late 1999 that most of the CHWs and some of the VHC members as well, both current and inactive, were heavily indebted to their BIs, so much so that many would face bankruptcy within a year if policies of accountability and transparency were not fully utilized and enforced.

In essence, according to the interviews with the VHCs and CHWs, it seems that the debts had been incurred in one of two ways. In general, up until very recently, the CHWs would receive drugs from the BI to stock their drug kits; ideally, they were expected to bring money to pay for the drugs before stocking their drug kits but in reality, this did not happen consistently or all that often. Very often instead, the CHW came to the BI empty-handed but with the intention to continue to carry out her work in her village. In general, she came without money because she had either used what little money she had collected within the community to provide for herself and her family. There were other scenarios mentioned where in many cases, because of the pervasive level of poverty within Siaya, the CHW had been unable to collect money from the mothers and caretakers for the drugs that she provided them during treatment. One VHC member captured the situation poignantly:

As the chairman, I have a problem with my CHWs. They say 'chairman, you have put us in a trap. You expect us to hold money when we don't have any money…holding money without having anything to eat at home' (comment from VHC, Gangu).

In one of the communities that we visited, the local term for this misuse of the drug fund was called "nyamo bag" or "muodo bag", loosely defined as "chewing or crushing the drug bag."

The technical advisor to the CICSS project, James Setzer, also a professor at the Emory University Rollins School of Public Health shared with his Health, Culture and Communities class in the winter of 2000 the problems facing this project. Interested in aiding the project in its quest to discover long-term solutions to the overall sustainability of the project, the researcher, a student intern from Emory University, expressed an interest in spending the summer trying to first understand the roots of the problem and then facilitate solutions for it through a series of focus group discussions held within several of the sub-locations served by the project. The researcher had several questions that she was interested in exploring. She wanted to find out what the true issues were causing CHWs to drop out, how providing incentives or compensation might affect CHW motivational levels and to discover, without the financial input of CARE, what solutions all three community stakeholders (CHWs, VHCs, community members) might each offer as a way to address this issue if they even labelled it as an "issue" at all. The research began in earnest the second week of June and continued through the first part of August 2000.

Methodology

Because the project as well as the researcher were interested in discovering and documenting the "why?", "how?" and "where do we go from here?" aspect of the very specific topic of CHW compensation as well as "the bigger picture" topic of ultimately finding ways to sustain the CICSS project, a qualitative research design was deemed the best way to solicit the kinds of responses that might provide valuable information to CARE-Siaya. Moreover, in keeping with the original intentions of the project, it seemed only appropriate that to solve some of the problems facing the project, the solutions should not come from artificially-constructed discussions in the classrooms of Emory University in Atlanta, Georgia or even the CARE offices in Siaya—the solutions should be generated within the communities themselves with the belief that those most familiar with the problem are ultimately the ones who can come up with long-lasting solutions appropriate to their specific situations. As anyone familiar with community health will acknowledge, it is important to always keep in mind the following principle: the communities that we enter to "develop" are already "jumping rope" when we arrive.

There are 24 sub-locations in which the CICSS project is currently operating. Two of these sub-locations have recently come on-board with the CHWs and VHCs slated to receive training in the fall of 2000. Therefore, out of the 22 in which the project is fully underway, six of them were chosen in which to conduct a series of three focus group discussions (FGDs)—one with the VHC members, one with the CHWs and one with mothers/caretakers who have received the services of the CHWs in the past for a total of 18 focus groups (21 including the pre-test FGD). Because the nature of qualitative research demands that samples are deliberately chosen to answer a specific

research question, it was debated initially whether or not a criteria should be developed for choosing which sub-locations the research team would visit. However after some discussion with several full-time staff at CARE who were familiar with the situations in each of these sub-locations, it was decided that the issue of compensating CHWs as well as the issue of the BIs being heavily indebted, cut across all of the sub-locations. In essence, while some sub-locations may have been stronger in some areas than others, the issues of compensation and indebtedness were easily found in all of them. Therefore, because of this fact, the researcher decided to take a random sample of six sub-locations. The sub-locations chosen for the FGDs were as follows: Bar Olengo (pre-test), Sumba, Gangu, Mur Malanga, Ojwando "A", Obambo and Pap Oriang.

Three sets of question guides were developed for each target group of participants[1]. The questions were developed in the native language of the researcher and then with the help of one CARE staff member and a person hired to serve as the moderator, the questions were then translated into Luo, the native language of the participants. Once the two versions of each question guide were developed, they were submitted to the training manager of the CICSS project to review for accuracy before conducting the pre-test.

The researcher decided to interview these three different groups of people within each of the communities so that they data could be triangulated and compared across groups of participants concerning the same issue. The questions were phrased in order to solicit answers from each of them about the same situation that they faced collectively in their communities. To be expected, some of the questions were necessarily the same, reflecting only changes in the perspective from which they were asked. However, some of the questions posed were only asked to one or two groups—for instance, in asking the mothers/caretakers some very specific questions about CARE and the services it provides, the purpose was not to discover the true answers to these questions as much as discovering whether or not they could answer them, reflecting to the researcher whether or not CARE has truly been successful in conveying its mission at the most fundamental level of its projects—the community level.

As is with the nature of qualitative research, some questions were modified and/or added as the research progressed if topics arose that shed new light on the situation. All of these modifications have been noted and explained in brief within the text of the question guides.

In the field, the research team consisted of three persons, none of whom was directly associated with the project. It was first considered, due to budgetary constraints that the Field Health Coordinators (FHC), supervisors to the Community-Based Advisors (CBA), and the CBAs serve in the roles of moderator and recorder respectively. However, it was decided that using people within the project would in effect, potentially affect the data. It was highly conceivable that participants might not feel comfortable in replying earnestly with CARE staff on hand and it was also feared that the staff members, perhaps consciously or unconsciously, might add their own perceptions into the notes taken during each FGD and or in the subsequent translations of the FGDs. Therefore, in order to insure the validity of the data, two people were hired “from the outside,” both of whom had prior experience in conducting FGDs to serve as the moderator and recorder. The researcher herself, an American student with no ability in Luo, served as the observer and made sure that the audio-recorder was working properly and recording all of the

[1] Please see attached FGD question guides in both English and Luo versions.

discussions. The recorder's written notes were intended to serve only as a back-up to the audio-tapes in the event of an audio-recording mishap.

During the three weeks that it took to conduct the FGDs, the team was engaged in its "off days" with translating all of the comments from the focus groups into English for analysis by the researcher. While conducting the FGDs, the researcher noticed that several of the replies began with a regretful tone, "if we had only…" Because the researcher wanted to see if some of these issues could be addressed before they in effect, became problems, the researcher met with one of the CBAs of the new sub-locations to arrange to hold a participatory activity in Nyajuok where problem-posing would be the main objective of the activity. The CBA asked that five VHC members, five CHWs and six mothers/caretakers come together to join in a discussion about the project. The activity was based on an activity in the Training for Transformation workbook II called "the fishbowl." The participants were seated in a large circle with a circle of four chairs arranged in the middle of the larger outside circle. After introductions by everyone and after the VHCs and CHWs were asked to describe the project as they understand it to the mothers/caretakers who were present, three questions were posed: What do you see as your role in the project? What do you think are the main problems facing the project as it stands now? What ideas do you have that could possibly address these "potential problems"? Everyone was asked to give their opinions and the way in which they were solicited was to have everyone spend a few minutes in the inner circle. The inner circle was the talking circle with the outside circle serving as the listening circle. If participants had something to say, they could only do so while seated in the middle. Each question was addressed by three different groups, which made for three mini-discussions on each question. Each of the groups were mixed so that it contained at least one VHC, one CHW and one mother/caretaker. The discussion was audio-taped and translated and the results have been compiled along with the other results that will be given to the communities in the form of a worksheet. It is hoped that this worksheet will visually display in a user-friendly way, all of the ideas that were generated in each of the communities visited, the possible problems that these ideas may cause and finally, the ways in which these problems could be addressed so that the original solution proposed might be considered a viable option for the communities to implement in compensating their CHWs.

Once the translations were completed, the researcher arranged to conduct one more FGD with ten of the CBAs[2] (there are currently 15 CBAs). Because the CBAs speak English, this FGD was conducted in English by the researcher with a recorder present. An individual interview with a representative from the Ministry of Health familiar with the aims of the project and involved with the collaboration among CARE, the MOH and the community was conducted. As of the writing of this report, it is hoped that the researcher may also be able to conduct an interview with an historical anthropologist who currently lives in Siaya who might be able to give some cultural and anthropological insight into what kinds of issues may affect the sustainability of this project as they pertain specifically to the Luo population[3].

[2] This particular FGD was conducted in English—please see attached question guide.

[3] The analysis of these last three interviews has not been included in this preliminary report but will be used in the thesis that is generated out of this research. A copy of this paper will be supplied to the project in May of 2001.

Results

It was clear from the 21 focus groups that we conducted in the sub-locations that there were several themes that came through strongly. First of all, overwhelmingly, all groups agreed that the communities are for the most part, very happy with the project interventions. To read through the transcripts, one finds testimonial after testimonial about the impact the project has had in reducing infant morbidity and mortality in the communities touched by the project. There is no disputing that the CHWs are doing good work as it relates to their diagnoses, treatments and teachings about preventive care. *The CHW has helped me especially when I was expecting. She was with me the whole time, telling me what to do and which drugs to take. Secondly, after giving birth, she still came to visit to tell me how to take care of my child* (comment from mother, Ojwando "A").

In every sub-location, the VHCs and mothers commented how appreciative and pleased they were that the CHWs would treat at night and that the treatment was so close to home. Many of the participants seemed to see that as the best attribute of the CHWs and the project at-large. When asked what they would change about the project as it stands now, two more themes came through—all of the groups expressed interest in having the CHWs receive additional training to treat not only children but adults as well and in every sub-location, participants complained that the CHWs were not trained nor do they have the provisions to give injectable drugs which they would like to have. Another complaint evident from several of the mother's FGDs was that they wanted liquid medicines to be made available for small children who cannot take tablets.

It was interesting to note according to the opinions of the VHC members and CHWs, that they do not feel trusted by their communities towards their activities. In every location, they expressed that the community perceives that they have misused their authority and have turned this project into a for-profit venture to benefit only themselves. All of them said that community members believe that the drugs were provided to the communities for free from the beginning (and some believe even until now) and that they can't understand why they should have to pay for them. Moreover, the CHWs and VHCs also said that many community members believe that they are being compensated for their work. In a few of the communities, they have made some strides in convincing them of the nature of the revolving drug fund but the majority of the VHCs and CHWs visited still see this misperception of the communities as a real problem that they deal with often.

- *They are happy with what we're doing but they still blame us for having to pay for drugs—they want them for free* (comment from CHW, Sumba).
- *When the project started, the community knew that everything was for free and they wondered why we were selling the drugs to them instead of giving them away* (comment from CHW, Gangu).
- *The community thinks that we're being compensated and when I tell them we're not, it brings on arguments that I don't want to have over and over* (comment from VHC, Ojwando "A").
- *They think that we are CARE staff yet they are the ones who chose us* (comment from VHC, Mur Malanga).
- *Those who don't agree with us say that CARE brought medicine for free but yet we are selling the drugs* (comment from CHW, Obambo).

In discovering these beliefs about the communities' perceptions on the part of the VHCs and CHWs, it was surprising how little of that negative perception came across from the mothers with whom the research team spoke. These ill feelings did not come up in the early FGDs so a question was added after finishing FGDs #4-6 in which the mothers/caretakers were asked whom they thought paid the CHWs. Though a few answered that they thought CARE was paying them, no negative vibe or attitude seemed to enshroud the answer. The belief that the CHWs and VHCs were cheating and/or lying to the community, the belief that came across so strongly from the VHCs and CHWs, in essence, did not arise when the mothers/caretakers were interviewed. Several things could explain this. First, the fact that the mothers were hand-picked by the CHWs and/or VHCs could explain why most of what they had to say was very positive, appreciative and supportive. These women have received the services of the CHWs and many of them commented on how close they were with their CHWs. If the CHW was given the task of finding some mothers to participate, it does not seem unreasonable to think that she would ask a mother/caretaker with whom she is familiar and one who might be willing to do this favor for her.

It seems in all likelihood that there might have been a selection bias present in regards to the mothers/caretakers. Unfortunately though, given the constraints of this study, this was the only feasible way for the research team to get a group of mothers/caretakers together for a discussion—the team had to rely on the CHWs to call the mothers/caretakers together on a specific date and the one prerequisite that they were given was to call only those mothers/caretakers who had received services from the CHW in the past. The researcher's rationale was that these mothers/caretakers would be the most able and appropriate to comment earnestly about whether or not they felt that CHWs should receive compensation, having experienced the "product" that the CHWs offer. It might have enhanced the research to have also spoken to mothers/caretakers who have never utilized the services of the CHWs to discover what their perceptions are; however, that was simply not feasible at this time, nor was it the true focus of this particular study. It is believed though by the researcher that these women might have exhibited, as well as any other more representative sample of the mothers/caretakers in the community, some of those negative, mistrustful attitudes that the VHCs and CHWs stated is so prevalent in their communities.

As presented in the introduction, there has been concern as to why the CHWs have been dropping out after having been chosen by their communities and trained by CARE. The question guide asked a two-part question to both the CHWs and VHCs about this drop-out issue for each role: why did certain people drop out and why do the rest continue on in their roles? Four major themes came out for the first question. Many CHWs, though they had been told that they would not be compensated by CARE, eventually dropped out because of this very issue. In some instances, the answers seemed to almost suggest that these CHWs who dropped really anticipated getting something eventually and when they finally realized that it wasn't forthcoming, they stopped performing their duties. *Most of the VHCs have left because initially they thought they could be compensated for the work they do yet this has not taken place. They basically said that they could not work without pay and so dropped out* (comment from VHC, Gangu). Another reason cited was that many of the husbands of the CHWs would not let their wives work for free and even though the women may want to work, their husbands prohibited them from doing so. Another main reason cited for dropping out was that when a CHW incurred a lot of debt that she

was no longer realistically able to pay back. Finally, laziness was given as yet another reason why some CHWs and VHC members are no longer working. *Those people who left—they left because they were lazy* (comment from CHW, Bar Olengo).

When asked why the rest chose to stay, several reasons kept being repeated. Most of the CHWs and VHCs felt that they owed it to their communities to continue because they had been chosen by them to fulfill this role. Others talked about how happy they were with their new skills and abilities to save children's lives; not only did this motivate them, many felt that they would feel guilty if children around them starting dying because they were no longer doing their jobs. *I still work because I was chosen by the community and trained by CARE so if I were to stop working, children would suffer because of me and I will have failed the community and CARE* (comment from CHW, Obambo). Others mentioned the confidence that they had derived from being made a CHW or VHC—this confidence and self-esteem based on their new-found skills, encourages a lot of them to continue their work. Others simply like the job, the people they get to meet and many CHWs replied at how happy they were to be able to treat their own children as well as the children in the community.

In order to gauge whether or not CHWs felt overwhelmed by their "official" duties in contrast to their personal household duties that might then predict whether or not a CHW stays or drops out, a question was asked about how they feel about the time they spend fulfilling their duties. No clear message came through in the interviews. They were split with some women claiming that they had enough time to get everything done and others claiming that their work as a CHW did suffer because they were not getting paid and had to look for some form of income elsewhere. It became clear that each individual had his/her own perception towards the amount of time it takes to complete the job with some finding just enough time in every day to complete their duties and other CHWs complaining that their work as a CHW conflicted with other pressing commitments. In hindsight, it might have been good to also ask them how much time or how many children and/or households they feel they should visit in order to do a thorough job as a CHW. As it stands now, it is hard to know if those who are content with the amount of work they are doing are also the same ones who only treat three children a month, for instance. And for those who complain about the time commitment, perhaps they should have been pressed with a follow-up question about whether or not their feelings towards the time commitment would cause them to consider dropping out. If phrased properly so as not to lead the answer, this might have been proved to have been another telling question to have asked.

One other important theme that came through that may influence whether or not CHWs drop out, was basically the idea that CHWs were not so happy with their roles as “bill collectors.” The VHCs noted this issue on several occasions as impediments to CHW motivational levels and the CHWs themselves described not only how much time in a day that activity consumed but also the fact that when they go to some of the homesteads, if the mother has not yet paid her CHW for past services, it creates some tension between the two.

- *The CHWS treat the mothers when their kids are sick and mothers just keep telling them to come the next day for money or they don’t pay at all. It discourages the CHWs.* (comment from VHC, Sumba).
- *When mothers don’t pay for the drugs straightaway and continue to delay payments, it creates a weird dynamic between the mothers and the CHW. When the mother sees the CHW*

coming, even if she's coming into the compound to treat other mother's sick children or just to teach promotive care, the indebted mother thinks that she has come to collect money—this can make the CHW so uncomfortable that she doesn't feel that she can even enter the compound and treat the other children. (comment from VHC, Gangu).

- *When you go to collect money for the drugs, they tell you to come the next day, next week, but they never have the money to pay. That discourages the CHWs who stop going to collect.* (comment from VHC, Ojwando "A")

As a sideline to the compensation issue and mentioned previously in the methodology section, the mothers were asked some very general questions about the role of CARE in their communities in order to get a feel for some basic issues facing sustainability[4]. Though there was some discussion initially if it was important whether or not a mother/caretaker can describe the mission of CARE in their communities, the researcher felt that if these women could not answer the question, then how effective could the project say CARE had been in conveying its message at the most basic level at which it operates? Most women answered that CARE was there to reduce disease and death in their children but very few knew how long CARE had been in their communities and even more importantly, only one mother was able to correctly answer the year when CARE planned to pull out of the community.

- *I think that they are here to stay because if they were planning to leave, they could have left long ago* (comment from mother, Pap Oriang).
- *They will be here for six years or more* (comment from mother, Obambo).
- *I think they will stay for ten years* (comment from mother, Ojwando "A").
- *They will stay as long as they have work to do which could take five years or more* (comment form mother, Mur Malanga).

The above themes are the ones that the researcher identified from the initial analysis of the data collected. There is a very good chance that after a much more thorough perusal of the data, many more themes and sub-themes will be identified as well.

As mentioned briefly before, the questions asked to three groups involved several questions that were meant to solicit ideas for compensating the CHWs that could be provided by the communities. Though it would be possible to identify several themes in the solutions and ideas that were proposed, the researcher made a conscious decision not to analyze that portion of the discussions in such a manner. These issues will be addressed in the thesis to follow but for the benefit of the project, it seemed more important that all of the possible solutions be shared with the project in an effort to begin to solve the CHW motivational/compensation issue. Moreover, the researcher wanted to create a document that the communities could use as well. On the last day of data collection in Pap Oriang, a mother commented through the moderator to the researcher, that every few months, someone comes into her communities, asks a bunch of questions about the CHW project but that she never hears the results of what they found or the decisions that they made based on the answers that the mothers give, even though they claim that the mothers' opinions are highly valuable. This comment was very telling and the researcher wanted to make sure that not only the project staff receive some feedback on the research done but the community members as well who are as equally important stakeholders in this project as the project staff. Therefore, you will see attached to this document, the worksheet that was

[4] These particular questions are labeled as Q1 a-f, in the mothers/caretakers question guide.

prepared for the communities—there is an English and Luo version of it[5]. The concept behind the worksheet was to let what was discovered and offered within the communities serve as a catalyst for an on-going dialogue of these critical issues facing the project. This "solution bank" worksheet is merely a beginning and it is hoped that the CBAs and FHCs, use this worksheet to begin a process whereby the community members they work with move beyond the apathy and griping about their situations to seeking real solutions to the problems they face. This worksheet comes out of discussions in eight different communities—the seven sub-locations visited for the FGDs and Nyajuok, the new sub-location visited for the participatory activity—therefore, imagine what might be discovered if these conversations are held in ALL of the sub-locations! The Luo version of the worksheet will be provided to EACH sub-location—the CBAs are encouraged to go over it with all relevant stakeholders—not just the VHCs and CHWs. There is also a tentative plan to audiotape the findings and provide a copy of the tape to each sub-location in order to add yet another method for sharing the data within the community.

DISCUSSION

In discussing the experiences and findings of the research, the researcher wants to give some disclaimer to the following comments. This report is a preliminary analysis and therefore, there may very well be some incorrect perceptions or opinions that upon further investigation and reflection may need to be modified. It is hoped that this report will also serve two-way type of discussion and the researcher would greatly appreciate any feedback, especially if what is contained herein seems inaccurate or if an issue is misrepresented.

As the researcher has come to understand the project, it was originally billed as one with a focus on sustainability, facilitating a process whereby communities could continue to carry out the life-saving interventions that were introduced by CARE in 1995. The communities that the research team visited were all asked questions pertaining to this issue of sustainability; if they were not asked outright about what they would do in the year 2003 when CARE withdrew funding, they were asked to identify solutions to problems that the community had the capacity to solve without the aid of CARE. Though there was clearly a mixed message about whether or not those interviewed felt that the community "owned" the project, even in those communities where some people answered that "yes, the community members see the project as 'theirs,'" in these same communities, not one FGD could finish without some participant asking CARE for some assistance. Whether it was a request for a bicycle or money to start an income-generating activity or a request that even if CARE leaves, would it be possible to leave a CBA behind to work in the community, these comments reflected to the researcher a high level of dependency on part of the communities towards the "good graces of CARE." After five years of this project, it did not seem that the goal of empowering the communities involved in the project had yet to take place on a large scale.

In any qualitative study, the researcher is considered a tool and it is important for the researcher to acknowledge how he/she may affect the data. In the first few FGDs, the role of the "mzungu in their midst" was not clearly identified and the research team upon reflection, felt that her presence affected how people answered. Thinking that perhaps the white person was a donor or a CARE person from abroad, the participants asked for many things from CARE. Later, after the

[5] Please see attached English and Luo versions of the "solution bank" worksheet.

FGDs were concluded in Sumba, it was explained that the researcher was only a student and in subsequent FGDs, the researcher was clearly identified as someone not working with CARE, in hopes that the participants would not waste the opportunity to exchange ideas if they felt that they could solve their problems by simply asking for the "mzungu" for assistance. Though this clarification was made from lessons learned at the end of the first three FGDs, it is not exactly clear whether or not that explanation had any bearing on how the participants responded and therefore, it is expected that those who work everyday in the field within these communities will have a better ability to judge this level of dependence on CARE than will the research team. It seemed important though to bring this observation to light.

Another threat to sustainability according to the researcher was the fact that as identified in the results, the mothers/caretakers could not clearly state CARE's mission nor did they know when CARE was slated to leave their community. The researcher felt that if the communities served have little comprehension of the lifespan of the project, what emphasis then will these same people put on making the activities and interventions sustainable? If the mothers/caretakers or any community members for that matter, think that CARE will be there forever as some women stated, what then will motivate these community stakeholders to try to make the successes of the project last beyond the original project years? Ultimately, it seems for these women that there is no impending sense of finality, no rush to really own the project once CARE money is no longer propping it up. To these mothers/caretakers, as most of them understand the CICSS project now, it will always be just that-- a project--not a way of life. In the researcher's mind, this is an image that will continue to impede the goal of promoting community ownership and one that the project staff should consider revisiting if sustainability is the true outcome.

In the researcher's mind, it is not simply the fact that mothers/caretakers cannot identify the year that CARE will withdraw funding or that the VHCs/CHWs defer to CARE often when it comes to solving problems or asking for assistance. What struck the researcher as a true threat to sustainability is the fact that if you review the responses from the final evaluation of the CICSS-I which was conducted exactly one year ago, you will find that many of the issues identified then by the communities are the same ones that they are facing now. In a project with a four, even an eight-year lifespan, one year is a significant amount of time to allow to pass with the same obstacles remaining as obstructions hindering the creation a sound sustainable structure. The communities have spoken—several times; they have identified their problems. The question at hand to the researcher is what is being done to move beyond the complaints to finding solutions? When will a process be initiated to move from this point that seems to be one of stagnation?

It must be said that an incentive plan whereby the CHWs would receive 10% of their drug sales was begun last year in several of the communities. Before the researcher began conducting the FGDs, the project staff said that the plan was not working that well and the subsequent responses from the FGDs verified that information. Ten percent has simply proven not to be enough for the CHWs to be worth the effort in those communities that tried to use that particular plan. However, many of these communities stopped using it awhile ago and are again in limbo, waiting for another idea. The concern of the researcher then becomes two-fold: 1) why are the communities waiting for CARE to identify solutions? and 2) what is the delay on the part of CARE in proactively facilitating this process of seeking out new solutions utilizing the input of the community? These issues are not new issues—in fact, the motivational issue of CHWs was identified in the DIP, revisited in the mid-term evaluation and the problem is mirrored again in

the final evaluation. It seems that a dialogue about this issue, a dialogue that moves beyond identifying the problem to one that answers the harder question of "where do we go from here?" is of critical importance and long overdue.

The communities visited had a lot to say about their particular situations and even more to offer concerning what they felt was necessary to address this issue of compensating the CHWs. As mentioned in the worksheet, the idea that CARE, the communities, the VHCs/CHWs, the leadership in the sub-locations and the MOH should try to work together to solve these problems came through in almost every focus group leading the researcher to believe that communication is a weak area. It was encouraging to see how many people felt that solving these motivational/incentive problems was a task within their means. In fact, the overall tone from all of the focus groups was very positive that solving this compensation issue could be done. As it has been identified in other evaluations, community members are so happy that their children are no longer dying like they used to die. I have pages of testimonial transcriptions describing the good things that this project has provided for the communities in which it operates. Therefore, because of this high rate of acceptability and satisfaction with the interventions, the researcher like the communities, believes that the compensation issue is not an insurmountable issue. It simply needs an emphasis on communication (dispelling rumors that CHWs/VHCs are getting paid by CARE, for instance) and cooperation among all interested parties.

The project needs to realign itself with its original intentions to facilitate community empowerment and dealing with this compensation issue is the perfect chance to put that task to the test. It is an art to get people to move beyond simply complaining about their situations. However, with the belief that the communities have the capacity to solve their problems and a concerted effort to help them in that process now while the support and resources of CARE are still engaged, these same people will acquire that ability to facilitate their own empowerment long after CARE has left. In essence, the project staff should actively be working not only to complete their daily duties but also, the overall approach should be one in which they are actively trying "to work themselves out of job." This project has an end and that is a given—what can each of the project staff do now to make sure that when that time comes, their communities don't flounder in their absence? Children's lives are at stake now AND in the future. Where can we go from here?

Recommendations

- **In the new sub-locations, CARE should pay close attention to the advice of old sub-locations on what could have been done differently in the beginning to avoid certain problems.**
    - *The VHCs were to be the ones to advise the CHWs but for the last four years, it has been CARE doing that. They (the VHC members who dropped out) didn't see themselves as useful and felt neglected so they dropped out."*
    - *We were not trained to manage finances—if we had been, we wouldn't have done this or let this happen. Even though we are the "managers of finances," we are basically the blind leading the blind."*
    - *If we could have been taught financial management from the beginning and if we had some system of openness, there would not have been these problems. If there could have*

been a percentage for the CHWs set aside from the beginning, this issue of 'chewing the bag' would not have become a problem.

- *If CARE talks to the community instead of just us and explains to them that the project now belongs to them and that CARE is no longer involved, then the community will agree to buy the drugs.*
- *The first thing that CARE and the CHWs should do is to call a meeting and talk to the community about the compensation issue and about the fact that CARE will leave eventually so that both of these parties can give ideas about what can be done.*
- *I think that mothers who take their children to the hospital should be asked from which village they came as well as who is their CHW so that we can know if they first sought out treatment from the CHW. We have a lot of the same drugs as the hospital so they shouldn't have to go all that way since they can get the same treatment right here.*
- *Had this incentive plan been introduced in the beginning we could have had a good chance to make some money because disease rates were high back then. But now, the rates have been decreased so we don't sell as much medicine as before and the profit was too low to be worth anything. (talking about 10% incentive plan)*
- *To solve this problem, we thought as the VHC to start a business in our BI so that we could get something to give as a compensation to our CHWs. But the BI constitution did not allow us to operate another business inside the BI. We are only supposed to use the money we generate to restock drugs and nets. We wanted to do this but we were stopped because of this rule.*
- *The problem is that we brought a service that the community really wanted but we didn't stress enough the importance of paying for the drugs from the beginning so the community hasn't been so diligent in paying all along. As for the CHWs, if we could have come up with a way to pay them from the beginnning, there wouldn't have been this problem of debts.*
- *From the beginning, the CHWs should have been required to always pay cash in order to get drugs.*
- *I like this idea of payments-in-kind because I always have something in my house, even if not money.*
- *The problem with the cash-and-carry policy is that if you don't have the money, you won't go to the BI and that means you don't treat.*
- *We need to work on getting community members to see us as just 'nyamrerwas' instead of as doctors—it is not good to foster that gap by calling us doctors. We are just community members.*
- *We need to work with the community and local government more than we have in the past four years.*
- *If the CHWs could be given only a portion of what of what their bags hold now, then maybe they wouldn't have had so many people incur so many debts in the beginning. As it is now, it would be hard to collect from all of the people who haven't paid.*
- *The VHCs should make sure that the CHWs are selling the drugs at the right price so that they make sure that the mothers are not having difficulty buying the drugs.*
- *Because we press them so much to bring money to the BI, the CHWs find it more and more difficult to treat mothers who can't pay even though their child is very sick.*
- *The problem is when the CHWs were being taught these skills, they were told never to refuse treatment and so they went on that rationale and treated many kids whose mothers couldn't or didn't pay.*

- *Mothers should urge other mothers to go to the CHW first instead of going to traditional healers for treatment.*
- *You should simply talk to your CHW about your situation and make plans to pay when you can or you can always give something for collateral until you can come and pay.*
- *Wherever you find a health clinic, you find people who pay for both the drugs and services they receive—no questions asked. Why can't the community do the same thing when it comes to the CHWs? (comment from mother)*

- **CARE-Siaya should consider developing ways in which CBAs/FHCs in the field can measure and report levels of dependency or self-reliance in order to continually monitor whether or not these communities are on the road to sustainability. The indicators that should be monitored could be chosen by the communities themselves to reflect on their own empowerment process.**

- **CBAs should be proactive and begin to facilitate a process within the communities in which they work to address the issue of compensating the CHWs for their work. It is recommended that the CBAs use the "solution bank" worksheet developed as a starting point from which to jump-start this process of enabling and encouraging the communities to find long-lasting feasible solutions pertinent to their particular situations.**

- **CARE-Siaya should consider investing in Transformation for Health training for <u>all</u> salaried project staff or at the very least, consider purchasing the Training for Transformation handbook series for community health workers. It is an experiential training that utilizes problem-posing techniques and helps to develop active listening skills that enable people to move beyond apathy and stagnation towards action and empowerment. It is based on the idea that we all remember much better what we have discovered and said ourselves than what others have told us[6]. The techniques acquired can easily be transferred to the communities if utilized in earnest by the CBAs in their daily interactions with the communities.**

[6] Training for Transformation handbook book II, p. 10

August 4, 2000

Dear VHC members, CHWs and community members at large,

As some of you are aware, I have spent the summer here in Siaya doing research with the CARE CICSS project as part of an attachment from my university in the United States. I was fortunate to be able to visit several of your communities over the course of the summer to conduct focus group discussions with VHC members, CHWs and mothers/caretakers that have utilized the services of the CHWs in the past. I also visited Nyajuok, which is one of the new sub-locations that is just starting the project now in their community. For those of you whom I visited, you are aware of the topic that I was interested in researching so that this project could come closer to achieving the goal of sustainability. For those of you whom I did not meet, let me briefly introduce what I did in the sub-locations of Bar Olengo, Sumba, Gangu, Mur Malanga, Ojwando "A", Obambo, Pap Oriang and Nyajuok in June and July of 2000.

It had been brought to my attention that there had become a problem in most of the communities where the CICSS project is operating related to a high drop-out rate of CHWs as well as BIs that were facing financial crises due to the indebtedness of CHWs and some of the community members as well. In order to get an idea of the problem as well as to find some solutions to them, we went to the communities to ask questions and get suggestions on ways that these problems could be addressed within the communities and ultimately, without the aid of CARE since they will not be in Siaya forever. I am very thankful to all of you who gave of your time to be with us and share your opinions. A lot of good ideas were generated over the course of the 22 focus group discussions that we had and I am writing to share those with you today in hopes that all of the communities might benefit from knowing how other communities are facing similar problems with the CICSS project as it is operating now.

I have created a worksheet in which I have presented all ideas and solutions that were offered. ***This worksheet is meant to be a work in progress, not a final draft by any means.*** It is hoped that together in your communities, you will talk about these ideas and determine whether or not they could be feasible in your particular situations. You will also notice many gaps and spaces; these reflect questions that may still need answering as well as my hope to give you another opportunity to think about ideas that might be useful and to give those communities that I did not visit personally a chance to add to the "solution bank." I hope that this worksheet will be a starting point for discussion in your communities because in all of the communities I visited, everyone talked about a need for their communities, the CHWs, the VHCs, the village administration and the MOH to come together to find solutions to this issue of CHW compensation and the overall sustainability of the project as well. I have posed some questions in the last column of the worksheet to help in guiding your discussion about each of the proposed solutions so that you can determine whether or not they can really work in your respective communities.

I think what you are doing in communities is great and I wish you a lot of success in the future in making your project something that lasts for many years to come. As they say, working together, anything is possible. Thanks again for working with me and good luck!

Sincerely,

Kristie McComb

Worksheet on proposed solutions and ideas generated in FGDs on the ways in which the CHWs could be compensated for their work in the CICSS project, Siaya, Kenya

MONETARY COMPENSATION

Idea or proposed solution →	←Problems identified with this idea→	←Possible solutions suggested	←Any other possible solutions?
As suggested at the treasurers' financial training in June 2000, CHWS should receive a portion of the profits from the sale of drugs, 100% of which was originally was meant for the BI. Drug prices are not to be increased with this plan; CHWs and BI should simply share the profits. The portion of profits that the participants felt the CHWs should receive ranged from 5 to 55%. Several VHCs/CHWs suggested that if this plan was implemented, they would need to have a meeting to decide on an appropriate percentage that would make CHWs happy while still protecting the earnings of the BI. ***Good points of this plan that were identified: Most CHWs and VHCs felt that it could be a good idea to motivate the CHWs to do their work. They felt it would eliminate the problem of "chewing the bag" since they would now receive money of their own and be less tempted to "dip into the pot." Some also suggested that CHWs could begin to pay back some of their debts with this new source of income.***	- CHWs must sell a lot of drugs to make decent amount of money. - Basing compensation on sales alone mught create tension between those CHWs who can sell a lot and those who are not successful "salespersons". - If the profits from sales are divided equally among the CHWs, it might create resentment on the part of hard-working CHWs who would want earnings to reflect the level of their work. - Former CHWs might want to resume their jobs thus "flooding the market" with CHWs which would decrease the overall amount an individual could make. - This incentive should have been started in the beginning of the project when disease rates were higher. - CHWs might be tempted to turn their jobs into a "business" as well as sell drugs outside of the community they have been trained to serve. - Can an incentive plan really work when moms can't realistically afford to even buy the drugs?	- This will depend on the percentage of the profit decided upon for CHWs. - Moms suggested that they should help create awareness about CHWs' work to increase the demand for their services. - VHCs should monitor the selling price of drugs and create awareness in the community about the correct prices of drugs through barazas, etc. OR…The prices should be standardized across sub-locations to make sure that CHWs don't set their own prices. - We should reduce the prices of drugs, recognizing how hard it is for our mothers to make a living.	
CHWs should raise the prices of drugs and use the gap between the old and new price for their compensation.	- This was tried in one sub-location but the mothers have complained that the drugs are now too expensive.	- In increasing prices, we have to make sure that the prices we set are comparable to the prices in nearby sub-locations.	

MONETARY COMPENSATION cont…

Idea or proposed solution →	←Problems identified with this idea→	←Possible solutions suggested	←Any other possible solutions?
The BI should give the CHWs five pills free for every 20 pills they sell; they could use the money from the sale of these five pills for their compensation.			
VHCs/CHWs should start a garden and split the profits generated by the harvest and sale of the produce.			
Mothers suggested that they could start a garden for the CHWs, which they would work in, harvest and then give the profits to the CHWs in their area in return for the care that they give their children.	- Some CHWs didn't feel that mothers would really follow through with such a plan since many of the mothers don't have kitchen gardens of their own.		
The community should hold a harambee to jump-start a CHW compensation fund. Then each month, if every household could contribute Ksh 3, a certain amount would be given to the CHWs to buy things like sugar and soap.			
The community could hold a disco as a fund-raising event and charge Ksh 10 for anyone who came; this money could be used towards compensating the CHWs.			
CHWs and/or VHCs should start a business on the side so that they do not have to rely on their roles as CHWs/VHCs to make a livelihood.	Capital is needed to get a business started and money from the BI cannot be used in this way—the money is to be used for restocking drugs and nets only according to constitutions of the BIs.		

NON-MONETARY COMPENSATION

Idea or proposed solution →	←Problems identified with this idea→	←Possible solutions suggested	←Any other possible solutions?
CHWs would be happy to receive any of the following: uniforms, certificates, CHW licenses, badges, drugs for free, bednets, flashlights, and gumboots.	- CHWs may take more drugs than actually needed to treat self and family - If they are given bednets, they may expect to receive them every year		
Mother suggested that they could work in the personal shambas of the CHWs in exchange for treating their children (one day's worth of weeding is equivalent to around Ksh50)			
Mothers also suggested that they could start a garden for the CHWs in their sub-location and give the harvest to the CHWs to use for themselves or to sell and make a profit.			

NON-MONETARY COMPENSATION cont…

Idea or proposed solution →	←Problems identified with this idea→	←Possible solutions suggested	←Any other possible solutions?
When asked about giving payments-in-kind, the majority interviewed thought that "they were better than receiving nothing" and felt that the CHWs would be open to receiving them. The types of payments-in-kind that the participants felt were feasible in their communities were as follows: tomatoes, maize, eggs, milk, sorghum, millet, sheep, goats, chicken, cassava, dresses, kangas, beans, mangoes, cattle, sugar, soap, rice, bowls, and blankets.	- Mother might give items that the CHW already has a lot of herself (for instance, mangoes in season) or she can't sell them because there is no demand for the item. - CHWs may be tempted to use whatever they receive before they can sell them and turn them into cash OR she will always be occupied with searching for a buyer so that she can get cash to pay the BI for the drugs. - The items given may not be of the same value as the drugs received. - If the community implements this incentive plan and a mother doesn't even have a payment-in-kind to give, the CHW may withhold treatment to a very sick child. - If this incentive plan is implemented in this sub-location but not others, word will get around and some CHWs will be disappointed. - Community will not support this plan because they already believe that the CHWs are being paid. - What if a mother is tempted to steal a chicken from another person's yard in an attempt to pay for the drugs?	- Mothers and CHWs should agree on what payment-in-kind would be acceptable. - The CHWs should bring the items straight to the BI and the VHCs should be responsible for selling them. One VHC offered to go very far in search of a good market for the items. It was also suggested that they make an agreement with someone in the community to serve as a middleman to sell the items at the market for the BI. - Some feared the payments-in-kind would be of less value than the drugs, others looked forward to them being of greater value. It was suggested that the mothers and CHWs should agree on the value of the medicine and then decide what item would be of equivalent value. - If a mom cannot give money or a payment-in-kind, she can give something as collateral until she can pay off her debt to the CHW. - In some communities, they are working diligently to create awareness about the fact that they are not paid for their work. - It was suggested that for all payments-in-kind, a VHC member should be present for the transaction and it should be recorded in a notebook as well.	

Questions for discussion

- ***What are the barriers to making this idea/solution a reality?***
- ***Are these barriers "breakable"? If so, how will we break these barriers to make the solution viable in our community?***
- ***What conditions are necessary within our community for this solution to be <u>economically</u> feasible?***
- ***What conditions are necessary within our community to make this solution <u>socially</u> acceptable?***
- ***What resources are necessary to make this solution a reality?***
- ***What resources do we have locally available that we could utilize in the process of making this solution a reality?***
- ***How will we harness these resources to bring about this solution?***
- ***Who will need to be involved to bring about this solution?***
- ***How will we involve these people in making this solution a reality?***
- ***What have we forgotten to discuss? Is there some aspect of this idea that we have failed to address in answering the above questions?***
- ***Upon reflection, given the discussion we have had, could this idea REALISTICALLY be implemented in our community?***

PROBLEM →

SOLUTION →

SATISFACTION!