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Expanded Impact Child Survival Program, Final Evaluation Report Gaza Province, Mozambique

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Table of Contents

List of Acronyms	iv
Acknowledgements.....	v
Executive Summary	1
Project Description, Goals and Objectives	1
Main Project Accomplishments.....	1
Conclusions and Recommendations	2
Overview of the Project.....	4
Project Goal and Objectives.....	4
Project Location	5
Project Population.....	6
Overall Project Strategy, Technical Interventions, and Cross-cutting Approaches.....	6
Care Group Strategy	7
Community-Level Health Committees	10
Socorrista Strategy	10
Technical Interventions.....	11
Principal Messages Employed	12
Diarrhea.....	12
Malaria	13
Pneumonia.....	13
Nutrition.....	13
Hearth Program and Other Nutrition-related Interventions	14
Cross-cutting Strategies	15
Partnerships.....	15
Collaboration of the USAID Mission in Mozambique	15
Data Quality: Strengths and Limitations	16
Project Results.....	16
Progress toward Quantitatively Defined Objectives.....	16
Exclusive Breastfeeding and Nutrition	17
Control of Diarrheal Diseases	19
Pneumonia Case Management.....	19
Control of Malaria.....	20
Childhood Immunization Coverage	20
Reproductive Health and HIV/AIDS Prevention.....	21
Progress in Quantitatively Defined Indicators Which Were Not Project Objectives	22
Nutritional Status	22
Other Measures of Immunization Coverage	22
Birth Spacing	23
Handwashing.....	23
Evidence Regarding Utilization of Ministry of Health Facilities	24
Qualitative Evidence of Progress in Achievement of Project Objectives.....	25
Evidence Related to Under-5 Mortality Reduction	26
Discussion of Results.....	29

Contribution toward Objectives	29
How Were These Results Achieved?.....	31
The Care Group Model	31
The Quality of the Project Leadership and the Team	32
Empowerment and Building Partnerships with Communities.....	33
Other Contributing Elements	33
The Influence of the Local Context on the Relationship between Activities and Outcomes ...	34
Role of Key Partners in Helping or Hindering the Project to Achieve the Results It Did.....	34
Overall Design Factors that Influenced Results.....	35
Discussion of the Broader Implications of Results	37
Progress toward Sustained Outcomes	37
Contribution to Replication or Scale Up.....	37
Attention to Equity.....	38
Role of Community Health Workers	38
Contribution to Global Learning.....	39
Conclusions and Recommendations.....	39

Annexes

Annex 1: Results Highlights	A1
Annex 2. Changes to the Project since Completion of the Detailed Implementation Plan	A2
Annex 3: Program Goals, Objectives and Indicators.....	A3
Annex 4. List of Publications and Presentations Related to the Project.....	A6
Annex 5. Project Management Evaluation	A8
Annex 6. Workplan Table.....	A12
Annex 7. Rapid CATCH Table.....	A15
Annex 8. Final KPC Report.....	A16
Annex 9. Community Health Worker Training Matrix	A89
Annex 10. Evaluation Team Members and Their Titles.....	A90
Annex 11. Evaluation Assessment Methodology.....	A91
Annex 12. List of Persons Interviewed and Contacted during Final Evaluation.....	A96
Annex 13. Mortality Data and Indirect Estimates of Mortality Impact.....	A97
Annex 14. Example of an Educational Aide Used by Care Group Volunteers during a Home Visit.....	A103
Annex 15. Report of Focus Group Discussions with Project Coordinators and Supervisors. A104	
Annex 16. Report of Focus Group Discussions with Ministry of Health Officials, Community-level Project Staff, <i>Socorristas</i> , Community Leaders, Care Group Volunteers, and Community Mothers	A111
Annex 17. Operations Research I	A119
Annex 18. Operations Research II.....	A182
Annex 19. Project Data Form	A241
Annex 20. Grantee Plans to Address Final Evaluation Findings.....	A252
Annex 21. Photographs Taken During the Evaluation	A253

Table of Tables

Table 1. Summary of Major Project Accomplishments.....	3
Table 2. Project Population Data	6
Table 3. Interventions, Level of Effort (LOE) and End-of-Project Objectives	12
Table 4. Classification of End-of-Project Targets	17
Table 5. Progress in Achievement of End-of-Project Targets	21
Table 6. Indicators Which Are Rapid CATCH Indicators but not Formal Project Objectives	24
Table 7. Diffusion of the Care Group Model to Other Organizations and Countries.....	32

Table of Figures

Figure 1. Project Goal, Strategic Objectives, and Intermediate Results.....	4
Figure 2. World Relief Mozambique Project Map	5
Figure 3. Structure of the Care Group Model in Vurhonga IV.....	9
Figure 4. Achievement of Nutrition Targets Vurhonga IV Project, Gaza Province, Mozambique 2004-2009	18
Figure 5. Sick Child Management: KPC Findings	19
Figure 6. Children 0-<24m Underweight for Age	22
Figure 7. Changes in Use of Modern Contraceptive Methods: KPC Findings.....	23
Figure 8. Changes in Utilization of MOH Facilities in Project and Non-Project Areas, 2004-2008	24
Figure 9. Estimates in Under-5 Mortality in Vurhonga IV Project Areas, 2005-2009, in Comparison to MDG for 2015.....	27
Figure 10. Changes in Under-5 Mortality in Vurhonga II and Vurhonga IV Project Areas in Comparison with Long-Term Trends in Gaza Province and Mozambique	28
Figure 11. Dr. Pieter Ernst, Developer of the Care Group Model and Leader of Vurhonga I-IV	32
Figure 12. Vurhonga IV Supervisory Staff and HQ Support.....	32
Figure 13. Cases of Under-5 Mortality Reported by the Supervisors, 2007-2008	34
Figure 14. Percentage of Latrine and Dish Racks in Households, Oct 2007 - Nov 2008.....	36
Figure 15. Percentage of Mother Who Know Volunteers and Who Were Visited by a Volunteer, Oct 2007 - Nov 2008.....	36

List of Acronyms

ANC	Ante-natal care
APE	<i>Agente Polivalente Elementare</i> (Term in Mozambique for CHW)
CATCH	Core Assessment Tool on Child Health
C-HIS	Community health information system
CDD	Control of diarrheal disease
CG	Care Group
CHW	Community Health Worker
C-IMCI	Community-based Integrated Management of Childhood Illness
CS	Child survival
CSP	Child Survival Project
DHS	Demographic and Health Survey
DIP	Detailed Implementation Plan
DOTS	Directly observed therapy-short course (for TB)
EBF	Exclusive breastfeeding
EOP	End of project
EPI	Expanded Program for Immunization
FE	Final evaluation
FP	Family planning
HAF	Home available fluids
HC	Health center
HF	Health facility
HIS	Health information system
HP	Health post
HQ	Headquarters
IMCI	Integrated Management of Childhood Illness
ITN	Insecticide treated net
KPC	Knowledge, practice and coverage
LQAS	Lot quality assurance sampling
LRA	Local rapid assessment
MCH	Maternal and child health
MOH	Ministry of Health
MTE	Mid-term Evaluation
NGO	Non-governmental organization
ORS	Oral rehydration solution
ORT	Oral rehydration therapy
SO	Strategic objective
TB	Tuberculosis
PCM	Pneumonia case management
PVO	Private voluntary organization
TB	Tuberculosis
TT	Tetanus toxoid
VHC	Village Health Committee
WR	World Relief
WR/M	World Relief/Mozambique

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Executive Summary

Project Description, Goals and Objectives

The World Relief (WR) *Vurhonga* IV Expanded Impact Child Survival Project (CSP) served a population of 247,002 in five of the most rural districts in Gaza Province, Mozambique: Massinger, Chibuto, Chicualacuala, Chigubo and Massangena Districts. Specific project beneficiaries in those districts were the 47,002 women 15-49 years of age and the 33,451 children 0-59 months of age living there. Three earlier, very successful CSPs (*Vurhonga* I, II and III) in various areas of Gaza Province had laid a solid foundation in lessons learned for this scale-up endeavor. Virtually all of the current Project's staff had also implemented the previous CSPs. As a result, this Project was implemented by an extraordinarily experienced and competent staff.

The goal of this census-based CSP was to reduce the disease burden in women of reproductive age and in young children. The objectives were to improve the quality and coverage of community-based integrated management of childhood illnesses (C-IMCI), develop sustainable community-based groups to increase preventive and care seeking C-IMCI practices and establish a Scale-squared Center for training for those involved in the scaled-up program.

Main Project Accomplishments

Project accomplishments were impressive. The Care Group model depends on Care Group Volunteers (CGV), each responsible for 10 neighbor families, organized into Care Groups (CG) trained in C-IMCI. The Care Group Volunteers' efforts are supported by Village Health Committees, health facility personnel, pastor/traditional healer groups, and Animators in the community—all trained in C-IMCI.

The Project trained the following community-level workers:

- 4,071 Care Group Volunteers, organized into 413 Care Groups, trained in all interventions;
- 129 Animators, who were trained in all interventions and who taught these interventions to the Care Group Volunteers, and oversaw the Care Groups;
- 59 *Socorristas*, selected and trained in MOH IMCI protocols; and,
- 117 Village Health Committees.

Of the 19 end-of-project (EOP) targets, 15 were achieved, and 11 of these 15 were achieved at the time of the mid-term evaluation (MTE). Most notable were the following (the baseline and end-of-project levels are shown here as determined by household surveys along with the end-of-project target):

- % of mothers/caretakers with a child less than 6 months of age who were exclusively breastfeeding their child: 17%→80% (goal 40%)
- % of mothers/caretakers with a child 6-<10 months of age who received complementary feedings: 51%→85% (goal 70%)
- % of mothers/caretakers of malnourished children who receive nutritional counseling: 14%→80% (goal 80%)

- % of children with rapid/difficult breathing (suspected pneumonia) treated within 24 hours at a health facility: 10%→64% (goal 50%)
- % of mothers/caretakers who cited two or more symptoms of AIDS: 25%→87% (goal 50%)
- % of children with fever (suspected malaria) that received treatment within 24 hours at a health facility 17%→62% (goal 75%).

The percentage of children 0-<24 months of age who were below the third percentile in weight-for-age declined from 17% at baseline to 8% at the end of the Project. The Project began to measure births and deaths half-way through the Project, during the third quarter of 2007, after most of the increases in coverage of key child survival indicators had been achieved. The initial under-5 mortality rate measured at that time was 98.4 deaths per 1000 live births. Over the next 18 months, the Project registered a decline in under-5 mortality by one-third, to 67.0 deaths per 1000 live births. Many community members participating in focus group discussions reported that the number of children with severe malnutrition and the number of deaths of children had declined following the implementation of the Project.

Progress was minimal for the percentage of children sleeping under an insecticide-treated bed net (ITN), primarily because the government program which was supposed to provide women with ITNs at the time of ante-natal care did not always have ITNs. However, among those who had ITNs, the percentage of children using them rose from 42% during the rainy season in 2004 (when the baseline KPC occurred) to 88% during the rainy season in 2008 (according to routine monitoring data).

Capacity building has occurred at both the community and at the health facility levels. The entire community has become aware of good health practices. The village leaders and members of the Village Health Committees are actively responding to feedback from the community-based health information system and making decisions to further improve the health of mothers and children. The pastors'/traditional healers' groups are disseminating health messages. Government health personnel at the health facilities in the districts have supported the Project's work, and the villages are aware of the progress the Project has made in improving the health of children.

Sustainability prospects are exceptional. In World Relief's previous CSPs in Gaza Province, project objectives have been sustained following the formal termination of the CSP. This sustainability of impact has been possible because of community awareness and involvement. The current Project achieved similar results in this expanded impact area, so we can expect that the progress achieved here will be sustained as well.

Conclusions and Recommendations

The World Relief/Mozambique *Vurhonga* IV Child Survival Project has successfully scaled up an effective model of community-based primary health care for improving child health in a high-mortality setting. Since the Project appears to have reached an under-5 mortality rate which Mozambique needs to reach by 2015 in order to achieve the Millennium Development Goal (MDG) 4 for children, Mozambique and Africa now have a valuable resource for demonstrating how the rest of the country and Africa can accelerate progress in lowering under-5 mortality. An

independent assessment of the mortality impact achieved should be undertaken. If confirmed, the Project, its staff, and the Project area should become a field model for the rest of the country and southern Africa.

Table 1. Summary of Major Project Accomplishments

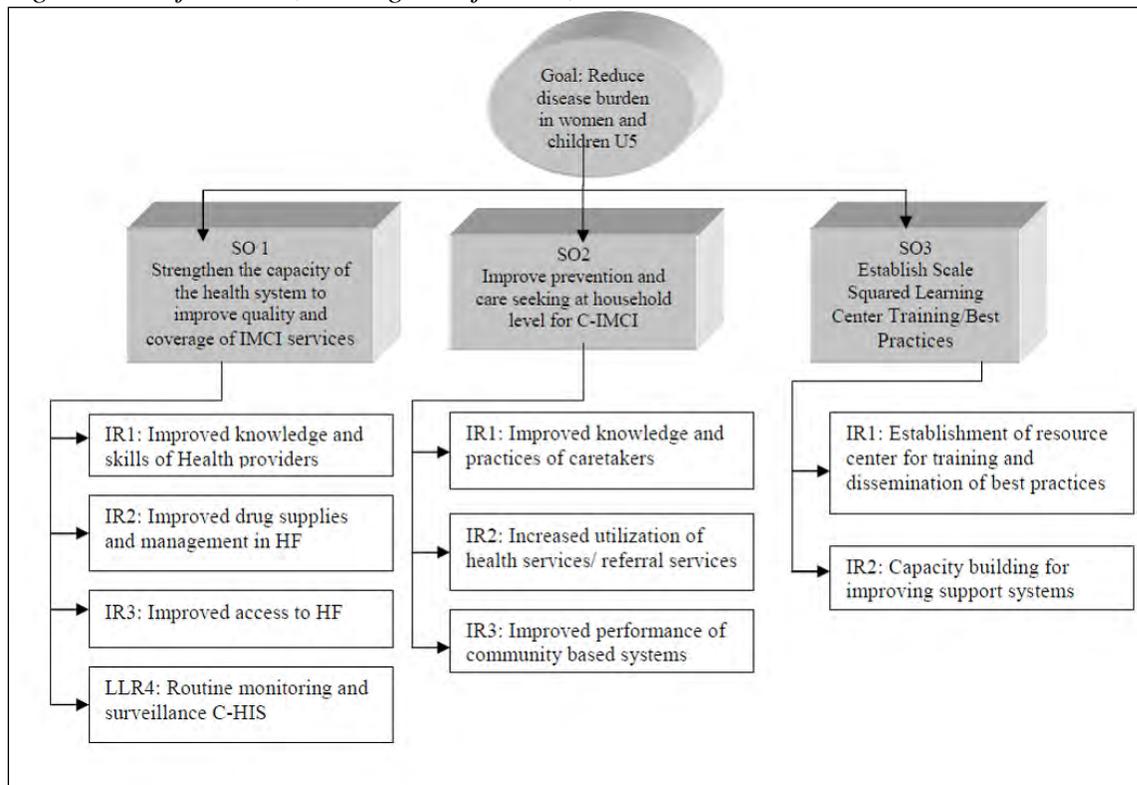
Project Strategic Objective 1: Strengthen the capacity of the health system to improve quality and coverage of IMCI services			
Project Inputs	Activities	Outputs	Outcome
59 Village Community Health Workers (<i>Socorristas</i>) have been trained	Provision of first aid, promotion of referral, and treatment of acute life-threatening illnesses, including community-based treatment of childhood pneumonia and malaria	87,130 patients (including 11,475 cases of childhood malaria and 6,616 cases of childhood diarrhea) were treated by <i>Socorristas</i> during a 21-month period beginning in July 2007, when the Project had been functioning for 2 years	Under-5 mortality was 67 deaths per 1,000 live births at the completion of the Project, compared to an estimated rate of 138 at the onset of the Project, representing a decline of 51%
Project Strategic Objective 2: Improve prevention and care seeking at household level for C-IMCI			
Health education by village volunteers (Care Group Volunteers) and by Animators and <i>Socorristas</i>	Promotion of appropriate health service utilization for acute illness, childbirth, and selected preventive services (e.g., family planning, ante-natal care, and post-natal care)	Utilization of government health facilities in the 5 districts where the Project was working had a greater percentage increase than the other 6 districts in Gaza Province where the Project was not working	Percentage of mothers of children 0-<24 months of age using a modern method of family planning (provided only in government health facilities) increased from 10% to 37%
		% of children with rapid/difficult breathing (suspected pneumonia) treated within 24 hours at a health facility increased from 10% at baseline to 64% at the end of the Project	Evidence of reduced under-5 mortality
		% of children with suspected malaria treated within 24 hours increased from 17% at baseline to 62% at the end of the Project	
	Promotion of appropriate nutritional practices for prevention and treatment of malnutrition	Marked increases in exclusive breastfeeding during the first 6 months of life were achieved (from 17% to 80%), in complementary feeding for children 6-<10 months of age (from 51% to 85%), in the percentage of caretakers of malnourished children who received nutritional counseling (from 14% to 80%), and in the percentage of malnourished children who received nutritious food following nutritional counseling (from 43% to 80%)	Percentage of children below the 3 rd percentile of weight for age declined by half (from 16% to 8%); also evidence of reduced under-5 mortality

Overview of the Project

Project Goal and Objectives

The overall Project goal was to reduce the disease burden in women and children aged less than five years. The Project's strategic objectives were (1) to strengthen the capacity of the health system to improve quality and coverage of C-IMCI services through training and supervision, drug management, and by establishing effective health information systems; (2) to develop sustainable community-based mechanisms to improve preventive and care-seeking practices outlined in C-IMCI; and, (3) to establish a Scale-Squared Learning Center¹ for C-IMCI training. The intermediate results for each strategic objective are illustrated in Figure 1.

Figure 1. Project Goal, Strategic Objectives, and Intermediate Results

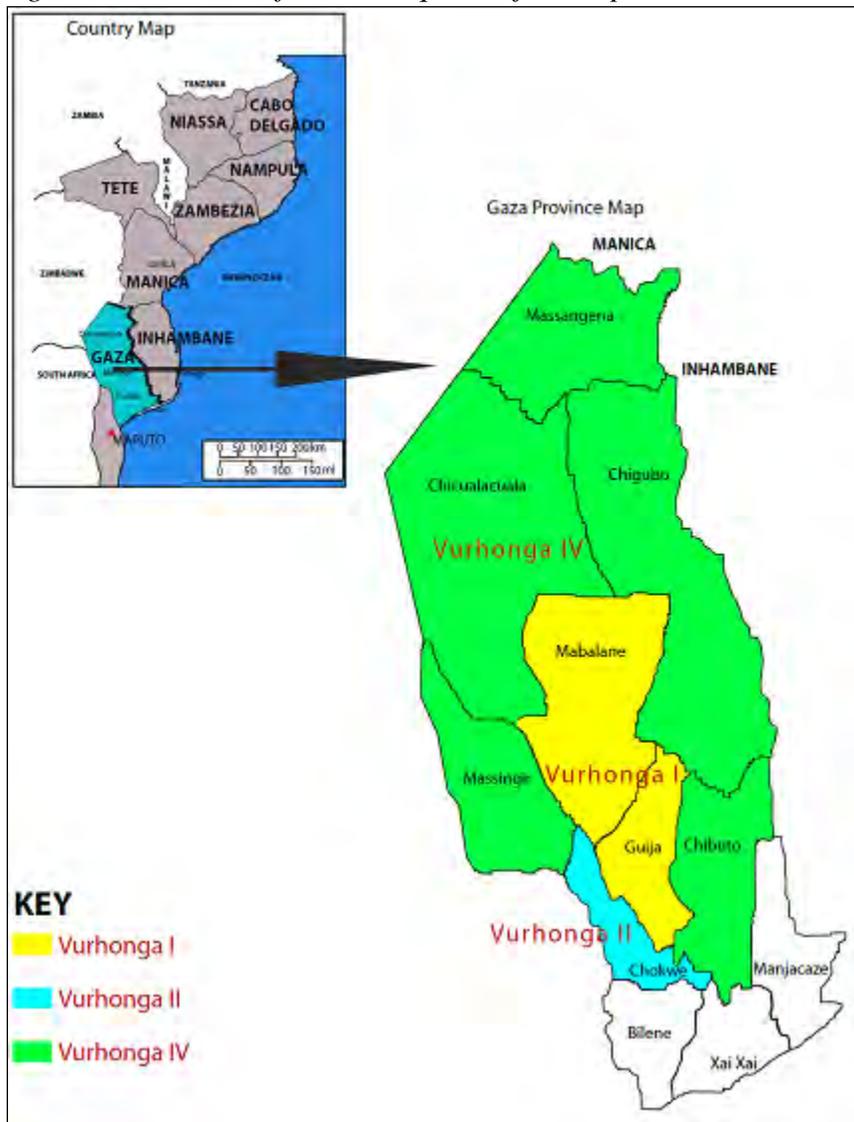


¹ Scale-squared Learning Centers are described in the book by Daniel Taylor-Ide and Carl E. Taylor, *Just and Lasting Change: When Communities Own Their Futures* (Johns Hopkins University Press, 2002). These are Self-Help Centers for Action Learning and Experimentation where people can come and learn new ideas and skills as part of scaling up program activities (p. 39). Scale-squared Learning Centers are a component of the SEED-SCALE methodology which promotes a community empowerment approach to development. SEED refers to self-evaluation for effective decision-making, and SCALE refers to system for communities to adapt learning and expand. SCALE also has additional meanings: SCALE One (successful change as learning experiences) refers to developing a model local program; SCALE-squared (self-help centers for action learning and experimentation) refers to developing a model center of activity where ongoing training and program modification are ongoing; and SCALE-cubed (systems for collaboration, adaptive learning and extension) refers to developing and implementing processes for expanding the program at scale.

Project Location

World Relief/Mozambique (WR/M) has been implementing child survival programs in the Gaza Province for the past 15 years. These have all been given the name “*Vurhonga*,” which means “dawn” in Shangaan, the local language. From 1995 until 1999, WR/M implemented a USAID grant from the Child Survival and Health Grants Program for Guija and Mabalane Districts, serving 100,000 people (*Vurhonga 1*). This was followed by a second USAID Child Survival Project for a population of 135,000 people in the nearby district of Chokwe, not including Chokwe town (*Vurhonga II*). UNICEF provided short-term funding for *Vurhonga III*, a one-year activity in 2004 of continued support for ongoing activities in the districts served by *Vurhonga I* and II and for beginning new activities in Massingir District, with a population of 23,000 people (Figure 2).

Figure 2. World Relief Mozambique Project Map



The current project, *Vurhonga IV*, is an Expanded Impact Child Survival Project (CSP) funded by the USAID Child Survival and Health Grants Program which began in October 2005 and

culminated in September 2009. The *Vurhonga* team launched the current Expanded Impact CSP in five of the most rural districts of Gaza province in southern Mozambique: Massingir, Chibuto, Chicualacuala, Chigubo and Massangena.

The Project area is a relatively sparsely populated rural area of mostly subsistence agriculture. Unfortunately, the majority of able-bodied men are absent most of the year because they are working in South Africa, primarily in the mines. The main crops are cassava, millet, corn, sweet potatoes, beans, and peanuts. Papayas and mangoes are available, as are nutritious marula nuts. Villages are reachable by unpaved roads during most of the year, but during parts of the rainy season this is not possible. There are very few vehicles traveling in the area, and motorcycles are quite scarce as well. Travel from the Project office in the town of Chokwe to the furthest parts of the Project takes ten hours.

The level of illiteracy is high. According to the final KPC survey, only 13.7% of the women in the Project population with a child less than 2 years of age had attended secondary school, and 43.7% were not able to read and write (even though 14.7% had obtained at least some primary schooling). Traditional beliefs, especially those related to witchcraft and illness, are still common and quite strong. Due to the numerous challenges facing development activities in these five districts, there have been very few NGOs working in this area.

There are no modern medical services in the Project area outside of those provided by the MOH. The Chokwe District Hospital has 130 beds. Medical care is provided primarily by a non-physician staff, only three physicians work there. There are few physicians with training in surgery, and most emergency surgery is provided by well-trained surgical technicians who were originally Assistant Medical Officers.

Project Population

This Project served a target population of 247,002 people, including 33,451 children 0-59 months of age and 47,002 women of reproductive age (15-49 years). The number of children 0-11 months of age was 8,391. The estimated number of children 12-23 months of age was 7,000, and there were an estimate 18,164 children 24-59 months of age (Table 2).

Table 2. Project Population Data

Population Category	Available at the time of writing of the Detailed Implementation Plan (2004)	Obtained after the 2005 census of Project Area
Total population	227,260	247,002
Women of reproductive age (15-49 years)	63,122	47,002
Population of children <5 years of age	38,635	33,451
< 12 months of age	Not available	8,391
12-23 months of age	Not available	7,000 (estimated)
24-59 months of age	Not available	18,164 (estimated)
12-59 months of age	Not available	25,164

Overall Project Strategy, Technical Interventions, and Cross-cutting Approaches

The overall Project strategy was to build a relationship of trust with the community and to empower it to bring about change in health-related behaviors and in utilization of preventive and curative health services. These behaviors would then lead to measurable improvements in the coverage of key child survival indicators and to reductions in the high levels of mortality in

children and mothers. This was to be accomplished through the Care Group strategy, formation of Village Health Committees, and training of village-level providers of curative care called *Socorristas*.

Care Group Strategy

The strategy for scaling up C-IMCI in the impact area employed the well-tested Care Group model originally developed 15 years ago by Dr. Pieter Ernst, who served as Director of the *Vurhonga* IV Project as well. The Care Group structure in the project area made it possible to carry out the following activities:

- Select Care Group Volunteers, each trained to communicate C-IMCI behavior change messages to 10 other mothers in their immediate neighborhood;
- Organize these Care Group Volunteers into Care Groups to receive training and supervision from the Animators;
- Teach paid Animators to train and supervise Care Group Volunteers to become behavior change agents;
- Create Pastoral Leaders/Traditional Healer Groups and train them in C-IMCI to reinforce the behavior change messages being disseminated in the community;
- Train *Socorristas* in C-IMCI in collaboration with MOH staff and place them in new Health Posts in communities in which health services were previously difficult to access, provide them with MOH-approved protocols, facilitate access to medications available through the MOH;
- Create and train Village Health Committees, composed of village leaders, Animators, Care Group leaders, *Socorristas* and/or nurses² from nearby health facilities to raise health awareness and encourage local health-related problem solving and decision-making;
- Employ a team of experienced Coordinators and Supervisors to train, manage, supervise and problem solve within the target districts;
- Establish regular communication links among Care Group Volunteers, Village Health Committees, staff at health facilities, MOH directors and staff, and the Project Management Team;
- Create a community-based health information system (C-HIS) and train volunteers to report pregnancies, births, deaths, childhood illnesses, and cases of malnutrition to the Animators, who then convey this information to the Village Health Committees for community action, to the *Socorristas* for eventual transfer to the MOH health information system, and to the Project supervisors for project monitoring and evaluation.

The Care Group model has enabled community members to improve their health, and it has strengthened the MOH's capacity to extend health services throughout the project area. WR/M has maintained a remarkable focus on the Care Group model from *Vurhonga* I through *Vurhonga* IV, with continued variations on the central concepts by the same group of people who also served as the Project staff for *Vurhonga* I, II, and III. What is also remarkable is that, with the steady and supportive leadership of the same Project Director for all of these Projects, the Project

² If the village happened to have a health center, then a nurse from that Health Center functioned as a member of that Village Health Committee. If there was a Health Center nearby but not actually in the village itself, then a nurse from the Health Center was often invited as a guest.

staff members have assumed ever greater competence and leadership skills. Thus, those who began as Care Group Volunteers or Animators in *Vurhonga I* are now senior project staff (Coordinators) responsible for whole district-level Project activities.

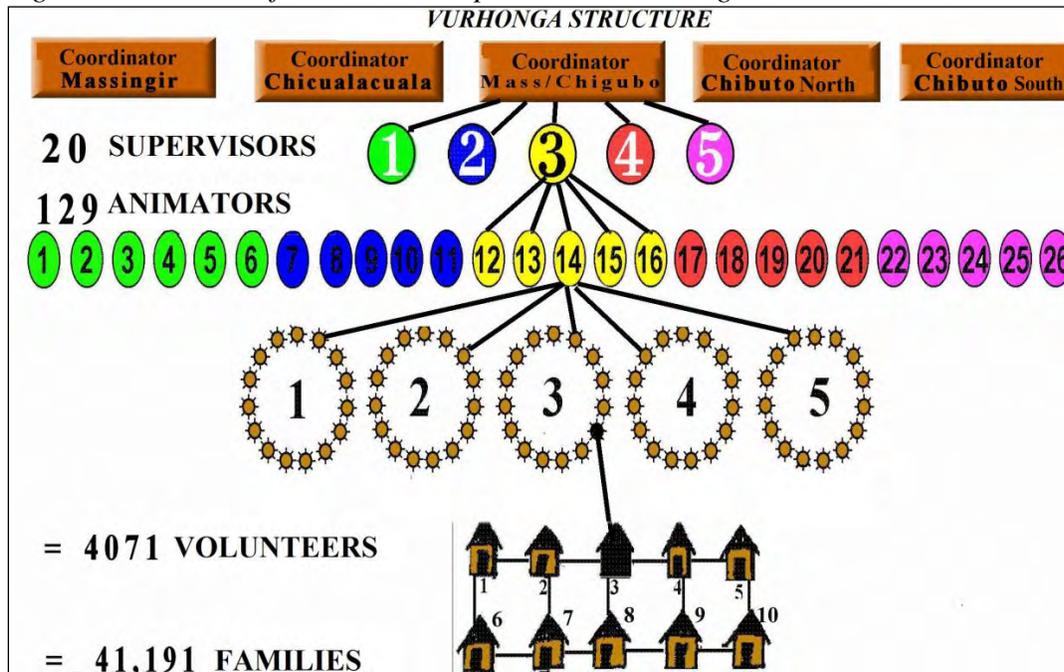
In *Vurhonga IV*, because of the expanded impact nature of the project, the larger population served, and the greater distances involved in reaching the people in the Project area, the Project chose to create a new level of paid staff member that did not exist in previous *Vurhonga* projects (Project Coordinators) and changed the responsibilities of Animators (Fig. 3). In past projects, the immediate Care Group supervisors (Animators) were full-time project staff members who were not long-term residents of the village(s) where they worked. Due to the larger population served and the greater distances involved in Project operations, the *Vurhonga IV* Project decided to hire Animators directly from the villages. Due to the low level of literacy in the Project area, many of these Animators had limited literacy skills.

The Animator met every two weeks with each Care Group and typically had three to five Care Groups under her responsibility, depending on the dispersion of the villages and ease of transportation. The Project trained a total of 129 Animators and 4,071 Care Group Volunteers (in 413 Care Groups) for a population of 250,000 people. The Animators were all long-time residents of the villages and were based in the Project area. Most carried out their work by walking to Care Group meetings, but some who had greater distances to traverse were given bicycles.

The Project had 20 Supervisors, each of whom supervised five to six Animators (Fig. 3). The Supervisors in turn were supervised by Coordinators. Each of the five districts making up the Project area had a Project Coordinator.³ A Program Manager supervised the five Project Coordinators and a Community Health Coordinator. The latter served as the primary educator of the *Socorristas* and the primary contact with the MOH. The Project Director provided overall leadership and guidance for Project activities. The Project had one vehicle for each district. Each of the 20 Supervisors had a motorbike which they used to travel to their stations and from there out to the villages for which they were responsible. After three weeks, they would return back to the town of Chokwe (where they all lived and had families) for one week. Then at the beginning of the next three-week cycle of work, all of the Supervisors would meet together at the Project Headquarters Office in the town of Chokwe.

³ The Massingir and Chigubo Districts had one Coordinator, and the Chibuto District, because of its size, had two Coordinators.

Figure 3. Structure of the Care Group Model in Vurhonga IV



The Care Group model was developed by Dr. Pieter Ernst in the early 1990s based on previous experiences in South Africa, where health workers went to villages and formed volunteer groups for receiving educational messages they provided. Later, after preliminary experience with various approaches, Dr. Ernst and other colleagues at World Relief who were working with him at that time (including Dr. Muriel Elmer and later Drs. Warren and Gretchen Berggren) conceived of the possibility for having one Care Group Volunteer be responsible for conveying educational messages to 10 geographically adjacent households. This approach proved to be quite successful in the *Vurhonga* I, II, and III child survival projects, and its effectiveness has been confirmed by a number of other organizations that have adopted it in different settings.

At the outset, the Project leadership met with village leaders. Working in collaboration, a map was developed of all the households in the village. Then a census was undertaken of all households, an Animator was chosen, and Care Group Volunteers (one for every 10 households⁴) were selected collaboratively by Project staff members and village leaders.

After their selection, all Animators spent three months at the SCALE-squared Center at the Project office in the town of Chokwe, at which time they learned all the educational messages which they were going to later teach to the Care Group Volunteers at Care Group meetings. Following this three-month training, they came to meetings at their district for one week whenever a new educational topic was being introduced. At that time, they again went over the messages for a topic that they had learned during the initial three months of training.

⁴ Depending on the number of households in a village, some Care Groups had as few as 6-7 members or as many as 15, but most had 10 members.

Altogether, the Project had six educational topics, each with a number of specific messages related to that topic. The six topics were: diarrhea, malaria, nutrition, STDs and HIV/AIDS, immunizations, and pneumonia detection and treatment.⁵ It took two years to convey the different messages to all the households in the Project area. This “rotation” of messages was carried out twice during the life of the Project.

Care Group Volunteers informed the Animator at the time of the Care Group meeting of any births or deaths that had occurred since the previous meeting, and they learned a new educational message to deliver in the forthcoming two weeks. During home visits, the Care Group Volunteer used a plasticized sheet with pictures describing the message being given.⁶ Every two weeks, an Animator met with a Care Group for 1-1 ½ hours. At that time, in addition to learning a new health message, they discussed the work of the Care Group Volunteers, including frequency of home visitation and progress in conveying previously delivered health education messages.

Community-Level Health Committees

Once the Care Group process was established and functioning, the Project Coordinators and Supervisors worked with the village leadership to establish Community Health Committees if none were present.⁷ These were composed of formal leaders in the village along with other key individuals, such as a representative of the Woman’s Organization of Mozambique (a national grassroots-level organization), a school representative, a representative of the churches, and a representative of traditional healers. Most villages also had a person responsible for health issues (*Chef de Saude*), and this person of course participated as a member as well, along with a person designated to represent each Care Group in the village.

These Committees usually met monthly to receive an update on the status of the health of the people in the village derived from the information collected by the Care Group Volunteers and compiled by the Care Group leaders. The Care Group leaders gave this information to the Animator, who presented it to the Committee. They also discussed any issues related to Project implementation, to coordination with the MOH, or to the functioning of the *Socorrista* (if the village had one). If the village was more than five kilometers from the nearest Health Center and if the village had at least 100 families, it was eligible to select a person to obtain training as a *Socorrista* (see below). The Village Health Committee determined who that person should be and took responsibility for supervising that person and also ensuring that an appropriate health post was constructed. These activities were undertaken in coordination with the District MOH officials.

Socorrista Strategy

Due to the limited number of formally trained health care providers in the Project area, the considerable distances to health facilities, and the limited availability of transportation (as well as the lack of money to pay for what limited transportation there is), access to facility-based health care is quite limited. In the earlier *Vurhonga* projects, a role for a community health worker called a *Socorrista* (literally, in Portuguese, “one who gives aid”) had been established. The

⁵ Detection and treatment of tuberculosis was added in 2007 in two of the Project districts in partnership with FHI.

⁶ An example of this is shown in Annex 14

⁷ The MOH policy is for communities to establish Community Health Committees, but they were uncommon when the Project began.

MOH had created a position called an APE (*Agente Polivalente Elementare*, or Basic Multipurpose Agent) in 1977, but the role gradually faded out until it was reactivated in 2000. Since then, there has been considerable debate nationally about whether this cadre should be expanded, whether they should be salaried by the MOH or not, and whether NGOs should be training and utilizing them. This is a particularly important question for the country since some has estimated that 60% of the population does not have ready access to basic health care. In the Project area, many villages are a three to four hour walk away from a Health Center.

The *Socorrista* is the *Vurhonga* version of the APE. *Socorristas* receive six weeks of training using a curriculum developed by the MOH. Once trained and authorized by the MOH, the *Socorrista* receives a kit with various medicines (called a Kit “C”) at the District MOH office. She returns to the District MOH office once a month to provide a report of her activities and to replenish her stock of medicines.⁸ The *Socorrista* is not an MOH employee, and she receives no reimbursement from the MOH. Rather, the Village Health Committee establishes a fee for each service which the *Socorrista* is authorized to collect from those receiving her services.

Socorristas receive training in first aid, personal hygiene, diarrhea prevention and treatment, malaria prevention and treatment, nutrition, vaccinations and vitamin A, pneumonia detection and treatment, family planning, STDs and HIV/AIDS, and tuberculosis. They also receive training in the appropriate use of medications for childhood malaria and childhood pneumonia (which they later receive through MOH channels). The Project and the MOH together provided the training. The MOH provided technical supervision of the *Socorristas* at the time the District EPI Team visits each village for routine immunization services every three months.

Prior to beginning *Vurhonga* IV there were 20 APEs who had been trained by the MOH or another NGO. During the life of *Vurhonga* IV, the Project trained 59 additional *Socorristas* and it also provided updated training to the 20 APEs already in the Project area at the outset and called them *Socorristas*.

Technical Interventions

Table 3 lists the eight interventions areas along with the corresponding Level of Effort (LOE) and End-of-Project (EOP) objectives for each.

⁸These Kit “C’s” are provided nationally by UNICEF. Unfortunately, the District supply offices were often out of stock with Kit C and the *Socorristas* were then unable to replenish their supplies. Two of the District Directors told us that they sometimes replenished the kits with stock from their own supply of medicines reserved for patients coming to the health facilities.

Table 3. Interventions, Level of Effort (LOE) and End-of-Project Objectives

Intervention	LOE	End-of- Project Objectives
Community-based Integrated Management of Childhood Illness		75% of caretakers know at least 2 danger signs ⁹ for seeking care immediately 60% of sick children offered increased fluids 60% of sick children offered continued feeding
Control of diarrheal diseases	20%	50% of caretakers wash hands with soap before food preparation, before child feeding, after defecation 70% children with diarrhea treated with ORT
Pneumonia case management	10%	50% of children with rapid/difficult breathing (suspected pneumonia) who were treated within 24 hours at a HF
Malaria prevention and case management	20%	75% of children with fever (suspected malaria) were treated within 24h at a HF 70% drug compliance for children treated for malaria. 50% of children sleep under an ever-treated ITN
Immunization	10%	80% children 12-<24m fully immunized
Nutrition	20%	70% of children 6-<10m receive complementary feeding 80% children weighed regularly in GMC 80% of caretakers of MN children receive nutrition counseling 70% of MN children received nutritious weaning foods/enriched food after nutrition counseling 70% of children who complete HEARTH achieve and sustain adequate (200g) or catch-up (400g) growth per month for at least 2m after HEARTH
Exclusive breastfeeding	5%	40% of children EBF for the first six months
Sexually transmitted diseases and HIV/AIDS	15%	50% of caretakers know at least 2 ways to prevent HIV/AIDS 50% of caretakers know at least 2 symptoms of STDs 50% of caretakers know at least 2 symptoms of HIV/AIDS
Ante-natal care		70% of the babies born to project mothers will be delivered by a trained health provider

Note: C-IMCI and ANC activities were embedded in the other Project activities

Principal Messages Employed

A set of detailed messages with appropriate drawings and materials were prepared for diarrhea, malaria, pneumonia, nutrition, immunizations, and STDs/HIV/AIDS. Examples of key messages for the first four of these topics are shown below.

Diarrhea

- Diarrhea is caused by germs on dirty hands, drinking water with germs, and lack of cleanliness around the house.
- Diarrhea can be prevented by the use of latrines, handwashing, keeping the house and yard clean, boiling water before drinking it, exclusively breastfeeding children during their first 6 months of life, and providing optimal nutrition to young children.
- Diarrhea can cause dehydration which can be fatal. Dehydration produces lethargy, a depressed fontanel (in babies), decreased urine output and tearing, and loss of skin turgor.

⁹Child not able to drink or breastfeed; child becomes sicker despite home care; child has fever or fast/difficult breathing; child looks unwell or is playing normally; child is lethargic or difficult to wake, vomits everything, or has convulsions.

- Dehydration is best treated with fluids, including breast milk, oral rehydration solution, and home-based fluids such as tea, coconut water, rice water, water with milled maize, or fruit juice.
- Take the child to the Health Center if the child's diarrhea does not stop after 7 days, if the child has fever with diarrhea, if there is blood with the diarrhea, if there is malnutrition with the diarrhea, if the diarrhea is severe, or the child won't drink or suckle.

Malaria

- Mosquitoes transmit malaria by biting one infected person and transmitting that infection by then biting another person.
- Mosquitoes can more readily reproduce during the rainy season when there is standing water, and this is when cases of malaria and childhood deaths from malaria are most common.
- Avoiding mosquito bites can reduce the transmission of malaria
- Fever, convulsions, and severe anemia can be signs of malaria, and early treatment is essential to reduce mortality. Children and pregnant women are at particular risk.

Pneumonia

- There are many infections of the upper respiratory track which are not life threatening which cause cough and fever. However, pneumonia is a leading cause of death in children and is caused by infection in the lungs. The symptoms are, in addition to cough and fever, are rapid breathing and (sometimes) retractions between the ribs when a child inhales.
- Children with malnutrition, children who are not completely immunized, children exposed to smoke, and children with HIV infection are more prone to develop pneumonia.
- If a child develops rapid breathing along with other symptoms such as cough, fever, or difficult respirations, the child may have pneumonia. Retractions between the ribs on inspiration are a sign of severe pneumonia.
- All cases of childhood pneumonia are life-threatening and need treatment with antibiotics from a trained health care provider as soon as possible because pneumonia is a bacterial infection, not a malady caused by spirits.

Nutrition

- Signs of severe malnutrition in children include thin arms and legs with a swollen belly, or swelling of the feet and forearms with weakness
- Malnutrition is caused by a lack of appropriate foods (including lack of breastfeeding) and frequent illnesses, especially diarrhea.
- The growth of children needs to be monitored.
- Good nutrition during pregnancy and exclusive breastfeeding during the first 6 months of life are important for the prevention of childhood malnutrition.
- After reaching 6 months of age, children need frequent feedings with porridge rich in nuts, oil and greens. The child also needs a varied diet including fresh fruits. Breastfeeding should continue through at least 2 years of age. When a child is sick or not hungry, the mother should encourage the child to eat.

Hearth Program and Other Nutrition-related Interventions

The Project staff has a 15-year experience working with the Hearth approach to identify and rehabilitate malnourished children. The Hearth approach involves mothers, families, and neighborhoods in rehabilitating their own malnourished children by using local food and know-how. The first goal of this approach is to convince mothers that the symptoms their children display are actually related to a lack of proper nutrition and not to spiritual influences, as was traditionally believed to be the case. The second goal of this approach is to not only rehabilitate the participating children but also reduce the prevalence of childhood malnutrition in the community and to energize the mothers and community to take broader, sustained action against malnutrition and poor health. The Hearth intervention takes place in the context of growth monitoring and counseling and micronutrient supplementation. In earlier *Vurhonga* CSPs, it was possible for the staff to identify practices of mothers with limited resources who had well-nourished children and analyze their feeding practices. This led to the development of a menu for rehabilitation which includes a snack and enriched porridge of millet, corn or cassava with oil, ground nuts, green leafy vegetables, bananas, sugar and oil. This provides each malnourished child with an extra 400 calories per cup for catch up growth, providing up to 800 calories per meal if the child is able to eat two cups.

Care Group Volunteers and their supervisors began the nutrition intervention topic and the related growth-monitoring program in August 2006, when they identified children whose weight for age was below the line on the standard growth chart used in Mozambique, meaning that they fell below the third percentile. These weighing sessions were in addition to the routine MOH GMC and were for children six months to three years of age. Mothers of these malnourished children were invited to participate in the month-long Hearth Program. The Hearth Program has the two-fold purpose of changing a mother's behavior and rehabilitating her child.

The mother brings her child six days per week for two weeks to a daily session of practice and supervision in the village. These sessions are led by the Animator and the Care Group Volunteers in the village. Part of the reason for the daily group sessions is for mothers to be able to experience what they refer to as the "brightening" of their children that they can readily attribute to the food the children have been receiving.

Mothers are expected to bring food and/or other materials to these group sessions. Some bring marula nuts (a widely available and highly nutritious nut from the marula tree), others bring dark green leafy vegetables, some bring firewood, some bring water, and some bring only cooking pots if that is all they have. Peanuts are provided by the Project for these Hearth sessions as an incentive for attendance.¹⁰

After two weeks of these daily Hearth sessions, as they are called, Care Group Volunteers visit the homes of these mothers and their children daily six days a week for another two weeks. They assist them in feeding their own children at home, where the mothers continue the new feeding practices they had learned during the previous 2 weeks in the group sessions.

¹⁰ Earlier *Vurhonga* Projects used to provide vitamin A, iron, and anti-parasitic medication (mebendazole) for children at the groups sessions, but this was later abandoned to keep the mothers from concluding that it was the medicines rather than the foods that had caused their child's improvement.

Children were weighed at the beginning and at the end of the month-long Hearth session and then at one, two six and twelve months following the conclusion of the Hearth session. The measurements were recorded in a Hearth Register by date. If a child still did not achieve at least adequate growth at the end of the month-long Hearth cycle, the child and the mother were requested to participate in the next Hearth Program when it was held again in the village. If the child did not show adequate growth after the second cycle, the child was referred to a health facility to be examined for possible underlying causes such as tuberculosis or HIV infection. The Animators tracked the children's growth on *Hearth* registers at six month and one year weighing/reinforcement sessions. Care Group Volunteers also followed up "graduates" of the Hearth Program.

Cross-cutting Strategies

Pastors' Groups: Pastors are locally influential people who are often consulted on many important personal issues. Each of the Supervisors was responsible for training four to five Pastors' Groups in addition to her role of supporting the Animators. The Project established 98 Pastors' Groups that met from time to time, but not on a regular basis as did the Care Groups. The Pastors' Groups were taught many of the same educational lessons that the Care Groups received. Sometimes the Animators held special meetings with congregations before or after church services to repeat or discuss health lessons when a member of the one of the Pastors' Groups requested it.

Partnerships

The Project worked in close partnership with the MOH, particularly at the district level. District-level MOH staff were fully informed and engaged at the outset of the Project about the Project's goals, objectives, and operational strategies. The MOH was engaged in working with the Project and with the communities in the selection, formation and utilization of *Socorristas*. The Project provided support to MOH staff members and also from time to time provided fuel and logistical support to the MOH for its EPI activities. The Project promoted the utilization of MOH services at EPI outreach sites, Health Centers, and at the district hospital. Toward the end of the Project, a partnership was forged with Family Health International, which supported the incorporation of community-based TB activities.

Collaboration of the USAID Mission in Mozambique

WR/M Child Survival team members in country worked in close collaboration with the local USAID mission throughout the course of the Project. Titus Angi was the USAID/ Mozambique Chief Technical Officer for the Project from 2005-2008 and was followed by Jeri Dible. Both received frequent communications from the Project staff. The Project staff also maintained congenial working relationships with other various key people at the USAID mission. In particular, the Project staff worked closely with a representative from the program office, Sheila Zacharias, and also with Federico Rocuts, an independent consultant for USAID who visited Chokwe and various field sites in September 2008.

World Relief Project staff members also attended a follow-up meeting at USAID followed by a separate one-on-one meeting with an independent consultancy team regarding proposals and policies for community-level health workers (APEs). Acting U.S. Ambassador to Mozambique, Mr. Todd Chapman, visited the Project field site in May 2009. After a presentation of the

Project's final evaluation results at USAID in July 2009 (which included other donors and partners), members of the USAID HIV team requested a follow-up meeting to discuss the Project and its results in greater detail. This provided an opportunity for the Project's Program Manager and Outreach Coordinator to meet directly with many new members of the USAID mission in Mozambique.

Data Quality: Strengths and Limitations

The Project staff members have a long (15-year) history of collecting and analyzing household-level data. They collected and analyzed their own household survey data.¹¹ The Project leaders are fully conversant with EPI INFO. The Project leaders are also fully conversant with sampling methodologies, and they use these in selecting households for ongoing monitoring by supervisors.

Many of us have observed that giving the Project staff the opportunity to collect and analyze by hand their survey data gives a strong sense of ownership and sense of achievement. This is an important component of capacity building. It is unfortunate that so many of the indicators which the Project adopted were not the standard indicators developed by the USAID Child Survival and Health Grants Program. Using standard indicators would have made the results more readily comparable.

Project Results

Progress toward Quantitatively Defined Objectives

Overall, the progress in achievement of quantitatively defined end-of-project targets has been quite impressive given the size of the target population and the logistical and socio-cultural challenges faced within the Project area. Even more impressive has been the rapid progress in increased indicator coverage. At the time of the mid-term evaluation (MTE), 12 of the 20 specific intervention objectives had already been achieved. Overall, 16 out of 20 targets set by the Project were achieved by the time of the Final Evaluation (Table 4).¹² With respect to the four targets that were not achieved, solid progress was achieved for three of the four. The increased levels of coverage were: 8%→44%, 3%→30%, and 17%→62%, all statistically significant increases ($p<0.05$).

The indicator with the least progress was the percentage of children sleeping under an insecticide-treated bed net (ITN). The coverage of this indicator rose from 8% to only 20% but was statistically significant ($p<0.05$). As is explained below, the MOH Health Centers were often lacking in their supply of ITNs. In addition, the baseline level of the indicator was measured during a high malaria prevalence period (in December) while the indicator was measured at the end of the project during a low malaria prevalence period (in June). These two factors account for at least some of the lack of progress on this indicator.

¹¹ The baseline survey was analyzed by hand. The mid-term and end-of-project KPC surveys were analyzed both by hand and by computer.

¹² Nine of the indicators monitored by the Project had no EOP targets. These are not considered in this discussion but are reviewed in the next section.

Table 4. Classification of End-of-Project Targets

Targets Which Were Achieved*
Percentage of caretakers who cited at least 2 danger signs for seeking care immediately
Percentage of children with diarrhea treated with ORT
Percentage of children with rapid/ difficult breathing (suspected pneumonia) treated within 24 hours at a HF
Drug compliance for children treated for malaria
Percentage of children 12-<24 months of age fully immunized (based on card) at the time of the survey
Percentage of sick children offered continued or increased foods during illness
Percentage of children 0-<6 months of age exclusively breastfed
Percentage of children 6-<10 months of age who received complementary feeding
Percentage of children weighed regularly (within the previous 3 months) in GMC sessions
Percentage of caretakers of malnourished children who received nutritional counseling
Percentage of malnourished children who received nutritious weaning/enriched foods after nutrition counseling
Percentage of children who complete the Hearth sessions will have achieved and sustained adequate or catch-up growth for at least two months after the completion of the Hearth session.
Percentage of mothers that gave birth with the assistance of a trained health care provider
Percentage of caretakers who cited at least 2 ways to prevent HIV/AIDS
Percentage of caretakers who cited at least 2 symptoms of STDs
Percentage of caretakers who cited at least 2 symptoms of AIDS
Targets Not Achieved
Percentage of children <2 years of age sleeping under an ever-treated ITN
Percentage of children with fever (suspected malaria) treated at a health facility within 24 hours
Percentage of sick children offered increased fluids during illness
Percentage of caretakers who wash hands before food preparation, before child feeding, and after defecation

** In two cases, achieving the target depended on the 95% confidence interval including the target value (for drug compliance in treatment of childhood malaria and delivery by a trained provider).*

Progress after the time of the MTE was for most indicators modest at best, however. For none of the indicators in Table 5 (see pp. 21-22) was there an increase of 15 or more percentage points between the level at the time of the MTE and at the time of the Final Evaluation. In fact, there was a decline in 4 of the 19 indicators shown in Table 5 between the MTE and the Final Evaluation. In contrast, between the baseline survey and the MTE survey, among the 19 indicators shown in Table 5 for which there was a measure for these two time periods, in only five was the progress less than 15 percentage points and in no case was there a decline below the baseline level. World Relief has experienced similar extremely rapid uptake of child survival interventions during the first 18-<24months of other child survival projects using the Care Group approach. When high coverage levels are already attained at the time of the MTE, of course, further substantial improvements in coverage are simply not possible.

Exclusive Breastfeeding and Nutrition

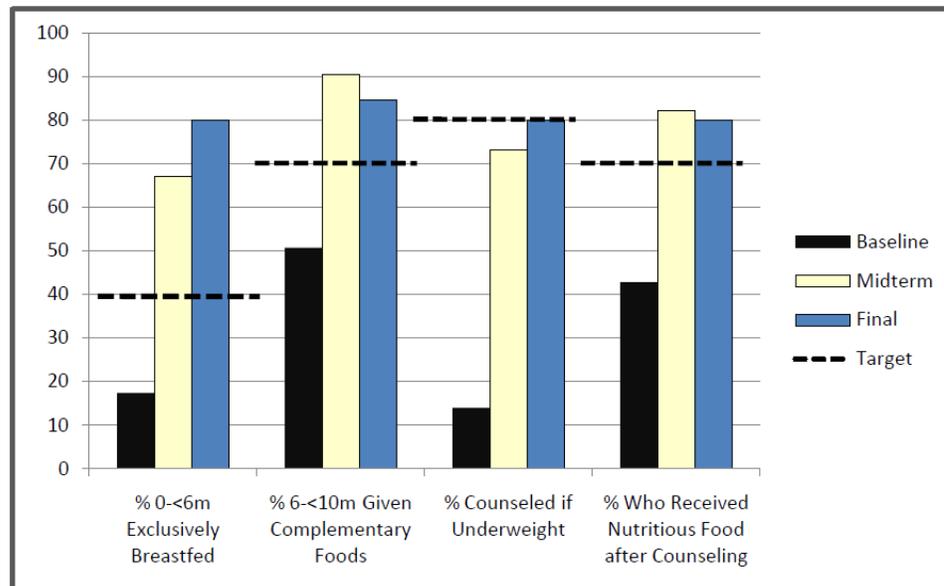
Project Objective: 1) 40% of children 0-<6m will be exclusively breastfed; 2) 70% of children 6-<10m will be receiving complementary feeding; 3) 80% of children will be weighed regularly during growth monitoring; 4) 80% of caretakers of malnourished (MN) children will receive nutrition counseling; 5) 70% of MN children will receive nutritious weaning foods/enriched porridge after nutrition counseling; 6) 70% of children who complete the Hearth sessions will have achieved and sustained adequate (200gm/m) or catch-up (400gm/m) growth for at least two months after the completion of the Hearth session.

Perhaps the most impressive achievements were in the area of nutrition (Fig. 4). The percentage of children 0-<6 months of age who were exclusively breastfed increased from 17% at baseline to 80% at the end of the Project, and there was a similar marked increase in the percentage of underweight children whose caretakers received nutritional counseling. Less marked, but

nonetheless noteworthy, was the increase in the percentage of children 6-<10 months of age receiving complementary feedings.

The MOH conducts growth monitoring at the time of EPI outreach services. This explains the high baseline coverage of growth monitoring (77% of children had been weighed in the previous three months at the time of the baseline KPC survey). However, only 14% of caretakers of children who were found to be malnourished at the

Figure 4. Achievement of Nutrition Targets Vurhonga IV Project, Gaza Province, Mozambique 2004-2009



time of the baseline KPC reported that they had received any nutritional counseling. Coverage of growth monitoring increased to 88% at the time of the final KPC survey, but more importantly the percentage of caretakers of malnourished children who reported that they had received nutritional counseling increased from 14% to 80%. The percentage of malnourished children who received nutritious weaning foods/enriched porridge after nutritional counseling rose from 43% at baseline to 80% at the time of the final KPC survey.

The Hearth Program was initiated in August 2006. Over the next three months, the Project identified 1,500 children 6-35 months of age¹³ who were below the third percentile of weigh-for-age on the Road to Health Chart and for whom Hearth Sessions were held. Of this total, 1,277 children and their mothers completed the two-week daily group sessions of the Hearth Program. The average weight gain per child during this period was 531 grams. At the time of follow up of these children two months after the completion of the Hearth Sessions, 83% of the children demonstrated adequate growth, exceeding the target of 70%. Overall, 39% exhibited catch-up growth (>400 grams of weight gain per month), 44% exhibited adequate growth (200-400 grams per month), and only 16% exhibited inadequate growth (<200 grams per month).

Based on the success of this program and because the Project leadership decided that malnourished children could be more effectively detected and treated on a one-on-one basis rather than in group sessions, the Project did not repeat official Hearth Program sessions during the second half of the Project but did continue nutritional monitoring and counseling. The nutrition messages were repeated during a second round in the second half of the Project;

¹³ While children 6-35 months of age were included in the Hearth Program, indicators for the program were measured only for children <24 months of age.

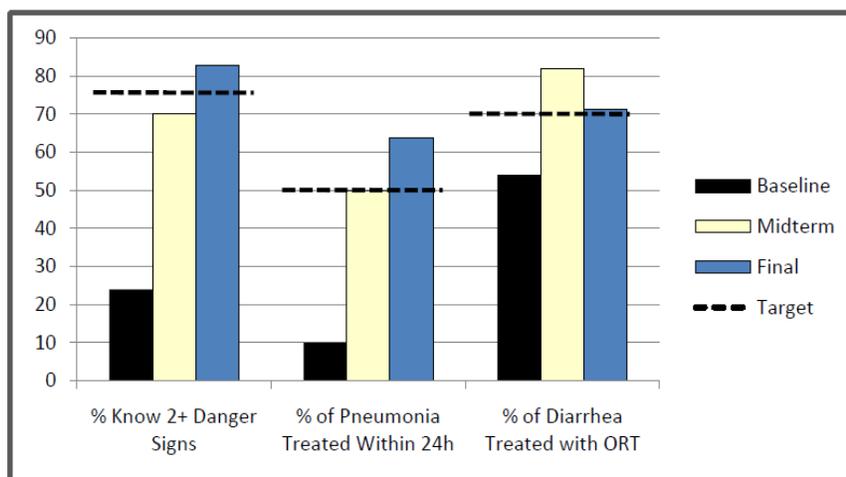
however, similar data was not available at the end of the Project since Hearth-related data was not kept after the MTE. It is important to underscore that all of the nutrition end-of-project objectives were achieved.

Control of Diarrheal Diseases

Project Objective: 1) 75% of caretakers will know at least 2 danger signs¹⁴ for seeking care immediately; 2) 60% of sick children will be offered increased fluids; 3) 60% of sick children will be offered continued feeding; 4) 50% of caretakers will wash their hands before food preparation, before child feeding, and after defecation; 5) 70% of children with diarrhea will be treated with ORT.

Awareness of danger signs of childhood illness among caretakers showed a marked improvement of 59 percentage points over the low baseline level (Fig. 5), as did the percentage of caretakers giving increased fluids (increasing by 35 percentage points) and continued feeding in the presence of illness (increasing by 43 percentage points), as shown in Table 5 (pp. 21-

Figure 5. Sick Child Management: KPC Findings



22). Provision of continued fluids for sick children did not reach the end-of-target objective of 60% even though it increased from 8% to 44%.

The percentage of caretakers who washed their hands before food preparation, before child feeding, and after defecation increased from 3% at baseline to 30% at the time of the final evaluation, reaching statistical significance but not reaching the end-of-project target of 50% (Table 5). The percentage of children with diarrhea who had been treated with oral rehydration therapy (ORT) increased from 54% to 71%, also exceeding the end-of-project goal of 70% (Figure 5). Thus, three out of five of the diarrheal disease-related indicators were achieved.

Pneumonia Case Management

Program Objective: 50% of children with rapid, difficult breathing (suspected pneumonia) will be treated within 24h at a health facility

There was a 54 percentage point increase in the percentage of children with suspected pneumonia obtaining treatment within 24 hours at a health facility, reaching a coverage level of 64% at the end of the Project compared to a target of 50% (Figure 5).

¹⁴ Child not able to drink or breastfeed; child becomes sicker despite home care; child has fever or fast/difficult breathing; child looks unwell or is playing normally; child is lethargic or difficult to wake, vomits everything, or has convulsions.

Control of Malaria

Project Objective: 1) 75% of children with fever (suspected malaria) will be treated within 24h at a health facility; 2) 70% of those children treated with an appropriate antibiotic for malaria will have complied with proper drug regimen; 3) 50% of the children less than two years of age will sleep under an ITN.

The percentage of children with suspected malaria who were treated at a health facility within 24 hours increased from 17% at baseline to 62% at the end of the Project, not quite reaching the target of 75%. Those who were treated with an appropriate antibiotic in compliance with the recommended protocol increased from 61% to 69%, almost reaching the target of 70%. During the course of the Project the first-line treatment changed from (1) chloroquine to (2) Fansidar (sulfadoxine and pyrimethamine) and Artesunate and then to Coartem. The confidence interval for the end-of-Project coverage level did include the target, so we consider this target to have been achieved.

As mentioned previously, there was minimal progress in ITN usage among children, increasing from 8% at baseline to only 20% at the end of the Project, below the target of 50%. The Project's activities related to the promotion of ITN use were hampered by the MOH's frequent lack of bed nets in the Project area. The Project promoted the use of ANC services at health facilities. Upon receipt of ANC services, women were supposed to have received ITNs for them and their children, but the ITNs were not always available.¹⁵

Of note, in addition is the fact that the baseline KPC survey was conducted in December, during a period of high malaria transmission (November to February) when the perceived risk of malaria is also high, while the MTE and FE KPC surveys were conducted in September and June, both during periods of low malaria transmission and low perceived risk (June-September). This could explain some of the low utilization of ITNs among those who actually have them that was observed at the time of the FE KPC survey. At the time of the FE KPC (in June 2009), only 36% of children in homes with ITNs used them.¹⁶ However, monitoring findings from November 2008 through February 2009 (carried out during home visits by Supervisors, not as part of the FE KPC) revealed that 88% of children in homes with ITNs had used them during the previous night. Among those who had ITNs, the percentage of children using them rose from 42% during the rainy season in 2004 (when the baseline KPC occurred) to 88% during the raining season in November-February 2008/2009.

Childhood Immunization Coverage

Project Objective: 80% children 12-<24m will be fully immunized.

Baseline levels of immunization coverage were already high and showed modest improvement over the life of the Project. Childhood immunization coverage (calculated as the percent of children 12-<24 months of age with all immunizations, based on card review) increased from 77% to 81%.

¹⁵ According to the MOH, the number of women coming to a MOH facility for their first ante-natal care visit rose by 10% during the life of the Project while in districts of Gaza Province where the Project was not working, the number declined by 10%. Thus, the Project does appear to have been relatively successful in promoting ANC.

¹⁶ The corresponding figure at the time of the baseline KPC was 41.7%.

Reproductive Health and HIV/AIDS Prevention

Project Objective: 1) 70% of the mothers will deliver with the assistance of a trained health provider; 2) 50% of caretakers will know at least two ways to prevent HIV/AIDS; 3) 50% of caretakers will cite at least two symptoms of STDs; 4) 50% of caretakers will cite at least two symptoms of AIDS.

The percentage of children (0-<24 months of age) whose birth was attended by a trained health provider (defined as a doctor or nurse) increased modestly from 59% to 68%. The confidence interval for the value of this indicator obtained at the FE included the target of 70%, so we consider this goal to have been reached. When trained TBAs are included in the definition of a trained provider, the increase is from 64% at baseline to 71% at the FE.

Baseline levels of knowledge about STDs and HIV/AIDS were low. The absolute increases in the levels of these three indicators were all above 60 percentage points. For all three of these indicators, the end-of-Project goal was exceeded by far (i.e., by 23 or more percentage points).

Table 5. Progress in Achievement of End-of-Project Targets

Program Indicators	Data Source	BL Value	Final Value	EOP Target
IMCI Percentage of caretakers with children 0-<24m who know at least two childhood illness danger signs for seeking care immediately [RC 12]	KPC	23.7%	82.7%	75%
CONTROL OF DIARRHEAL DISEASE Percentage of sick children 0-<24m who were offered increased fluids	KPC	8.2%	43.6%	60%
Percentage of sick children 0-<24m who were offered continued or increased feeding	KPC	17.5%	60.0%	60%
Percentage of caretakers with children 0-<24m who reported washing hands with soap before food preparation, before child feeding, after defecation	KPC	3.0%	29.7%	50%
Percentage of children 0-<24m who received ORT/ORS/home available fluids for diarrhea (BL includes all diarrhea cases, MT and Final include only diarrhea more than 3 times)	KPC	54.3%	71.2%	70%
PNEUMONIA Percentage of children 0-<24m who received treatment for suspected pneumonia from a trained provider within 24 hours (BL criteria for suspected pneumonia included cough and difficult breathing while MT and Final includes all cases of rapid/difficult breathing)	KPC	10.0%	63.6%	50%
MALARIA Percentage of children with suspected malaria (fever, convulsions or malaria) treated within 24 hours at a HF (BL criteria for suspected malaria included only fever)	KPC	17.4%	62.1%	75%
Percentage of caretakers with children 0-<24m treated at the HF for malaria in the past two weeks reporting drug completion (BL criteria for suspected malaria included only fever)	KPC	60.7%	68.5%	70%
Percentage of children 0-<24m who slept under an ITN the previous night [RC 9] (BL is an estimate based on 43 children who slept under a net, and that 56.3% of nets reported in the survey were dipped)	KPC	8.1%	20.0%	50%
IMMUNIZATION Percentage of children 12-<24m fully immunized (verified by card) before 24 months (Includes all children regardless of card presence)	KPC	77.3%	81.1%	80%
NUTRITION Percentage of children 0-<6m who were exclusively breastfed during the past 24 hours, based on dietary recall [RC 5]	KPC	17.4%	80.0%	40%

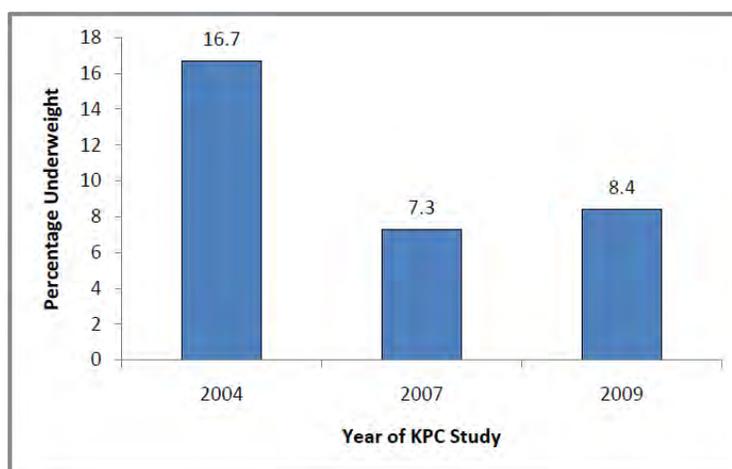
Percentage of children 6-<10m who received breast milk and complementary foods during the last 24 hours, based on dietary recall [RC 6]	KPC	50.7%	84.7%	70%
Percentage of children 0-<24m weighed in last 3 months (verified by card)	KPC	76.9%	87.7%	80%
Percentage of caretakers with malnourished children 0-<24m who received nutrition counseling	KPC	14.0%	80.0%	80%
Percentage of malnourished children 6-<24m who receive daily nutritious weaning foods/enriched foods after nutrition counseling	KPC	42.8%	80.0%	70%
Percentage of children who complete the Hearth sessions will have achieved and sustained adequate (200gm/m) or catch-up (400gm/m) growth for at least two months after the completion of the Hearth session. (Final value is from MTE 2007)	Hearth Data	0%	83%	70%
HIV/AIDS PREVENTION				
Percentage of children age 0-<24m whose births were attended by skilled health personnel (Doctor or nurse) [RC 3]	KPC	58.5%	68.0%	70%
Percentage of caretakers with children 0-<24m who cited at least two known ways of reducing the risk of HIV infection [RC 10]	KPC	10.3%	79.3%	50%
Percentage caretakers with children 0-<24m who cited two or more symptoms of STDs	KPC	11.4%	73.3%	50%
Percentage of caretakers with children 0-<24m who cited two or more symptoms of AIDS	KPC	24.8%	86.7%	50%

*More information, including numerators, denominators and confidence intervals are provided in the KPC Report in Annex 8.

Progress in Quantitatively Defined Indicators Which Were Not Project Objectives Nutritional Status

Changes in nutritional status provide further evidence of the success of the nutritional interventions. At the time of the baseline survey, 17% of children 0-<24 months of age were underweight (defined as less than the third percentile weight-for-age). By the time of the MTE, this percentage declined to 7% and remained at 8% at the time of the final evaluation (Figure 6).¹⁷

Figure 6. Children 0-<24m Underweight for Age (below 3rd percentile): KPC Findings



Other Measures of Immunization Coverage

The immunization indicator used by the Project was the percentage of children 12-<24 months of age (regardless of their card status) who were completely immunized on the day of the survey according to information recorded on

¹⁷ At the time of the baseline KPC, the only nutritional indicator measured was whether or not the child fell below the line on the Road-to Health Chart, indicating a level of under-nutrition less than 3% of the median weight for age. At the time of the MTE and Final Evaluation, actual weight and age were recorded, making it possible to calculate the percentage of children with moderate and severe malnutrition based on WHO standards. These latter measures are noted in Annex Table XX.

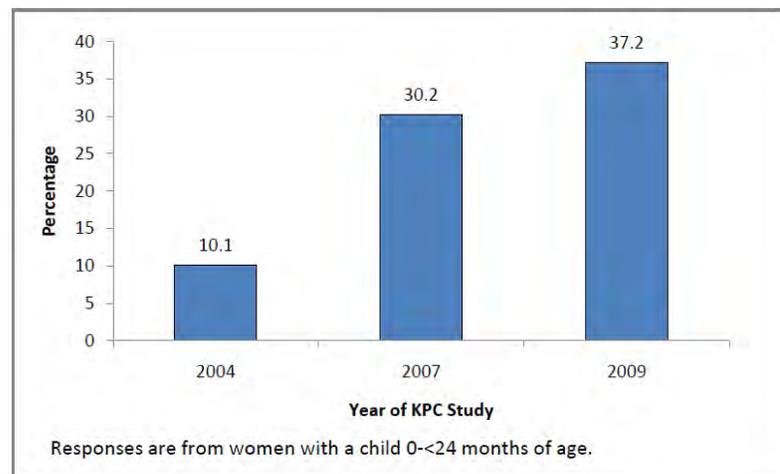
the immunization card. The Rapid CATCH¹⁸ indicator calls for dividing the number of children 12-<24 months of age who have been fully vaccinated by their first birthday by the number of children in the same age group with vaccination cards. For the MTE and Final KPC surveys, the Rapid CATCH (RC) indicator was able to be calculated correctly and it increased slightly from 67.5% to 68.3%. Unfortunately, the baseline measure is not able to be calculated correctly; therefore, comparison to the beginning of the project is not possible.

There is a similar problem with the measles RC indicator. The RC calculation calls for dividing the number of mothers/caretakers who recalled that their child received a measles vaccination by the total number of children 12-<24 months of age. The KPC surveys did not ask mothers whether their child had received a measles vaccination. Instead, the Project recorded the number of children 12-<24 months who had verified measles vaccinations (documented on the vaccination card) and divided this number by the number of children 12-<24 months of age. The measles coverage rate using this method dropped slightly from 95.5% at the time of the Baseline KPC to 83.0% at Final. However, this difference is not statistically significant. Regardless of how changes in childhood immunization coverage are measured, we can conclude that baseline levels were already high and minimal, if any, increase in coverage was achieved during the life of the Project.

Birth Spacing

The percentage of children 0-<24 months of age who were born at least 24 months after the previous surviving child is a Rapid CATCH indicator, but was not measured at the time of the baseline KPC survey. There was a minimal non-significant improvement in this indicator between the MTE and the Final Evaluation, from 69% to 73% as shown in Table 6. However, as shown in Fig. 7, there is strong evidence of increased use of modern family planning among women with a child 0-<24 months of age – from 10% to 37%, which is a statistically significant increase.

Figure 7. Changes in Use of Modern Contraceptive Methods: KPC Findings



Handwashing

The proper calculation of the handwashing indicator for the Rapid CATCH is the percentage of mothers of children 0-<24 months who report that they wash their hand with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has

¹⁸ The Rapid CATCH (core assessment tool on child health) is a set of questions to be used in household surveys which is intended to provide a snapshot of the target population in terms of child health. The measurement of these indicators is required of all USAID Child Survival and Health Program grantees even though some of the indicators may not be relevant to the goals and objectives of a particular project.

defecated. Unfortunately, at the time the baseline KPC survey was analyzed, this indicator was calculated by hand in a different fashion. The original surveys are not available now for further tabulation, and the data were not transferred into an electronic format. (The calculation of baseline indicator did not include any information on whether or not the caretaker washed her hands after attending to a child who had defecated.) At the time of the MTE and the final evaluation, the percentage was quite low (7% at both times), as shown in Table 6.

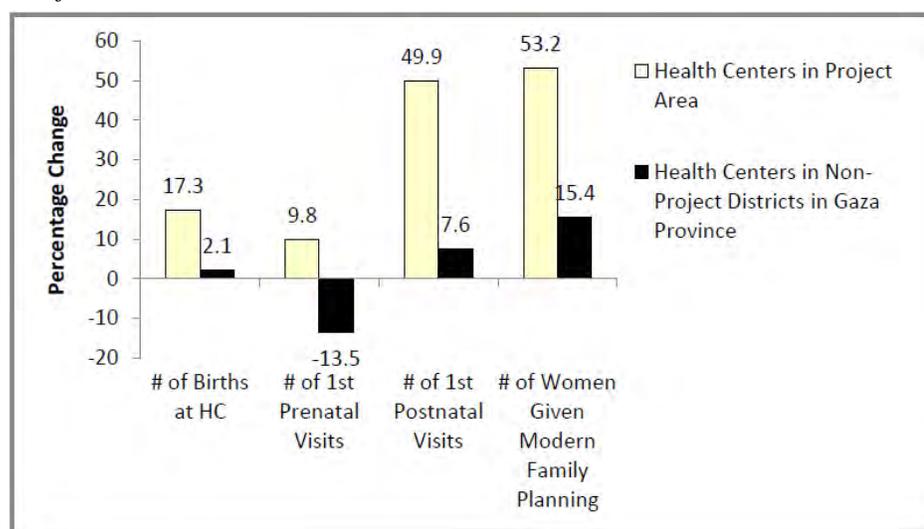
Table 6. Indicators Which Are Rapid CATCH Indicators but not Formal Project Objectives

Rapid CATCH Indicators	Data Source	BL Value	Final Value
Percentage of children 0-<24m who were offered increased fluids and continued or increased feeding during illness [RC 13]	KPC	2.9%	36.4%
Percentage of caregivers of children 0-<24m who report washing their hands with soap/ash at the four critical times. [RC 11] (BL value excludes after helping a child who has defecated)	KPC	3.0%	6.7%
Percentage of children age 12-<24m who are fully vaccinated before the first birthday [RC 7] (BL value is from the MT KPC, September 2007)	KPC	67.5%	68.3%
Percentage of mothers with children 0-<24m who reported receiving at least two tetanus toxoid injections before the birth of their youngest child [RC 4]	KPC	56.1%	88.0%
Percentage of caretakers with children age 12-<24m who recalled that their child received a measles vaccine [RC 8] (Includes measles vaccines verified by card divided by all children regardless of card presence)	KPC	95.5%	83.0%
Percentage of children age 0-<24m who were underweight (-2SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population) [RC 1] (BL includes children outside of the normal curve on the Mozambique health card)	KPC	16.7%	10.4%
Percentage of children age 0-<24m who were born at least 24 months after the previous surviving child [RC 2] (BL value is from the MT KPC, September 2007)	KPC	69.0%	73.0%

Evidence Regarding Utilization of Ministry of Health Facilities

Implicit in the goals of the Project was the increased utilization of health facilities in the Project area. These were mostly Health Centers. Some had beds for keeping patients overnight although there were no hospitals in the Project area as we think of them- places where surgery can be performed and so forth. The local population refers to the Health Centers as hospitals.

Figure 8. Changes in Utilization of MOH Facilities in Project and Non-Project Areas, 2004-2008



The Gaza Province MOH office kindly provided the Final Evaluation Team with data regarding the number of patients seen per district at its Health Centers. Fig. 8 compares the increase in

utilization in the five districts which made up the Project area with the utilization in the other six districts in the Gaza Province where the Project had not been working between 2004 and 2008. These percentage changes in the number of deliveries, first pre-natal visits, first post-natal visits, and visits to provide modern family planning are all far greater in the Project area than in the non-Project area in the province. The findings for family planning also reinforce the increased utilization of family planning identified by the KPC surveys.

Qualitative Evidence of Progress in Achievement of Project Objectives

As we describe in greater detail in Annex 11, 27 focus group discussions were held in nine randomly picked communities deemed to be representative of the Project area. There, we interviewed village leaders, Care Group Volunteers, and mothers from the same communities. Village leaders were recruited to make up one focus group, Care Group Volunteers were recruited to form another focus group, and mothers were recruited to make up a third focus group in each of the nine villages visited over a three-day period. We also interviewed Animators and, when present, *Socorristas* in each of these nine villages. MOH officials at each of the five districts where the Project functioned were also interviewed.

These assessments provide strong evidence that the Project had functioned effectively at the village level and had done an excellent job of engaging the MOH and the village leaders. It had developed a strong teaching and supervisory system that led to highly effective functioning of the Care Groups and the Care Group Volunteers. There was strong evidence that the Project had brought about major changes in knowledge and practice of key child survival indicators, as the quantitative coverage data indicates. In terms of promotion of C-IMCI, there was strong evidence from these interviews that the Project, through its system of training 4,071 Care Group Volunteers to share educational messages in each household in the Project area, had achieved major changes in village-level health-related behaviors. Households were keeping their yards and houses much cleaner, and they were installing and using latrines for the first time. They were washing their hands. They learned about the importance of nutrition for child health, and there were many dramatic stories of rehabilitation of severely malnourished children with locally available foods (see Annex 15). Making *Socorristas* available in many of the Project villages provided ready access to antibiotic treatment for childhood malaria and pneumonia and assistance in determining whether referral was warranted or not.

The qualitative assessment also provided evidence that the benefits of the Project are likely to be sustained in a strong way for the near-term at least. Many of those interviewed indicated that they thought the village-level work would continue, now that villagers have learned new skills and practices and how to teach these to others. The Village Health Committees and the *Socorristas* were fulfilling a felt need in the community, and they had earned the full support of the MOH. No additional funding or assistance is required for them to continue functioning. Now that villagers have a better understanding of the causes of common serious diseases, they are motivated to prevent them when possible and to access appropriate modern health care services when they do develop. In this sense, women, village leaders, and even men in the communities have now become empowered to improve their health and the health of their children. Those participating in the interviews and FGDs provided numerous examples of this.

An unanticipated but highly positive outcome of the Project is strong evidence of increased social cohesion and a spirit of wanting to work together to improve everyone's health in the community, especially those who are the poorest. Traditional beliefs related to disease causation often have an element of blame, jealousy or revenge built into them. If someone becomes sick, then traditional beliefs require that some other individual was the cause of the illness. Therefore interpersonal antagonisms would often flare up when serious illness struck. Now that people's understanding of the causes of common serious illnesses such as childhood malnutrition, malaria, pneumonia and diarrhea were brought closer into accordance with the modern scientific understanding of disease causation, there was no longer a need for blame, jealousy or revenge. Furthermore, once people realized what they could accomplish by working together, they became motivated to do more. Thus, many of those interviewed commented on the increased social cohesion that had occurred in the communities and how community members developed a sense of community belonging. This led to people helping those who were either resisting positive change or who lacked food and other essentials for good health.

The Ministry of Health officials we interviewed clearly saw that the Project was meeting an important need in their districts – namely, to serve as the missing link between the MOH health facilities and the communities. The MOH officials realize that the MOH does not have the Project's capacity to build partnerships with the communities, promote behavior change at the community level, and build community-based programs for treatment and referral. Therefore, it recognized that the Project was filling an important void. As one MOH official noted, "The Project is doing what the MOH could not do on its own."

Evidence Related to Under-5 Mortality Reduction

We know from other studies that increasing coverage of key child survival interventions within high-mortality populations will reduce under-5 mortality. Therefore, since the Project has demonstrated marked improvement in coverage of key child survival interventions, it is plausible to presume that the under-5 mortality rate in the Project population has declined as well as a result of Project activities.

The Lives Saved Tool, developed at Johns Hopkins University, estimates the number of lives saved by the project or program based on estimated baseline under-5 mortality rates, the number of children in the project or program area, and the changes in coverage of key child survival intervention which they project or program was responsible for. Using this tool, the Project saved an estimated 534 lives of under-5 children, and the overall decline in under-5 mortality was estimated to be 21%.

In the course of carrying out focus group discussions and interviewing individuals in the villages and in the MOH, we heard many comments about dramatic reductions in child mortality. The Project staff itself estimates that there was a 40-80% reduction in the number of child deaths from the time the Project began until it ended. In one village we visited, we were told that it had 15 child deaths in 2006, 12 in 2007, five in 2008, and none in the first six months of 2009. Two mothers shared with us the following comments:

The mortality of children is now reduced. Before the Project came to our village, children were dying from malaria. The parents and traditional healers would try their best, but the children would still die.

Before, many children were dying. Now, when a child has fever they wet a *capalana* [skirt worn by Mozambiquan women] through the night and take the child to the health facility the next morning. Before, when children would get sick they would not take the child to the Health Center.

During interviews with community members conducted at the time of the Final Evaluation, numerous comments were made about impact on child mortality (see p. 8 in Annex 15). The Project's field supervisors noted that they had observed fewer child deaths from malaria, diarrhea and malnutrition since the Project began (see p. 73, Annex 16). Now, they report, most of the child deaths are in children whose mothers are HIV-positive, so they presume these children are dying of AIDS-related conditions. Increasing access to treatment for childhood malaria (especially as a result of having *Socorristas* in the communities able to provide this) has helped to reduce the number of child deaths from malaria, they say. They think that improved nutrition of the children, cleaner homes, and better hygiene have all contributed to fewer child deaths from diarrhea. It is apparent to the Project staff and to community members that the decline in child mortality is directly attributable to the Project's activities at the community level.

Aside from indirect and qualitative evidence, however, it is of course important to review any direct evidence about the mortality impact of the Project. Vital events registration is one of the activities which Care Group Volunteers perform. When the Care Groups meet, the Care Group Volunteers report any births and deaths which occur. When a child death is reported, a Supervisor makes a visit to that home at a later date to determine what the cause of death appeared to have been. Unfortunately, the Project chose not to activate this aspect of the Project activities until half-way through the life of the Project, after most of the gains in coverage had already been achieved.

Figure 9. Estimates in Under-5 Mortality in Vurhonga IV Project Areas, 2005-2009, in Comparison to MDG for 2015

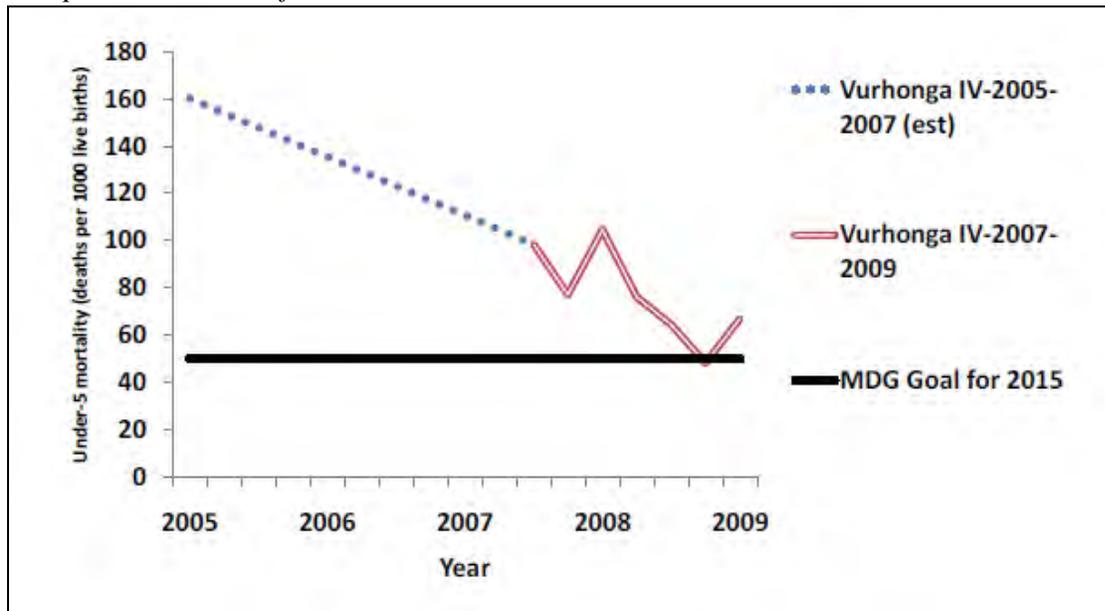
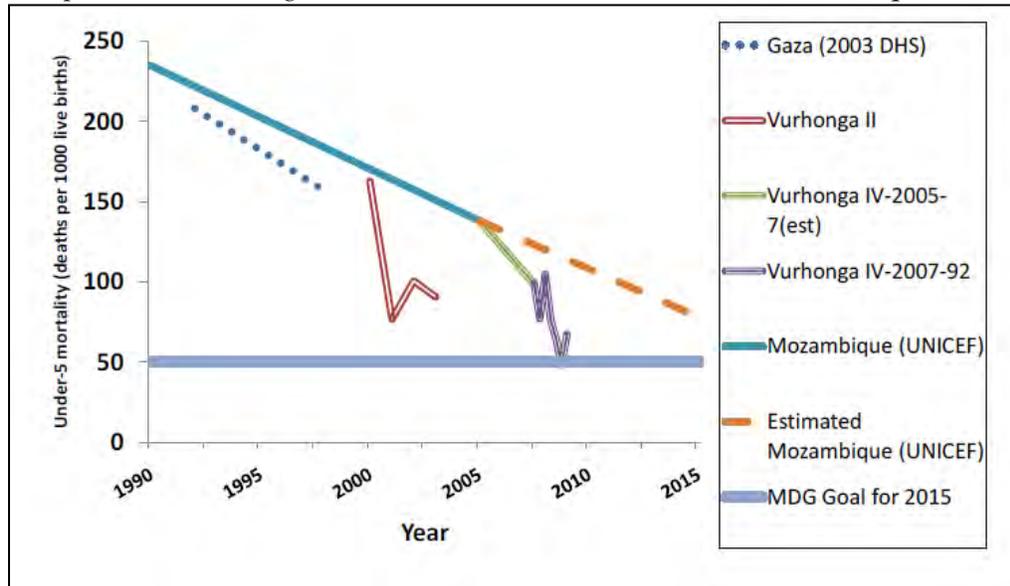


Figure 10. Changes in Under-5 Mortality in Vurhonga II and Vurhonga IV Project Areas in Comparison with Long-Term Trends in Gaza Province and Mozambique



Nonetheless, these data, as shown in Fig. 9, are strongly suggestive of a substantial mortality impact as a result of Project activities. There are no baseline measures of under-5 mortality in the Project area. We assume that the baseline level is the same as that for Gaza Province. The 2003 DHS estimated this to be 156 deaths per 1000 live births, and the 2008 UNICEF data indicate that it was 165 in 2008 for Mozambique.¹⁹ It seems quite likely that the baseline under-5 mortality rate in the Project area was even higher than this, considering that the Gaza Province has a higher level of poverty than the country as a whole and the Project area is the most isolated, sparsely populated, and economically disadvantaged area of the province.²⁰

At the time the Project began collecting vital events from the Care Group Volunteers in the third quarter of 2007, the overall under-5 mortality rate in the Project area was 98. Over the next 18 months, according to the vital events collected by the Care Group Volunteers, the under-5 mortality declined by one-third (31.6%), to 67. Of particular note here is the finding that the Project appears to have achieved, or came close to achieving (depending on how strictly one wants to define this), the 2015 Millennium Development Goal for Children (MDG 4) in Mozambique of an under-5 mortality rate of 50.²¹ These findings gain further credence in the light of previous demonstrations of the effectiveness of the Care Group model in reducing

¹⁹ UNICEF, 2008 (*Tracking Progress in Maternal, Newborn and Child Survival*. New York, UNICEF). This is available at: <http://www.countdown2015mnch.org/reports-publications/2008report>. See also: http://www.ine.gov.mz/inqueritos_dir/mics/mics2008.pdf.

²⁰ For instance, the 2003 Mozambique DHS survey reports that 54% of households in Gaza Province are female-headed compared to 26% for the entire country; only 36% of homes have sanitation compared to 51% nationally; 23% of homes have access to water within a 15-minute walk compared to 36% nationally, and 9% of the population has completed at least primary school compared to 13% nationally (MOÇAMBIQUE: Inquérito Demográfico e de Saúde 2003. Instituto Nacional de Estatística. Maputo, Moçambique. Ministério da Saúde. Maputo, Moçambique. MEASURE DHS+/ORC Macro (Assessoria) Junho 2005, Chapter 2, pp. 15-30.)

²¹ UNICEF established this goal: UNICEF, 2008 (*Tracking Progress in Maternal, Newborn and Child Survival*. New York, UNICEF). This is available at: <http://www.countdown2015mnch.org/reports-publications/2008report>.

mortality in nearby districts, when independent mortality assessments confirmed the findings obtained from vital events registration of Care Group Volunteers.²² These same findings regarding trends in under-5 mortality in the Project area are shown in a broader context in Fig. 10. Here, the known and projected trends in under-5 mortality in Mozambique and in the Gaza Province are shown.

Discussion of Results

Contribution toward Objectives

The *Vurhonga* IV Child Survival Project has successfully scaled up an effective model of community-based primary health care for improving child health in a challenging part of one of the poorest countries in the world, where the population of five health districts consists of one-quarter of a million people. Success consists of achieving the Project's original goal and strategic objectives. Evidence of success comes from multiple sources: the KPC surveys, interviews with community and MOH officials, and information from the community-based health information system (C-HIS).

Referring back again to Table 1 on page 3, let us quickly review the project's achievements. As called for in Strategic Objective 1, the capacity of the health system is now stronger because of the Project's success in helping the MOH and the communities to build a stronger and more effective preventive and curative health system that extends to every household. The Project's engagement with the communities made it possible for 59 communities without ready access to a Health Center to construct and operate a Village Health Post. There has been improved knowledge and skills of health care providers as a result of the training of 59 new *Socorristas*, made possible through the support of the Project. The Care Group Volunteers working within their Care Groups, the Animators, the *Socorristas*, and the Village Health Committees, have all created a functioning community-based health information system (C-HIS) which makes it possible to detect epidemics²³ and to track year-by-year changes in mortality.

As we have seen, there has been improved utilization of MOH health facilities relative to utilization of MOH health facilities of other parts of Gaza where the Project was not working. And, of course, there has been remarkable progress in developing routine monitoring and surveillance at the community level. Intermediate Result 2 (p. 3) calls for improved drug supplies and management in the MOH health facilities. The Project did not appear to target this objective even though it was part of the DIP, but the Health Facilities Assessment conducted in 2007 documented that drug supplies were good in the Project area. Intermediate Result 1 (p. 3) calls for "improved knowledge and skills of health providers." In addition to providing training for the *Socorristas*, the Project did provide a number of training and orientation sessions for MOH staff members working in the Project area. By training and placing *Socorristas* in the villages with drugs provided by the MOH, the Project has in fact improved the availability of drug supplies to the Project population. The very fact that the MOH was willing to share its own drug supplies at

²² Edward A., Ernst P., Taylor C., Becker S., Mazive E., Perry H. 2007. Examining the evidence of under-five mortality reduction in a community-based program in Gaza, Mozambique. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 101:814-22.

²³ The C-HIS in fact did detect one epidemic of cholera which was confirmed by the MOH. The early detection of this and engagement of the MOH led to prompter control that probably would have occurred otherwise.

the Health Centers with the Socorristas when the Kit C supplies were not available suggests that the good will between the Project and the MOH helped to get drugs out to the villages.

The evidence of improved prevention and care-seeking practices at the household level for C-IMCI, as called for in Strategic Objective 2, is notable. There has been a marked improvement in the utilization of oral rehydration fluid for diarrhea and in the early treatment with antibiotics at health facilities for malaria and pneumonia. There has been increased utilization of health facilities (as expressed by increased utilization of MOH facilities in the Project area compared to MOH facilities in adjacent non-Project areas as well as by the large number of patients treated by the *Socorristas*, including cases of childhood malaria and pneumonia). Mothers, caretakers, Care Group Volunteers, Animators, and *Socorristas* have greatly improved their knowledge and practice of healthy behaviors, including those that promote good nutrition, rehabilitate malnourished children, prevent diarrhea through improved household cleanliness, handwashing, latrine usage, usage of dish racks, and boiling of water. Community-based health systems have been created and now function effectively through the Care Group system, the Village Health Committees, and the care provided at village Health Posts by the village-based *Socorristas*.

Strategic Objective 3 called for the establishment of a Scale-squared Learning Center for the provision of training in best practices. This Center was established, and it did provide training for the staff, including 129 Animators who stayed there for three months as part of their initial training. During the second year of the project, World Relief held a workshop at the Center on the Care Group model. This was attended by representatives from several other NGOs within and outside Mozambique. Many other groups also used the center for training. During the fourth year of the Project, a workshop was held at the Center for district health personnel to improve linkages between the C-HIS and the HIS. The workshop included MOH personnel from the Project's five districts plus those three districts reached previously by Vurhonga I and Vurhonga II, all in Gaza province. Most recently, the training center has been used to host key meetings to discuss national scale up of the Vurhonga community-based health model, first with the local USAID mission and secondly with a group of individuals from MOH, USAID, CDC, and WHO visiting the Project after the Final Evaluation exercise to place in the Project area in July 2009.

One can make a reasonable conclusion that, because of all of the aforementioned achievements, the Project's overall goal of reducing the disease burden in women and children has been achieved. We do have substantial direct and indirect evidence of reduced disease burden in children. The direct evidence of a significant under-5 mortality impact comes from the vital events collected by the Care Group Volunteers. An analysis of this information by the Final Evaluation Team demonstrates a drop of under-5 mortality by one-third during the last 2 years of Project operations. A reasonably conservative estimate is that the under-5 mortality declined by half during the life of the Project. Unfortunately, baseline under-5 mortality levels are not available at present.

There is also strong evidence of a significant under-5 mortality impact based on the frequent comments of persons in the communities who were visited during the final evaluation who said that there are now fewer child deaths than before the Project began. Then, of course there is substantial indirect evidence of under-5 mortality decline as well. First of all, there is strong evidence that levels of childhood nutrition improved. This evidence is based on anthropometry as

well as evidence of improved nutritional practices (exclusive breastfeeding in the first 6 months of life, complementary feeding for children 6- <10 months of age, improved feeding practices for sick children, and rehabilitation of malnourished children following introduction of Hearth sessions). The increased mortality risk among young children with under-nutrition is now well-established. So, the presentation of evidence of improved nutritional status in and of itself provides strong indirect evidence of mortality impact.

Finally, there is strong evidence of increased coverage of key child survival indicators unrelated to nutrition. This evidence includes increased access to treatment for malaria, diarrhea and pneumonia as well as improved hygiene (as demonstrated by increased use of handwashing and increased presence of well-maintained latrines, dish racks, household cleanliness).

The Project did not include any direct measure of the health of women of reproductive age among its indicators. However, one could reasonably conclude that the dramatic 3.7-fold increase in use of modern family planning among women with a young child would lead to improved health simply by not exposing as many women to the health risks of pregnancy. Furthermore, the knowledge that these women obtained regarding disease prevention and treatment for their children will lead to healthier behaviors and more informed health care utilization for themselves as well.

How Were These Results Achieved?

Many elements were essential for the achievement of the above results. Among them, the most important were the Care Group model, the quality of the Project leadership and staff, and the engagement of communities and women as partners.

*The Care Group Model*²⁴

The *Vurhonga* staff developed the Care Group model initially and has been refining it now in this geographic area for the past 15 years. Because of the demonstrated success of this approach in previous *Vurhonga* child survival projects, the approach has spread to many other settings around the world (Table 11), and evidence for its effectiveness in reducing under-5 mortality has been published in a peer-reviewed journal²⁵ and highlighted in the 2008 UNICEF State of the World's Children report.²⁶ The achievements of the current Project once again demonstrate the robustness and resilience of the Care Group model on a larger scale using one additional supervisory level of field staff that had not been present in *Vurhonga* I-III. The Care Group model is effective because it is a simple and straightforward way of engaging local people in their health problems, relying on peer-to-peer education among women, and ensuring that every household is engaged.

²⁴ A full description of the Care Group model as developed by World Relief has been written: Laughlin, M. and World Relief Health Team (2004). *The Care Group Difference: A Guide to Mobilizing Community-Based Volunteer Health Educators*. Baltimore, MD, World Relief. It is available at http://www.caregroup.org/storage/documents/Diffusion%20of%20Innovation/Care_Manual.pdf.

²⁵ Edward A., Ernst P., Taylor C., Becker S., Mazive E., Perry H. 2007. Examining the evidence of under-five mortality reduction in a community-based program in Gaza, Mozambique. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 101:814-22.

²⁶ UNICEF, 2008 (*Tracking Progress in Maternal, Newborn and Child Survival*. New York, UNICEF). This is available at: <http://www.countdown2015mnch.org/reports-publications/2008report>.

Table 7. Diffusion of the Care Group Model to Other Organizations and Countries

Organizations that Have Implemented the Care Group Model		Countries Where the Care Group Approach Has Been Implemented
Africare	Medical Teams International	Burundi
American Red Cross	Salvation Army World Service Organization	Cambodia
Catholic Relief Services	Samaritan's Purse	Guatemala
Concern Worldwide	Save the Children	Indonesia
Curamericas Global	SurfAid	Liberia
Food for the Hungry		Malawi
		Mozambique
		Rwanda

The Quality of the Project Leadership and the Team

Dr. Pieter Ernst is an extraordinary leader. He is a physician and surgeon originally from South Africa who has a remarkable insight into the local culture, human relations, and leadership (Fig. 11). He is also a world-class practitioner of community-oriented public health. He is an inspiring leader – he inspires the local people he recruits to work with him to have confidence in themselves. He is also an excellent manager, delegator of responsibility, and has a gift for numbers, statistics, and the details of operational programming.

He is dedicated to the people of the area, to their empowerment, to their development, and to their improved health. He has been living in Chokwe for almost two decades now. Fifteen years ago, he recruited and began working with what is now the *Vurhonga* Project staff. He has been working with the Project staff for 15 years now. Dr. Ernst's vision, long-term commitment to the people of Chokwe, his leadership, and the quality of people he has attracted and developed are major reasons for the success of the *Vurhonga IV* Project.

The Project staff that Dr. Ernst has recruited and developed is equally extraordinary (Fig. 12). this group of people has stuck together through thick and thin over the past 15 years. There was no turnover of paid fulltime staff during the period of Project operations from 2004-2009 except for two staff members who died and one who had to resign to assist her husband. This is an extraordinary achievement in light of the difficulty of the work and the personal sacrifice required by the work. The spirit of teamwork and mutual support that has developed within this remarkable group of people has been an inspiration to

Figure 11. Dr. Pieter Ernst, Developer of the Care Group Model and Leader of Vurhonga I-IV



Figure 12. Vurhonga IV Supervisory Staff and HQ Support



witness. Our Final Evaluation Team spent quite a bit of time with the Project staff at the beginning and at the end of the evaluation. And a number of the staff members accompanied us during our three day visit to the field for interviews with community members. The rapport which the staff had with the community members, with the community leaders, and with the MOH staff was also quite remarkable. After the Final Evaluation Team selected the villages where we wanted to go interview, the field staff was effective in getting the word to the villages and, when we arrived in these communities a few days later, we were met with a prepared village and the people necessary to conduct our interviews with the community leaders, Care Group Volunteers, women in the village, and others collaborating with the Project.

One of the unique aspects of the Project supervisory staff is that they all have worked in the role that they later supervised. All of the Project staff started out as Animators or Care Group Volunteers in the *Vurhonga I* Project, and they later gradually moved into supervisory roles.

Empowerment and Building Partnerships with Communities

The third critical factor which has led to the success of the Project has been its capacity to empower those in the community, especially women, and to create an opportunity for local people to participate in a way that is motivating and meaningful for them. The Care Group model helps in certain aspects of this process, but the process of empowerment and building partnerships with communities involves more than the Care Group model. It involves a way of working with local people which gives them respect and dignity and then becomes a self-reinforcing dynamic. When community leaders are treated with respect as partners at the outset, they later come to provide crucial support for the Project when difficulties arise. One of the Care Group Volunteers expressed the sentiment of many people we heard from at the time of the focus group discussions when she said:

I was a shy person and I didn't like visiting other people. Now, as a Care Group Volunteer, I have developed strong relationships with my neighbors, and this has helped me to be friendlier to other people and to help them.

Similarly, another community member who had become an Animator told us:

I feel like my life has changed because I feel respected in the community. Before the training, I felt like any other person in the community. Now, everywhere I go, people know me and respect me, and they want to adopt healthy behaviors.

Other Contributing Elements

Other elements also made important contributions to the Project's success, but space limitations prevent a full discussion of them. Among these is the overall framework for the Project established by the USAID Child Survival and Health Grants Program as well as the managerial and technical support provided by World Relief Headquarters. Also of critical importance were the well-designed and simplified educational messages and the pedagogical process for teaching these messages to the staff and to the mothers in the community. The initial process for establishing cooperation with the MOH and with the community leaders was critical as well. All of these elements – when combined with the Care Group model, a high-quality Project staff, community partnerships, and empowered people – enabled the outstanding results identified by the Final Evaluation Team to be achieved by this Project.

The Influence of the Local Context on the Relationship between Activities and Outcomes

What features of the environment contributed to or inhibited progress made by the Project? In one sense, the firmly entrenched traditional beliefs regarding causes and treatments of life-threatening conditions – together with high levels of illiteracy – made it more difficult to promote health behaviors and practices. On the other hand, the Final Evaluation Team sensed that the Project arrived at a particularly historic moment in the cultural life of the population. The people seemed to be ready finally to accept the possibility that their long-held traditional beliefs were no longer appropriate for the world in which they now find themselves. Thus, the dramatic changes in beliefs and behaviors that we were told about and that the monitoring and evaluation data confirm may not have been as dramatic had the traditional beliefs in the area not been as entrenched.

The dispersion of the population and the lack of transportation is a particular challenge, both for the Project staff and for the people themselves. Obtaining transport to reach health facilities when needed is a major challenge. The Project was able deal with these challenges by providing motorbikes to its field staff and developing a policy that they would stay in the posts for three weeks at a time.

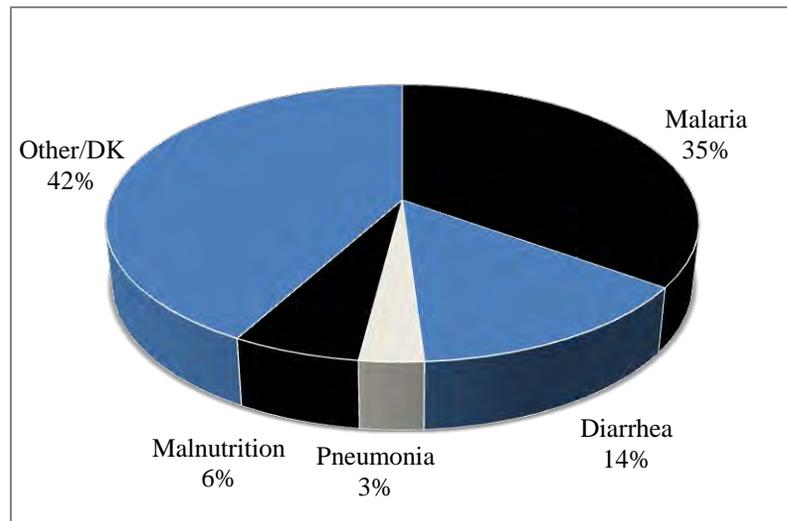
Role of Key Partners in Helping or Hindering the Project to Achieve the Results It Did

The MOH was the key partner in this Project. It certainly played an important enabling role in supporting the Project in its activities. By all accounts, the MOH saw the need for and the value of the community-based work that the Project made possible, and at the same time the MOH recognized that it did not have the capacity to carry out this kind of activity.

The MOH authorized the selection, training and support of the *Socorristas*. Importantly, the MOH has authorized the *Socorristas* to diagnose and provide antibiotics for childhood malaria and childhood pneumonia, a policy that many other MOHs in Africa have not yet adopted. All of these contributed to the success of the *Socorrista* program.

The MOH has established a good program of health care services at its Health Centers in the Project area. The Final Evaluation Team never heard a single complaint from community members or from the Project staff about the quality of care provided at the MOH facilities. After repeated questioning throughout the Project area, the Final Evaluation Team never heard that patients were treated rudely or that medicines were lacking. This is a remarkable achievement,

Figure 13. Cases of Under-5 Mortality Reported by the Supervisors, 2007-2008



and it certainly contributed to the success of the Project since promoting the use of health facilities for life-threatening conditions was one of the important activities of the Project at the community level.

Having said that, we should also point out that the lack of ITNs represents the greatest shortcoming of the Project – but this was beyond the control of the Project. Had ITNs been readily available to women coming for ante-natal care, as they were supposed to have been, the Project may have achieved much greater progress in the utilization of ITNs by mothers and children. If this could have been achieved, an even greater mortality impact would likely have been achieved by the Project since, as Fig. 13 demonstrates, malaria appears to be far and away the leading single cause of children in the Project area.²⁷

Overall Design Factors that Influenced Results

As previously mentioned, the Care Group model is the most important design feature that led to the Project's achievements. However, two other design factors are of critical importance as well, and both of these are inherent in the Care Group model: getting supervisors out into the communities, and developing a strong community-based health information system.

As has been previously emphasized, the supervisory staff of the Project have been working together for 15 years, and over this time they have all come to recognize that absolute necessity for the supervisory staff to spend most of their time in the communities, meeting with community people, Care Group Volunteers, Care Groups, community leaders, finding out what the problems are and looking for ways to solve them. A rough estimate is that the district-level Coordinators and the Supervisors spent at least two-thirds and possibly three-fourths of their time out in the communities.

Of course, the Care Group model requires that an Animator meet with the Care Group Volunteers making up the Care Group every two weeks, and this is an activity that must take place in the community. So the Animators, who meet with the Care Groups, have to be in the communities as well, of course. However, without the next two supervisory levels devoting most of their time to being in the field, it is hard to imagine that the Project would have been as successful. One reason for this is that we heard of many situations in which a difficult moment was reached in the community in moving the Project forward, and this led to Project staff and Care Group Volunteers going to community leaders for support. Invariably, the community leaders provided their support, making it possible for Project activities to move forward.

The second critical design issue is the community-based health information system (C-HIS). This involves first of all working with the community to make a map and a census of the community and, on the basis of this, determining how many Care Group Volunteers and Care Groups would be needed. Then, through the process of home visitation carried out by Care Group Volunteers, births and deaths are reported at the time of Care Group meetings.²⁸

²⁷ Once the Mother Volunteers reported a death, the Animator later visited the home to interview the mother/caretaker or other household members about the symptoms and causes of the death. The Animators received training about which symptoms are associated with specific causes of death.

²⁸ Carrying out a census after mapping the community and routine visiting all homes are fundamental parts of a broader process for health improvement in defined populations which some of us refer to as the census-based,

Furthermore, those children in need of basic health services (such as immunizations and nutritional monitoring) are also identified and targeted for special follow up. This information is also shared with the Village Health Committee (including the Animator and the *Socorrista*), giving the community ownership of accurate information vital to its well-being. Finally, the Project expanded this C-HIS to include interviews by Animators of families in which a death occurred to determine the cause of death and also household interviews by supervisors when they visited the community to assess coverage of specific indicators and also to determine if the homes had actually been visited by Care Group Volunteers, if the mothers remembered the messages the Care Group Volunteers had actually taught them, and if the homes had a sanitary latrine and dish rack (Figures 14 and 15). The presentation of this information to the staff and to the communities had a powerful reinforcing effect to help the Project continue to progress in achieving its objectives. This information helped the Project to know which communities were falling behind and needed extra support, and it helped the communities to know how they were doing in comparison to other communities in the Project area. Finally, providing an opportunity for everyone – community members and Project staff – to see that the number of child deaths was declining was highly motivational.

Figure 15. Percentage of Mother Who Know Volunteers and Who Were Visited by a Volunteer, Oct 2007 - Nov 2008

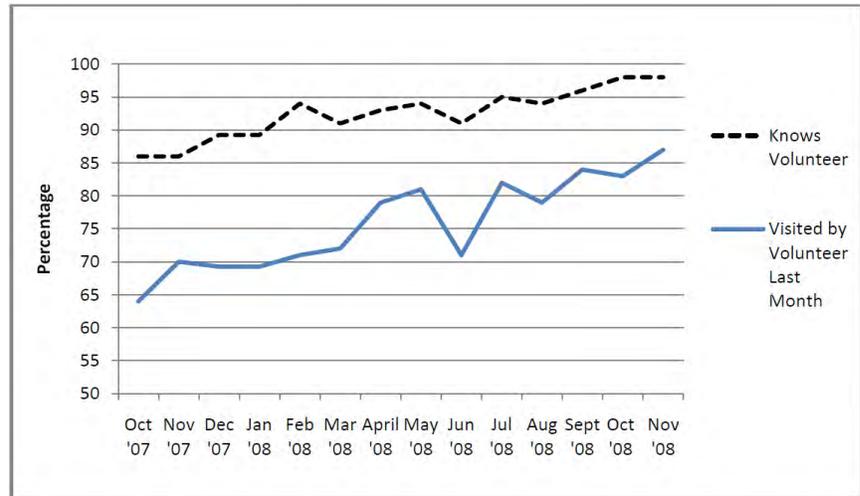
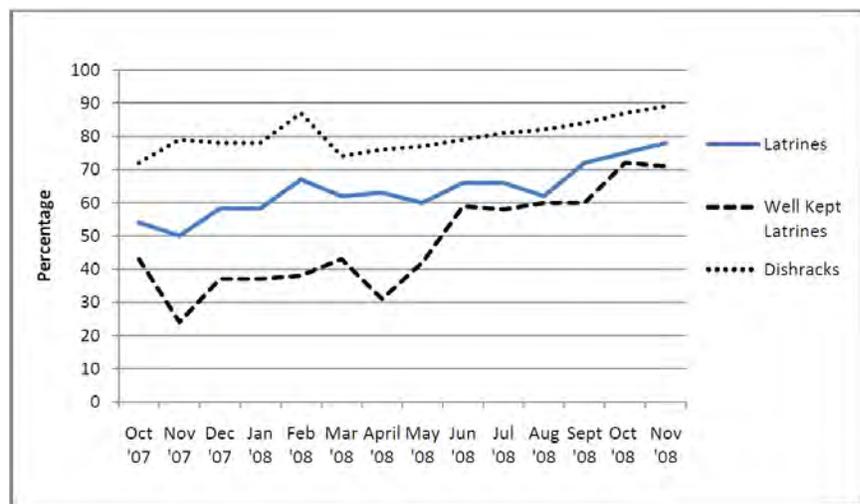


Figure 14. Percentage of Latrine and Dish Racks in Households, Oct 2007 - Nov 2008



impact-oriented approach, described elsewhere (Perry H., Robison N., Chavez D., Taja O., Hilari C., Shanklin D., and Wyon J. 1999. Attaining Health for All through community partnerships: Principles of the census-based, impact-oriented approach developed in Bolivia, South America. *Social Science and Medicine* 48:1053-1067).

Discussion of the Broader Implications of Results

Progress toward Sustained Outcomes

What is the potential for the achievements of the Project to continue now that the Project has ended and funding has stopped? The new knowledge and the changed attitudes of the local people in the Project area will persist for at least some time into the future. One of the strengths of projects using the Care Group model is that previous assessments in Mozambique and in other countries which have used this approach have demonstrated that the Care Group members continue their work in visiting households and supporting mothers for at least several years after the formal projects end. These projects have also created new community norms, particularly for cleanliness, hygiene, prevention and treatment of childhood malnutrition, and prevention and treatment of common serious childhood illnesses. So, we can expect the same for *Vurhonga IV*. All community members who spoke about this issue in our focus group discussions at the time of the Final Evaluation confirmed that they expected the same.

Secondly, the Project has initiated new community-level structures that are likely to continue following the termination of the Project. These include the *Socorrista* and the Village Health Committee. The *Socorrista* is a Community Health Worker who is trained and authorized, among other things, to treat childhood malaria and childhood pneumonia with antibiotics. Since the *Socorrista* is paid with fees from the community and is selected and supervised by the Village Health Committee, there is no dependence on outside funds for salary support. At present, the *Socorrista* does need medicines and supplies from the MOH which are provided for free, but it does seem feasible for the *Socorrista* to pay for them if necessary since the MOH's supply so far has been unsteady.

The following quotes, which the Final Evaluation Team heard from people in the community, speak for themselves. One mother said:

The children are changing because they now know they need to wash themselves. Children follow the behaviors that their mothers do, such as using a dish rack or cleaning the yard when they wake up.

A Care Group Volunteer said:

Vurhonga has established roots here. These will not disappear. We will take our sick children to the Health Center. If a child is malnourished, we'll make enriched porridge for her or him."

Another Care Group Volunteer said:

Even though we will not have a Supervisor in the future, the seeds have been planted and they have taken root. They will continue to grow."

And one Village Leader told us:

The seed has been planted because of the Care Group Volunteers. After the Project ends, they will remain and continue teaching us."

Contribution to Replication or Scale Up

Vurhonga IV is a replication of the earlier *Vurhonga* projects on a larger scale. Thus, the success achieved by *Vurhonga IV* is a further verification of the validity and robustness of the methods and principles used by the Project, including the Care Group model. The findings from this Project should reinforce the already ongoing trend to apply this approach in other settings, not only among World Relief International's programs but also among those of other organizations.

The population of 250,000 people reached by *Vurhonga IV* is more than double that reached by earlier *Vurhonga* projects, so there is no doubt that this Project represents a scale up of earlier efforts. Nonetheless, the need now is to replicate and scale up the Project to even larger populations.

Attention to Equity

The very fact that the Care Group model ensures that every household in the Project population is reached with basic education ensures that at least some degree of equity is achieved, even if it is not optimal. Of course, the full meaning of equity involves giving more attention and resources to those in greatest need, not simply ensuring equal attention and resources for everyone. Growth monitoring makes it possible to provide special attention to malnourished children and thus is one way of addressing equity issues. Thus, the Hearth Model is one of the important mechanisms of the Project for achieving equity, since it involves a special program of nutrition education and support for mothers and caretakers of malnourished children. The Final Evaluation Team heard inspiring stories about how the community and even the Project staff reached out to malnourished children when their families were lacking the basic resources required for nutritional rehabilitation. This new sense of community responsibility for the health and well-being of the most disadvantaged children, including their nutrition, is one of the great achievements of the Project – one which will endure.

Quotations which the Final Evaluation Team heard during the focus group discussions include the following:

We have been mixing the teachings of the Project with religious teachings. We now have more compassion for the poor. We are helping them get things they need, such as toilets and food.

We help each other when one of us is sick. We see ourselves as part of a system because if someone dies, the death and its reason are reported back to the village leadership.

There is much more love between us. By going to households, meeting with mothers, and joining the Village Health Committee, we share and form relationships.

Even those people who used to hide sick people in their houses do not do that anymore. The people are now confident to approach Care Group Volunteers when someone in their family is sick.

This is not only your child; it is our [the community's] child because someday he will grow up to help all of us.

Role of Community Health Workers

The Animators are community-level paid workers whose role was to teach health messages to the Care Group Volunteers in Care Groups and support them in their work at the household level. The *Socorristas* are paid with fees by the local community, and the Animators were paid a modest salary by the Project. If, by the term “worker,” we mean paid health personnel, then *Socorristas* and Animators are Community Health Workers who were essential to the Project's success. And, of course, the Care Group Volunteers, who worked two to four hours a week or so and who received no remuneration, were also essential to the Project's success. Without Community Health Workers, the Project could not have achieved what it did. Since the Animators live in the village they worked in, they are a sustainable resource, as are the *Socorristas*, who also live in the village.

Contribution to Global Learning

The lessons from this Project have major relevance for global efforts to improve the health of children around the world. At present, only 16 of the 68 countries in which 97% of the deaths of under-5 children are occurring are on track to achieve the Millennium Development Goal for children (MDG 4) by the year 2015. None of the 16 countries on track are in sub-Saharan Africa²⁹ As far as we know, there is only one area of sub-Saharan Africa that has already achieved MDG 4, and that is the Navrongo field research area in northern Ghana.³⁰ The finding that this Project appears to have reached MDG 4 is a most noteworthy accomplishment of considerable importance to the global health community.

Conclusions and Recommendations

The *Vurhonga IV* Child Survival Project is a most noteworthy example of what can be achieved at a modest cost with the proper leadership and technical support in high-mortality resource-poor settings to improve the health of children through community-based primary health care. Dramatic improvements in coverage of key child survival interventions have been achieved, and there is considerable direct and indirect evidence that a major decline in under-5 mortality has occurred as well. The methods and procedures used by *Vurhonga IV* are widely applicable in other high-mortality, resource-poor settings, and the achievements appear to be sustainable. The effectiveness of the approach needs to be tested further in urban settings since most of the experience so far has been in rural settings.

Specific operational recommendations for future child survival programming include the following:

1. The MOH should have a person at the district level whose responsibility is to link MOH activities with community-level activities. This person would be responsible for *Socorrista* activities, working with Village Health Communities, and community relations.
2. The MOH needs to make every possible effort to have ITNs available to women coming for ante-natal care in accordance with its national malaria program commitments.
3. Consideration should be given to making *Socorristas* responsible for Care Groups in communities which no longer have an Animator (if a *Socorrista* is present).

For further replications of the Care Group model and its associated methods and procedures, the following modifications from *Vurhonga IV* seem appropriate based on the findings of the Final Evaluation:

1. Animators should be selected from among a group of several candidates who all participate in census-taking in the village at the outset of a project, and they should be selected from the village in which they will work.

²⁹ UNICEF, 2008 (Tracking Progress in Maternal, Newborn and Child Survival. New York, UNICEF.), which is available at: <http://www.countdown2015mnch.org/reports-publications/2008report>; Countdown Coverage Writing Group, 2008 (Countdown to 2015 for maternal, newborn, and child survival: the 2008 report on tracking coverage of interventions, Lancet 371:1247-58).

³⁰ Binka et al., 2007 (FN Binka, AA Bawah, JF Phillips, A Hodgson, M Adjuik & B Macleod. Rapid achievement of the child survival millennium development goal: evidence from the Navrongo experiment in Northern Ghana. *Trop Med Int Health*, 12, 578-83).

2. Village Health Committees should be formed and begin to function soon after the Project becomes functional in a village. The Project should provide training for the VHC soon thereafter. Arranging for a system of emergency transport should be a priority of the VHC.
3. Vital events registration should be the first activity that Care Groups and Care Group Volunteers undertake, and it should continue throughout the life of the Project.
4. All KPC surveys should be saved and kept readily available, at least until after the Final Evaluation of a project, and survey data should be entered into an EPI INFO database. Questions should be used which make it possible to tabulate indicators according to USAID standards.
5. The Project should assist each community to maintain ongoing records of its monthly C-HIS information which will make it possible to easily visualize trends over time.
6. Consider training drivers to conduct interviews and data collection so that they can provide independent assessments based on household surveys.

The Project's achievements need to be shared with the global health community, and its mortality impact needs to be assessed independently through direct retrospective demographic methods involving birth histories from a representative sample of women in the Project population. Perhaps more importantly, Mozambique, the global health community, and USAID should consider the Project's leadership and staff as a key resource for leadership in helping other parts of Africa – both within Mozambique and beyond – to implement similar programs elsewhere. This means providing additional financial support for current Project activities that would make it possible to maintain the Project's current achievements and enable to Project's leadership and staff to provide training to others from outside the geographic area to learn the Project's methods and procedures and adapt them in other contexts. This Project leadership, staff, and their program is a critical national and global resource that should not be allowed to wither on the vine. Rather, this team and the program they have developed should maintain themselves as a SCALE-squared Center and, in fact, become a SCALE-cubed Center for taking this approach to scale.³¹

Because of the promising findings obtained here and elsewhere with the Care Group approach and related activities, the methods and procedures used for *Vurhonga* IV should be applied in larger populations with careful independent monitoring and mortality impact assessment. This recommendation is in harmony with a recommendation made arising from a comprehensive review of the effectiveness of community-based primary health care in improving child health, namely that “There is a need for rigorous assessments of community-based integrated approaches for improving child health at large scale.”³² Finally, there is an urgent need to convey the potential of Care Groups more effectively to the global health community.

³¹ As we noted at the outset on page X., SCALE-squared Learning Centers and SCALE-cubed process are described in the book by Daniel Taylor-Ide and Carl E. Taylor, *Just and Lasting Change: When Communities Own Their Futures* (Johns Hopkins University Press, 2002). SCALE-cubed processes (systems for collaboration, adaptive learning and extension) refer to developing and implementing processes for expanding the program at scale.

³² H Perry, P Freeman, S Gupta, BH Rassekh. How Effective is Community-based Primary Health Care in Improving the Health of Children? Summary Findings and Report to the Expert Review Panel. Working Group on Community-based Primary Health Care, International Health Section, American Public Health Association, 2009 (available at <http://aimdb.files.wordpress.com/2009/08/finalcbphcreporttoerp-7july2009.pdf>).

Annex 1: Results Highlights

The World Relief/Mozambique Child Survival Project in an isolated rural area of Gaza Province reached one-quarter of a million people with community-based primary health care. The Project reached every household every two weeks by training over 4,000 Care Group Volunteers, each responsible for 10 households. The Care Group Volunteers met in groups of 10 (called Care Groups) and learned a key child survival educational message and then shared this with her neighbors over the subsequent two weeks.

Dramatic improvements were achieved in coverage of key child survival practices between 2004 and 2009. The percentage of mothers exclusively breastfeeding their 0-<6 month old child increased from 17 to 80%. The percentage of mothers of malnourished children who received nutritional counseling increased from 14 to 80%. The percentage of children with symptoms of pneumonia treated within 24 hours at a Health Center increased from 10 to 64%, and the percentage of children with symptoms of malaria who were treated within 24 hours at a Health Center increased from 34 to 62%.

The percentage of children who were malnourished (defined as those who were below the 3rd percentile in weight for age) declined by half, from 17% to 8%. Numerous community members and Project staff reported that they number of child deaths had declined dramatically, and registration of vital events by Care Group Volunteers (which did not begin until half-way through the Project) documented a decline of under-5 mortality by one-third. A more realistic estimate is that under-5 mortality fell by half.

The Final Evaluation Team heard powerful stories of women's empowerment set in motion by the Project. For instance, once women learned how to rehabilitate malnourished children with locally available foods, the volunteered to join the Project and became Care Group Volunteers, helping other mothers in the village to rehabilitate their malnourished children. One village leader told the Final Evaluation Team: "The seed has been planted because of the Care Group Volunteers. After the Project ends, they will remain and continue teaching us."

The experience of more than 11 organizations in more than eight countries around the world with Care Groups in promoting the uptake of child survival interventions is now sufficiently extensive and positive that Care Groups should now be considered a Best Practice for reducing child mortality.

A Volunteer Mother Educating One of Her Neighbors



Annex 2. Changes to the Project since Completion of the Detailed Implementation Plan

There were some changes that had to be made in the implementation of Project activities that had not been anticipated when the Detailed Implementation Plan (DIP) was written. Perhaps the most important of these was the declining value of the US dollar within Mozambique, leading to a lower level of funding for Project operations than had been anticipated. This made it necessary to terminate Project activities in March 2009, six months prior to the planned completion of the Project.

The second significant deviation from the original DIP was the inability to recruit a Deputy Director to carry out the responsibilities envisioned – namely leadership for the Scale-squared Center in Chokwe, where teaching others about the Project and the Care Group methodology would take place. WR/M had difficulty in finding suitable Mozambican candidates for the position, and the two persons who initially accepted the position had to terminate their contracts prematurely. The position ended up being filled by expatriates based in the capital (Maputo) rather than based in Chokwe, as was originally envisioned.

Annex 3: Program Goals, Objectives and Indicators

Program goals:

- 1) To reduce the disease burden in women and children under five.
- 2) To strengthen the capacity of the health system to improve coverage and quality of C-IMCI services
- 3) To develop sustainable community-based mechanisms to improve prevention and care seeking practices for C-IMCI
- 4) To establish a SCALE-squared Learning Center for C-IMCI training and development for national implementation

SO1. Strengthening the Capacity of the Health System to Improve the Quality and Coverage of IMCI Services

EOP Objectives	Indicators	Method	Activities
Improved knowledge of providers	% of providers who have training in IMCI/C-IMCI	HFA: provider interviews, exit interviews, record reviews, observations	Training and supportive supervision of <i>Socorristas</i> ; joint M&E with MOH
	% of <i>Socorristas</i> who comply with standard case management practices and provide services		
Improved drug supply and management	% of Health Centers/Health Posts that have essential drugs for IMCI	Record reviews, interviews	Train in creating and maintaining records (monitoring system for procurement of essential drugs; support to VHC to monitor user fees)
Improved access to health services	% of target population that has access to health services (<5 km)	KPC, LRA	Support outreach activities; training of <i>Socorristas</i> ; support establishment of Health Posts
Monitoring of CHIS	% of Health Posts that provide monthly CHIS data to the Health Center	Monthly Care Group statistics and Health Post records	Design and institute CHIS; create and train VHC to support volunteers

SO2. Improve prevention and care seeking at household level for C-IMCI

EOP Objectives	Indicators	Method	Activities
IMCI 75% of caretakers know at least 2 danger signs ³³ for seeking care immediately.	Caretakers of children 0-<24m who cite at least 2 danger signs for seeking care immediately	KPC LRA	Train volunteers and caretakers to recognize danger signs and appropriate care seeking
60% of sick children offered increased fluids	Children 0-<24m who were sick in previous 2w and were offered increased fluids.	KPC LRA	Train volunteers and caretakers to increase fluid intake for the sick child
60% of sick children offered continued feeding	Children 0-<24m who were sick in previous 2w and were offered increased or continued feeding.	KPC LRA	Train volunteers and caretakers to continue feeding the sick child
CDD 50% of caretakers wash hands with soap/ash before food preparation, before child feeding, and after defecation	Proportion of caretakers who washed hands with soap/ash before food preparation, before child feeding, after defecation	KPC LRA	Train caretakers to wash hands before food preparation and after defecation Encourage care takers to have set up a washing area

³³ Child not able to drink or breastfeed; child becomes sicker despite home care; child has fever or fast/difficult breathing; child looks unwell or is playing normally; child is lethargic or difficult to wake, vomits everything, or has convulsions.

70% children with diarrhea treated with ORT.	Children 0-<24m with diarrhea in previous 2w who were given ORT	KPC LRA	Train caretakers to prepare and feed ORS to the child during diarrhea Ensure availability and accessibility of ORS for the caretakers
PCM 50% of children with rapid/ difficult breathing (suspected pneumonia) treated <24h at a HF	Children 0-<24m with rapid/ difficult breathing in past two weeks treated within 24h at HF	KPC LRA	Train volunteers and caretakers to recognize cough and fast/difficult breathing as signs of pneumonia Train volunteers and caretakers to seek treatment in a HF within 24h for cough and fast/difficult breathing.
Control of Malaria 75% of children with fever (suspected malaria) treated within 24h at a HF	Children 0-<24m who had suspected malaria in the past 2w that were treated within 24h at a HF	KPC LRA MOH Data	Train volunteers in recognizing signs for fever/malaria and importance of immediate treatment (within 24h)
70% drug compliance for children treated for malaria.	Children 0-<24m treated for malaria in previous 2w who completed their treatment	LRA	Train volunteers and caretakers on the importance of full compliance to malaria treatment
50% of children sleep under an ever-treated ITN	Children 0-<24m who slept under an ever-treated ITN the previous night	KPC LRA	Train volunteers and caretakers on ITN use
Immunization 80% children 12-<24m fully immunized.	Children 12-<24m fully immunized at the time of the survey	KPC LRA	Train caretakers on importance of immunization Mobilize community for immunization campaigns and facilitate MOH staff
EBF 40% of children EBF for 0-<6m	%Children <6m EBF based on a 24h diet recall	KPC LRA	Train volunteers to counsel and support caretakers in EBF
70% of children 6-<10m who received complementary feeding	% children 6-<10m receiving breast milk and complementary foods.	KPC LRA	Train volunteers and caretakers on importance of appropriate and adequate complimentary feeding
Nutrition 80% children weighed regularly in GMC.	% children 0-<24m weighed in last 3m (by card)	KPC LRA MOH Register	Train volunteers to assist MOH staff for monthly EPI/GMC sessions and community mobilization
80% of caretakers of MN children who receive nutrition counseling.	% caretakers of MN children who received nutrition counseling.	KPC LRA	Train volunteers to counsel caretakers during home visits and GMC sessions on prevention of MN and rehab of MN children
70% of MN children who received nutritious weaning foods/enriched foods after nutrition counseling.	% caretakers of MN who state they give nutritious weaning foods/enriched foods to their child at least 1/day.	KPC LRA	Train caretakers on importance and preparation of enriched porridge
70% of children who complete HEARTH achieve and sustain adequate (200g) or catch-up (400g) growth per month for at least 2m after HEARTH.	% MN children who complete 12d HEARTH and achieve adequate (200g) or catch-up (400g) growth and continue to gain weight at International Standards for their age after participating in Hearth.	HEARTH program register data and follow-up.	Train volunteers in HEARTH methodology Conduct 2 HEARTH cycles in the 1 st 2 years, repeat in 3 rd and 4 th year as required Monitor coverage in bimonthly GMC sessions Maintain HEARTH registers

STD/HIV/AIDS 50% of caretakers will know at least 2 ways to prevent STD/HIV/AIDS	% of caretakers who cite at least 2 ways to prevent HIV/AIDS	KPC LRA	Train volunteers and caretakers on causes and prevention of HIV/AIDS Promote demand and utilization of VCT services
50% of caretakers will know at least 2 symptoms of STD/HIV/AIDS	% of caretakers who cite at least 2 symptoms of STDs	KPC LRA	
50% of caretakers will know at least 2 symptoms of HIV/AIDS	% of caretakers who cite at least 2 symptoms of AIDS	KPC LRA	
ANC 70% of the mothers will deliver by a trained health provider	% of mothers who deliver by a trained health provider	KPC LRA	Train volunteers and caretakers on importance of ANC and encourage delivery by trained health provider

SO3. Establish SCALE-Squared Learning Center for C-IMCI

EOP Objectives	Indicators	Method	Activities
Establishment of resource center for training and dissemination of best practices	Functioning resource center for training on C-IMCI	4 training sessions for C-IMCI	Development of training curriculum, supervision guidelines, M&E performance plan
	50% of district MOH staff will have participated in at least one workshop	Keep participant list for those attending capacity building workshops	Joint planning with MOH, PVOs, and donor community; training and dissemination workshops

Objectives for Capacity Building and Sustainability were measured and documented at baseline and at the end of the project but not reported as EOP objectives.

<i>Objective</i>	<i>Measurement Method</i>
Capacity Building	
60% of HC/HP have essential drugs for C-IMCI interventions (CDD, Malaria, PCM, EPI)	Health facility assessments
75% of target population has access to health service (<5km)	C-HIS
80% of pastors/traditional healers receive training in C-IMCI	Structured interviews with pastors
60% of traditional healers receive training in C-IMCI	Structured interviews with traditional healers
80% of <i>Socorristas</i> receive training in clinical protocols for diarrhea, pneumonia and malaria	Training records, MTE, interviews with health providers
Sustainability	
80% of volunteers continue in CG	Supervisor checklists
60% of VHC met in the last 2 months	Community data
60% of trained <i>Socorristas</i> continue providing services	Community data

Annex 4. List of Publications and Presentations Related to the Project

Publications

“Mozambique: Reducing under-five mortality through a community-based programme”
The State of the World’s Children 2008, p. 59. (Results featured are from the *Vurhonga II CSP*)
UNICEF, December 2007 (copy inserted on following page)

Presentations

Annual Meeting of the Global Health Council, 29 May 2008, Omni-Shoreham Hotel, Washington, DC

“Evidence of Census-based, Impact-oriented Strategies in World Relief Programs”
Anbrasi Edward-Raj, Johns Hopkins School of Public Health
Melanie Morrow, World Relief
Henry Perry, Future Generations

USAID Implementing Partners Meeting Organized by Forte Saude, 6 August 2008, USAID Mission in Maputo, Mozambique

“WR CSP Coordination Experience with DDS and DPS”
Pieter Ernst, Child Survival Director, World Relief

USAID Site Visit, 11 August 2008, Scale-squared Training Center in Chokwe, Gaza, Mozambique

“Socorrista Selection, Training, and Functions”
Inacio Chitlhango, Community Health Coordinator

World Relief/Mozambique Invitation to a meeting of the Provincial Health Directorate and District Health Directorate, 19 August 2008, Scale-squared Training Center in Chokwe, Gaza, Mozambique

“*Vurhonga* Project Update, Results and Data Sharing, and Beyond End of Project Discussion”
Pieter Ernst, Child Survival Director

World Relief MOH, WHO, USAID, CDC Joint Site Visit, September 10, 2008, Scale-squared Training Center in Chokwe, Gaza, Mozambique

“Socorrista Selection, Training, and Functions”
Inacio Chitlhango, Community Health Coordinator

Humanitarian Action Summit, Harvard University, 27 March 2009

“Community-based Health Information”
Melanie Morrow, Director of Maternal and Child Health Programs

Description of the Project Included in the State of the World's Children 2008: Child Survival (p.59).³⁴



Context and challenge: Mozambique is one of the world's poorest countries, with gross national income per capita of just US\$340 in 2006 and an under-five mortality rate of 138 deaths per 1,000 live births. Life expectancy at birth is just 42 years, more than 40 per cent of children under five are suffering from moderate or severe stunting, and only one third of the population is using adequate sanitation facilities. Access to essential health-care services is limited, with 23 per cent of infants lacking a measles vaccine. Only 10 per cent of children sleep under a mosquito net (treated or untreated). And almost two thirds of the population live in rural areas, where only 1 in every 4 has access to an improved source of drinking water.

The challenge was to deliver an effective community-based child survival programme to rural communities with poor physical and environmental health infrastructure, and verify that the community programme contributed to mortality reduction.

Approach: The Chokwe Ministry of Health and World Relief partnership project in operation during 1999–2003 used the 'Care Group' approach to implement a child survival programme that aimed to address three elements of Community Integrated Management of Childhood Illness (C-IMCI):

- Improved partnerships between the health system and the community.
- Increased accessible care for community-based providers.
- Promotion of essential household practices for child health.

The Care Group approach trains community educators through group interaction. One volunteer Women's Health Educator provides peer-to-peer health education to 15 surrounding households, and 10 Women Health Educators form a Care Group that meets once a month with a paid supervisor. During monthly Care Group meetings, a health field staff member or a Women's Health Educator supervisor presents health messages about child survival and women's health. The Care Group members then practise training with each other, sharing the information presented. Before the next Care Group meeting, each volunteer is responsible for visiting the households under her jurisdiction to relay the messages she has just learned.

The child survival programme was designed to be comprehensive, integrating breastfeeding, complementary feed-

ing, use of oral rehydration therapy and insecticide-treated mosquito nets. The programme strengthened referral to local health facilities and case management of common illnesses at the facilities.

Partnerships with UNICEF and the International Committee of the Red Cross facilitated the provision of free insecticide-treated nets, vaccines and vitamin A supplements. Close cooperation with village health committees and local pastors provided support for the volunteers in carrying out health promotion and community mobilization for such as activities as distribution of insecticide-treated mosquito nets and conducting immunization campaigns.

Results: The project also implemented a community-based vital registration and health information system through the 2,300 community volunteers who collected data on births, deaths and childhood illnesses every month. These data were aggregated during the monthly meetings and the registers sent to health posts operated by community providers, or *socorristas*, who were trained by the district Ministry of Health. The collated information was sent back to local village health committees, health centres and the Ministry of Health.

Data from the community-based vital registration and health information system showed a 66 per cent reduction in infant mortality and a 62 per cent reduction in under-five mortality. To check the reliability of these findings, an independent mortality assessment was carried out by experienced researchers using a pregnancy history survey based on standard methodologies applied in the Demographic and Health Survey. This mortality survey found reductions of 49 per cent and 42 per cent in infant mortality and under-five mortality, respectively.

These results demonstrated the effectiveness of the Community IMCI and validated the fact that community health workers can collect reliable health data for monitoring mortality.

See References, page 107.

³⁴ UNICEF. The State of the World's Children 2008: Child Survival. New York: UNICEF (available at: <http://www.unicef.org/sowc08/docs/sowc08.pdf>).

Annex 5. Project Management Evaluation

Planning

The Project staff members have been working together now for 15 years. They know the Project area well, and have long-term relationships with the MOH. They have gradually improved the Care Group methodology over this time, and the planning for the current Project reflected this expertise. Most importantly, the MOH at the district level and the community leaders were fully engaged in the process of Project planning at the outset.

After full discussion with the Project staff, there were several suggestions that arose regarding changes in the DIP that might have improved the Project. One of these was to select Animators only after a more thorough interview and vetting process. Another was to limit the work of the Animators to only one village. This would have required more Animators (and therefore more supervision), but since Animators were paid based on the number of Care Groups they supervised, it would not have made a significant difference in the budget.

Another suggestion made by the Project staff at the time of the Final Evaluation was that the Village Health Committees should have been established earlier in the life of the Project. This activity did not get underway until the second half of the Project, after the MTE. The Village Health Committees proved to be a very valuable resource for the Project and the communities.

Supervision of Project Staff

During the discussions which took place at the time of the Final Evaluation the Coordinators noted the difficulty in supervising staff who were in turn supervising others. The Supervisors noted, and the Coordinators agreed sometimes the Coordinators moved into solving problems being faced by Supervisors since they had dealt with similar problems in previous projects when they themselves were in the role of the Supervisor. A more productive approach would have been to coach the Supervisors through the problems they were facing rather than solving them for the Supervisors. The progression from direct supervision to teaching others to supervise is a difficult transition and perhaps the staff would have benefited from a more formal discussion and training in how to handle such situations.

Another issue which arose was that during the final two years of the Project, a new activity emerged which was important but nonetheless proved to be a distraction from the core Project activities. The Project began to work in the area of community-based tuberculosis (TB) control. This led to the senior Project management having to devote more time to TB activities than had been originally envisioned.

Human Resources and Staff Management

One of the unique and stellar aspects of this Project is the quality of its professional leadership and the competency of the field staff, built up over 15 years of working together. Morale, cohesion, and working relationships have all been excellent, and there has been virtually no turnover of the entire staff over this entire 15-year period.

The lack of continued funding for child survival activities in Chokwe following the completion of this Project was one of the reasons for engaging in TB work (with USAID support through

Family Health International). Now, WR/M has been able to obtain funding through the USAID Child Survival and Health Grants Program for TB activities, which will provide employment for a number of the current staff. Furthermore, since this program also utilizes the Care Group model, this new TB program will help to also keep active various child survival components of the current Project. (Fortunately, there is a new USAID Mission program in Nampula, in which World Relief is an implementing partner which will be able to incorporate some of the senior-level Project staff.)

Financial Management

Issues arose related to timely transfer of funds from HQ to Mozambique, and also issues in the Project being able to access the funds once they had arrived in Mozambique. These were short-term problems that were eventually overcome; but they did lead to difficulties in day-to-day operations. There were no major budgetary adjustments.

Logistics

The Project appears to have had all the supplies and equipment that it needed. Vehicles and motorcycles were quickly repaired when they broke down.

Information Management

The Project was a pioneer in the development of the mini-KPC, which World Relief has used successfully in many of its child survival projects. This has made it possible to track on a quarterly basis progress in coverage of indicators using LQAS sampling methods. Supervisors conducted household interviews at the time they were in the villages for other purposes. At the time of the MTE, the Project decided to abandon this approach and instead asked the Supervisors to collect a different type of information -- namely information about whether the Care Group Volunteers were visiting the homes of those under their responsibility and what the retention was of the educational messages the Care Group Volunteers were giving.

The information collected at the village level on births and deaths was passed on to the MOH, but there was no clear evidence that this information was useful to the MOH or used by it.

The Project did not, unfortunately, give priority to vital events registration at the community level. This activity did not begin until after the MTE. Thus, estimates of under-5 mortality are not available for the initial two years of Project activity. The lack of attention to vital events registration, especially during the first half of the Project, is a disappointment since it is so easily incorporated into the month Care Group work cycle, and World Relief has had such success with this previously in Chokwe and with its child survival projects in other countries.

Technical and Administrative Support

The Headquarters Office providing technical backstop support staff was provided by multiple people over the course of the Project, leading to some inevitable weaknesses in the quality and consistency of support provided to the field from HQ. Having pointed this out, though, it must also be pointed out that the quality of the HQ technical staff is extraordinary. World Relief is fortunate to have a HQ technical backstop staff of such high quality and commitment.

Management Lessons Learned

The Project has demonstrated that it is possible to scale up the Care Group model of Community-Based Integrated Management of Childhood Illness and maintain effectiveness and impact. The management challenge of extending the previous experiences in Gaza Province to a wider geographical area at an affordable cost has been met.

The management innovations which made this possible include the following.

Timing of Work in the Field

The Field Staff spent three weeks continuously in the field, staying at night at their field site in the Project area. They would then return home for one week and for a monthly staff meeting. This was possible because the Field Staff (all women) were older, and their children were older as well and did not need the daily care that they would have needed had they been younger.

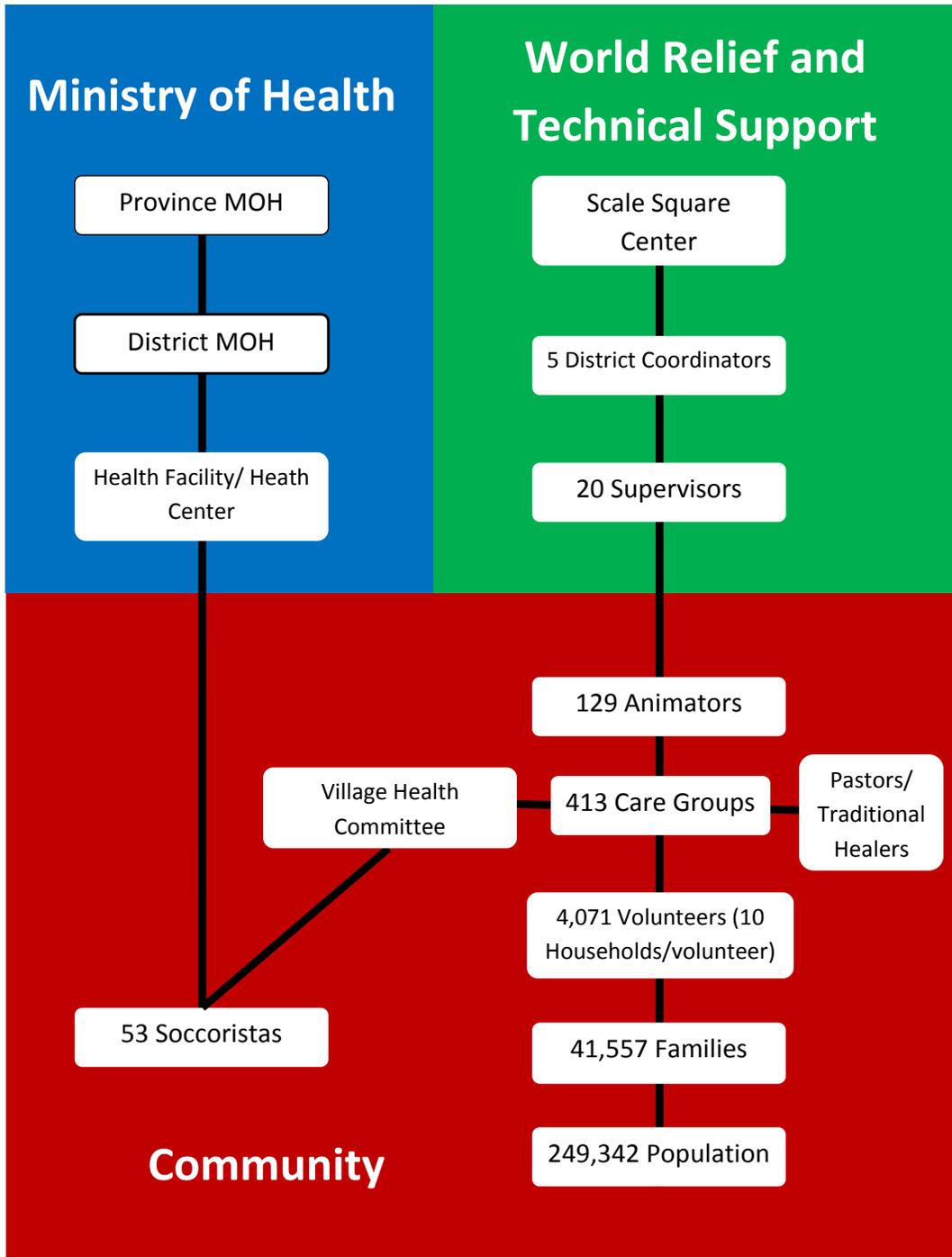
Changing the Qualifications for Animators and Adding Another Level of Supervision

The Project established a new layer of supervision, and it utilized different criteria for selecting Animators. In previous projects, the Animators had been selected by the management team and sent out to the communities to work with Care Groups. They were not people who came from and lived in the communities where the members of the Care Groups they supervised were living. In the current Project, however, the decision was made to recruit Animators from within the communities where they would be working. Given the low level of education in the Project area, many of the Animators were less educated than their previous counterparts. However, since they were from the locality, they had an in-depth knowledge of the villages and their inhabitants. The fact that the Animators were paid was not known within the village by the village leaders or by the Care Group members. Several staff members commented on this. If this had been known, considerable envy and jealousy would have arisen that would have affected Project functioning.

In the current Project, the Supervisors had previously worked as Animators in the earlier *Vurhonga* projects, and the district-level Coordinators had previously worked as Supervisors. This provided opportunities for the staff members to upgrade their skills and move to new challenges, building on their previous experience. It also provided supervisory strength in the sense that those supervising had previously performed the roles of those they were now overseeing.

Other Issues Identified by the Team: None

Figure 5.1 Management Structure of the Vurhonga IV Project and Relationships to the Ministry of Health Programs in the Project Area



Annex 6. Workplan Table

Project Objectives/Activities	Objective Met	Status of Activities	Comments
<i>Improved knowledge of providers</i>			
Training and supportive supervision of <i>Socorristas</i> ; joint M&E with MOH	Yes	Completed	MOH capacity for <i>Socorrista</i> supervision is somewhat limited, but ongoing efforts were made during EIP outreach activities and the MOH is committed to providing the <i>Socorristas</i> with medications, even replenishing supplies from their own stock
<i>Improved drug supply and management</i>			
Train in creating and maintaining records (monitoring system for procurement of essential drugs; support to VHC to monitor user fees)	Yes	Completed	<i>Socorristas</i> were trained in record keeping and provided necessary information to the MOH to replenish their medication supply
<i>Improved access to health services</i>			
Support outreach activities; training of <i>Socorristas</i> ; support establishment of Health Posts	Yes	Completed	Trained 59 <i>Socorristas</i> and supported the building of a HP for each <i>Socorrista</i> . Also reinstated and provided additional training for the 20 MOH APEs now operating in the Project area.
<i>Monitoring of CHIS</i>			
Design and institute CHIS; create and train VHC to support volunteers	Yes	Completed	Vital events registration began after the MTE; data was reported to the VHCs and the MOH
<i>Improve prevention and care seeking for childhood illness</i>			
Train volunteers and caretakers to recognize danger signs and appropriate care seeking	Yes	Completed	
<i>Improve prevention and care seeking for diarrheal diseases</i>			
Train volunteers and caretakers to increase fluid intake for the sick child	Yes	Completed	
Train volunteers and caretakers to continue feeding the sick child	Yes	Completed	
Train caretakers to wash hands with soap/ash before food preparation, before feeding a child and after defecation	Yes	Completed	
Encourage caretakers to use latrines	Yes	Completed	
Encourage caretakers to set up dish racks	Yes	Completed	
Train caretakers to prepare and feed ORS to the child during diarrhea	Yes	Completed	
Encourage HAF if ORS is not available	Yes	Completed	
Ensure availability and accessibility of ORS for the caretakers	Yes	Completed	ORS packets available at the HCs or through <i>Socorristas</i> at the HPs
Encourage increased fluids for 2 weeks post diarrhea	Yes	Completed	
<i>Improve prevention and care seeking for pneumonia</i>			

Train volunteers and caretakers to recognize cough and fast/difficult breathing as signs of pneumonia	Yes	Completed	
Train volunteers and caretakers to seek treatment in a HF within 24h for cough and fast/difficult breathing	Yes	Completed	
<i>Improve prevention and care seeking for malaria</i>			
Train volunteers in recognizing signs for fever/malaria and importance of immediate treatment (within 24h)	Yes	Completed	
Train volunteers and caretakers on the importance of full compliance to malaria treatment	Yes	Completed	
Train volunteers and caretakers on ITN use	Yes	Completed	
<i>Improve knowledge and utilization of immunization services</i>			
Train caretakers to seek immunization for their children on schedule	Yes	Completed	
Mobilize community for immunization campaigns and facilitate MOH staff	Yes	Completed	The <i>Socorristas</i> played an important role in EIP activities, serving as the point person for their area, providing community mobilization and providing logistical arrangements within the community. The Project also provided occasional logistical and transportation support to the MOH
Track Vitamin A coverage	Yes	Completed	Vit A coverage was tracked along with other immunizations during the BL, MTE and FE surveys
<i>Promote positive nutrition practices; Improve care seeking and treatment for malnutrition</i>			
Train volunteers to counsel and support caretakers in EBF	Yes	Completed	
Train volunteers and caretakers on importance of appropriate and adequate complimentary feeding	Yes	Completed	
Train volunteers to assist MOH staff for monthly EPI/GMC session and community mobilization	Yes	Completed	
Train volunteers to counsel caretakers during home visits and GMC sessions on prevention of MN and rehab of MN children	Yes	Completed	
Train caretakers on importance and preparation of enriched porridge	Yes	Completed	
Train volunteers to counsel caretakers during home visits and GMC sessions on prevention of MN and rehab of MN children	Yes	Completed	
Train caretakers on importance and preparation of enriched porridge	Yes	Completed	
Train volunteers in Hearth methodology	Yes	Completed	

Conduct 2 Hearth cycles in the 1 st 2 years, repeat in 3 rd and 4 th year as required	Yes	Completed/ Suspended	No need to repeat as exceeded target after first cycle. Done as part of the regular detection and surveillance by the volunteers during household visits.
Monitor coverage in bimonthly GMC sessions	Yes	Completed	
Maintain Hearth registers	Yes	Completed	
<i>Improve prevention and care seeking for STDs/HIV/AIDS</i>			
Train volunteers and caretakers on causes and prevention of HIV/AIDS	Yes	Completed	
Promote demand and utilization of VCT services	Yes	Completed	
Train volunteers and caretakers on importance of ANC and encourage delivery by trained health provider	Yes	Completed	
<i>Establishment of resource center for training and dissemination of best practices</i>			
Development of training curriculum, supervision guidelines, M&E performance plan	Yes	Completed	
Joint planning with MOH, PVOs, and donor community; training and dissemination workshops	Yes	Completed	Activities held at the Scale-squared Center included a workshop on the CG model, a workshop to improve C-HIS and HIS linkages, and discussions of national scale up of the Vurhonga <i>Socorrista</i> model

Annex 7. Rapid CATCH Table

Rapid CATCH Indicators		BL Value	MT Value	Final Value
1	Percentage of children age 0-<24m who were underweight (-2SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population) <i>**BL includes children outside of the normal curve on the Mozambique health card</i>	16.7%	9.0%	10.4%
2	Percentage of children age 0-<24m who were born at least 24 months after the previous surviving child <i>**BL value is from the MT KPC, September 2007</i>	N/A	69.0%	73.0%
3	Percentage of children age 0-<24m whose births were attended by skilled health personnel (Doctor or nurse)	58.5%	63.7%	68.0%
4	Percentage of mothers with children 0-<24m who reported receiving at least two tetanus toxoid injections before the birth of their youngest child	56.1%	83.7%	88.0%*
5	Percentage of children 0-<6m who were exclusively breastfed during the past 24 hours, based on dietary recall	17.4%	67.0%	80.0%*
6	Percentage of children 6-<10m who received breast milk and complementary foods during the last 24 hours, based on dietary recall	50.7%	90.5%	84.7%*
7	Percentage of children age 12-<24m who are fully vaccinated before the first birthday <i>**BL value is from the MT KPC, September 2007</i>	N/A	67.5%	68.3%
8	Percentage of caretakers with children age 12-<24m who recalled that their child received a measles vaccine <i>**Includes measles vaccines verified by card divided by all children regardless of card presence</i>	95.5%	80.6%	83.0%
9	Percentage of children 0-<24m who slept under an ITN the previous night <i>**BL is an estimate based on 43 children who slept under a net, and that 56.3% of nets reported in the survey were dipped</i>	8.1%	14.1%	20.0%*
10	Percentage of caretakers with children 0-<24m who cited at least two known ways of reducing the risk of HIV infection	10.3%	65.6%	79.3%*
11	Percentage of caregivers of children 0-<24m who report washing their hands with soap/ash at the four critical times <i>**BL value excludes after helping a child who has defecated</i>	3.0%	6.7%	6.7%
12	Percentage of caretakers with children 0-<24m who know at least two childhood illness danger signs for seeking care immediately	23.7%	65.5%	82.7%*
13	Percentage of children 0-<24m who were offered increased fluids and continued or increased feeding during illness	2.9%	24.7%	36.4%*

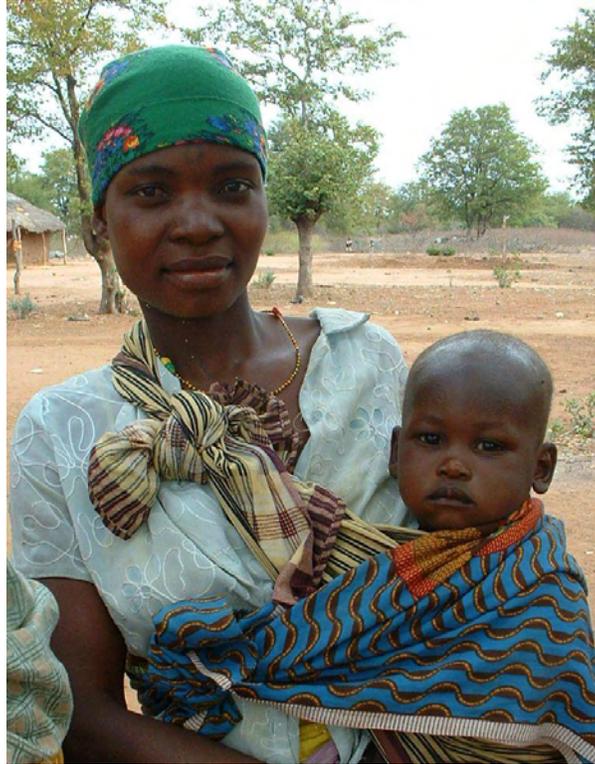
** Denotes statistical significant (p<0.05)*

For a detailed description of numerators, denominators and confidence intervals, please refer to Annex 8 Final KPC Report.

Annex 8. Final KPC Report



**World Relief Mozambique
Expanded Impact Child Survival Program**



**Final Knowledge, Practice,
Coverage (KPC) Survey Report**

Draft: November 3, 2009

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
APE	Agentes Polyvalente Elementar (Community Health Worker)
AQ-AS	Amodiaquine- Artesunate
BCG	Bacille Calmette-Guerin
CATCH	Core Assessment Tool on Child Health
CG	Care Group
CGV	Care Group Volunteer
C-HIS	Community- Health Information System
CI	Confidence Interval (95% for this report)
C-IMCI	Community- Integrated Management of Childhood Illness
CSP	Child Survival Project
DDS	District Health Department
DHS	Demographic Health Survey
DPT	Diphtheria, Pertussis, Tetanus
EBF	Exclusive Breast Feeding
EOP	End of Project
GMC	Growth Monitoring Counseling
HF	Health Facility
IPTp	Intermittent Presumptive Therapy during pregnancy
ITN	Insecticide Treated Net
KPC	Knowledge, Practice and Coverage
HIV	Human Immunodeficiency Virus
MOH	Ministry of Health
ORT	Oral Rehydration Therapy
ORS	Oral Rehydration Solution
SP	Sulfadoxine- Pyrimethamine
STD	Sexually Transmitted Disease
TBA	Traditional Birth Assistant
TT	Tetanus Toxoid
USAID	United States Agency for International Development
WHO	World Health Organization
WR	World Relief

TABLE OF CONTENTS

<u>I. EXECUTIVE SUMMARY</u>	20
<u>II. BACKGROUND</u>	20
<u>National Standards and Policies</u>	21
<u>Program goals and objectives</u>	22
<u>Strategic Objectives:</u>	22
<u>Table 1: Intervention Mix and Level of effort</u>	22
<u>Intervention Specific Objectives:</u>	22
<u>III. PROCESS AND PARTNERSHIP BUILDING</u>	23
<u>IV. METHODS</u>	24
<u>Table 2: Program and Rapid Catch Indicator Definitions</u>	24
<u>Sampling Design</u>	26
<u>Interviewer Recruitment</u>	26
<u>Interviewer and Supervisor Training</u>	27
<u>Data Collection</u>	27
<u>Data Analysis</u>	27
<u>V. RESULTS</u>	27
<u>Table 3: Program Results by Indicator</u>	27
<u>VI. DISCUSSION</u>	30
<u>Table 4: External Comparison</u>	33
<u>Information Dissemination</u>	33
<u>VI. BIBLIOGRAPHY</u>	33
<u>ANNEX A: ENGLISH SURVEY QUESTIONNAIRE</u>	34
<u>ANNEX B: SHANGAAN SURVEY QUESTIONNAIRE</u>	47
<u>ANNEX C: SAMPLING FRAME AND DATA POINTS</u>	61
<u>ANNEX D: FINAL KPC SURVEY TEAM, PERSONS AND ROLES</u>	66
<u>ANNEX E: SURVEY TRAINING SCHEDULE</u>	67
<u>ANNEX F: INDICATOR TABLE FOR PROGRAM AND RAPID CATCH INDICATORS</u> ...	68
<u>ANNEX G: RAW DATA TABLES</u>	74
<u>ANNEX H: PROJECT RESOURCE REQUIREMENTS</u>	88

I. EXECUTIVE SUMMARY

In June 2009, The World Relief Expanded Impact Child Survival team conducted a Final KPC survey in the project area of Massingir, Chicualacuala, Massangena, Chigubo and Chibuto districts in Gaza Province, Mozambique. The survey was designed to assess the knowledge and practices of mothers of children 0-23 months in diarrheal disease control, malaria control, pneumonia, infant and young child feeding, immunization coverage, growth monitoring, birth spacing and HIV/AIDS. The Baseline questionnaire was modified at the time of the Midterm and this same modified questionnaire was repeated at the Final with a 30 cluster survey methodology used to select the respondents.

This project has met or exceeded the following indicator targets:

- Percentage of caretakers with children 0-23 months who know at least two childhood illness danger signs for seeking care immediately [RC 12]
- Percentage of sick children 0-23m who were offered continued feeding during illness
- Percentage of children 0-23 months who received ORT/ORS/home available fluids for diarrhea
- Percentage of children 0-23 who received treatment for suspected pneumonia from a trained provider within 24 hours
- Percentage of caretakers with children 0-23 months treated at the Health Facility (HF) for malaria in the past two weeks reporting drug completion
- Percentage of children 12-23 months fully immunized (verified by card) before 24 months
- Percentage of children 0-5 months who were exclusively breastfed during the past 24 hours, based on dietary recall [RC 5]
- Percentage of children 6-9 months who received breast milk and complementary foods during the last 24 hours, based on dietary recall [RC 6]
- Percentage of children 0-23 months weighed in last 3 months (verified by card)
- Percentage of caretakers with malnourished children 0-23 months who received nutrition counseling
- Percentage of malnourished children 0-23 months who receive daily nutritious weaning foods/enriched porridge after nutrition counseling
- Percentage of children age 0-23 months whose births were attended by skilled health personnel (Doctor or nurse) [RC 3]
- Percentage of caretakers with children 0-23 months who cited at least two known ways of reducing the risk of HIV infection [RC 10]
- Percentage caretakers with children 0-23 months who cited two or more symptoms of an STD
- Percentage of caretakers with children 0-23 months who cited two or more symptoms of AIDS

II. BACKGROUND

The mortality rates for infants (101/1000) and children under-five years (152/1000) in Mozambique are among the highest in the world (DHS, 2003). Access to healthcare is particularly problematic for those living in rural areas, where 68% of people have reported 'distance to care' as a problem in accessing healthcare (DHS, 2003). The Vurhonga Expanded Impact Child Survival Program is located in the northern part of Gaza Province in southern Mozambique. The program reaches 121 villages and about 80 smaller settlements scattered through the five most rural districts of Gaza, namely: Chibuto, Chicualacuala, Chigubo, Massangena, and Massingir. The total population of this area is 247,146.

The Expanded Impact Program builds on the success of the Vurhonga I (Mabalane and Guija Districts, 1995-1999) and Vurhonga II (Chokwe District, 1999-2003) Child Survival Programs (CSP). Vurhonga II showed reductions of 49% in infant mortality and 42% in under-five mortality (Edward, A. et al., 2007). This project scales-up C-IMCI coverage in the five additional districts in Gaza Province using a large network of Care Group (CG) volunteers, who work in collaboration with religious leaders, village health committees, Socorristas (community health workers), and the health system.

National Standards and Policies

National standards and policies that are relevant to the project are as follows:

- Immunization is a high priority within the Ministry of Health. Most fixed health posts in the program area have cold chain facilities for storage of vaccines; mobile teams based at the hospital/health centers are responsible for immunization outreach in villages where no cold chain facilities exist. Vitamin A distribution is a part of the package of immunization services.
- Since the project began, IPTp with SP has been introduced for prevention (prophylactic treatment) of malaria in pregnant women. An indicator was therefore added to the survey questionnaire to assess coverage for this important intervention.
- During the course of the project, the first line anti-malarial changed Chloroquine to Fansidar (sulfadoxine and pyrimethamine) and Artesunate and then to Coartem. The indicator related to compliance with anti-malarial was changed to refer to "anti-malarial" rather than "Chloroquine."
- National policies encourage exclusive breastfeeding for children 0-5 months. Continued breastfeeding and appropriate complementary feeding is encouraged for children 6 months and older.
- ORS packets are readily available at health posts and health centers for the treatment of diarrhea.
- TBAs are not considered "trained health care providers" for assisted deliveries. When the project goal was determined it was thought that trained TBAs would be considered as "trained health providers." However, since the project began, MOH policies were established to encourage referral of all pregnant mothers to give birth in government health facilities. Therefore, to be consistent with MOH policy (and Rapid CATCH) the project removed TBAs from this indicator.
- Socorristas have not been allowed to be trained on rapid diagnostic tests for malaria. Thus, Socorristas treat all cases of fever as if it were malaria; thus increasing incidence of drug resistance and the number of cases of reported malaria.

Program goals and objectives

The goal of the program is to reduce the burden of mortality and morbidity among children under five years and women of reproductive age. A major component of the program strategy is the establishment of a Scale² Training Center for provincial implementation of C-IMCI using the CG model. The program goals and objectives are in compliance with the USAID Mission Strategic Objective Three (SO3) for improving access, quality, and management of MOH services, while also mobilizing community demand for basic health services. The objectives are also consistent with the MOH national policies for specific interventions and the C-IMCI strategy.

Strategic Objectives:

- 1) To strengthen the capacity of the health system to improve quality and coverage of C-IMCI services through training, drug management, supervision and by establishing effective health information systems.
- 2) To develop sustainable community based mechanisms to improve prevention and care seeking practices for C-IMCI.
- 3) To establish a SCALE² learning center for C-IMCI training in Chokwe that would be used to disseminate best practices with the aim to encourage scaling up to national level.

Table 1: Intervention Mix and Level of effort

Intervention	Level of Effort
Nutrition	20%
Control of Diarrheal Diseases	20%
Malaria Prevention and Case Management	20%
HIV/AIDS Prevention	15%
Pneumonia Case Management	10%
Immunization	10%
Exclusive Breastfeeding	5%

Intervention Specific Objectives:

1. Integrated Management of Childhood Diseases

- 75% of mothers of children 0-23 months know at least 2 danger signs for seeking care immediately

2. Control of Diarrheal Disease

- 60% of sick children are offered increased fluids
- 60% of sick children are offered increased or continued feeding
- 50% of mothers wash hands before food preparation, before child feeding, and after defecation
- 70% of children with diarrhea are treated with ORT
- 60% of children with diarrhea are given extra food for two weeks following diarrheal episode (Note that this cannot be measured by KPC survey, because the population of interest has had diarrhea *within* the past two weeks and therefore cannot appropriately answer questions about catch-up feeding).

3. Pneumonia Case Management

- 50% of children with rapid or difficult breathing (suspected pneumonia) are treated at a health center within 24 hours

4. Malaria Prevention and Case Management

- 75% of children with fever (suspected malaria) treated at health facility within 24 hours
- 70% of children treated for malaria complete packet of anti-malarial drugs (*previous wording: 70% drug compliance for children treated with Chloroquine for malaria*)
- 50% of children 0-23 months slept under an ITN the previous night

5. Expanded Program on Immunization

- 80% of children 12-23 months of age are fully immunized.

6. Exclusive Breastfeeding

- 40% of children 0-5 months are exclusively breastfed.
- 70% of children above 6 months (6-9 months) received breast milk and complementary foods.

7. Nutrition

- 80% of children are weighed regularly (within the past 3 months) in Growth Monitoring and Counseling (GMC).
- 80% of caretakers with malnourished children receive nutrition counseling.
- 70% of malnourished children receive nutritious weaning foods/enriched porridge after nutrition counseling.
- 70% of children who completed HEARTH achieve and sustain adequate (200g)/ catch-up (400g) growth per month for at least two months after HEARTH (Note that this cannot be measured by KPC survey).

8. HIV/AIDS

- 50% of mothers of children 0-23 months know two or more ways to prevent HIV/AIDS.
- 50% of mothers of children 0-23 months know two or more symptoms of HIV/AIDS

9. Antenatal Care

- 70% of mothers of children 0-23 months delivered their youngest child with a skilled birth attendant (trained health provider).

III. PROCESS AND PARTNERSHIP BUILDING

The program's five district coordinators work closely with the community health managers and District Health Directors in the geographic areas for which they are responsible. They attend monthly partner coordination meetings at the DDS (District Health Department), coordinate activities with MOH outreach schedules, and share findings from periodic performance monitoring surveys and C-HIS data. District health staff were aware of the project's activities and appreciated the program's in-depth strategy for community mobilization to achieve health objectives. At the community level, the village leaders were informed of the survey team's

presence and their permission was sought before interviews began. However, there were some constraints in making the KPC more participatory. The great distances of the villages from the capital and the lack of accommodation made it difficult to get MOH employees directly involved as they were not able to spend several days away from work in the rural areas to participate in surveying activities.

IV. METHODS

The purpose of the KPC survey is to evaluate and compare end-of-program (EOP) indicators with Baseline and program established targets for adoption of key preventive behaviors, increased utilization of preventive services, appropriate home care behaviors for sick children, and prompt care-seeking from trained providers in case of childhood illness.

The Final KPC questionnaire is designed for mothers/caretakers of children 0-23 months and was based on the questionnaire used for the Midterm KPC survey in September 2007. The original questionnaire was based on the Rapid CATCH indicators and the KPC 2000 modules. The questionnaire was developed in English and then translated into the local language, Shangaan, and back translated for accuracy (See Annex A and B for the survey questionnaires). The survey was pre-tested in five villages in Chokwe District, which lie outside the current program area but are similar in culture and living conditions to villages in the program area.

The questionnaire contains 49 questions that cover the following topics:

- 1-4 Identification and ages
- 5-6 Education of the mother
- 7-11 Breastfeeding and nutrition
- 12-13 Growth monitoring and counseling
- 14-20 Health knowledge and care seeking
- 21 Diarrhea control
- 22-24 Pneumonia
- 25-27 Malaria control
- 28-30 Insecticide Treated Nets
- 31-36 Immunizations
- 37-41 Maternal Care and Family Planning
- 42-46 STI/HIV/AIDS
- 47-48 Sustainability
- 49 Hand washing

Table 2: Program and Rapid Catch Indicator Definitions

Intervention Area	Indicator Definitions	
	Numerator	Denominator

Integrated Management of Childhood Illness	Number of caretakers with children 0-23 months who know at least two childhood illness danger signs for seeking care immediately [RC 12]	All caregivers of children age 0-23 months
Control of Diarrheal Diseases	Number of children 0-23 months who were offered increased fluids and continued or increased feeding during illness [RC 13]	Number of children 0-23 months who were sick in the past two weeks
	Number of caretakers with children 0-23 months who reported washing hands before food preparation, before child feeding, after defecation	All caregivers of children age 0-23 months
	Number of caregivers of children 0-23 months who report washing their hands with soap/ash before food preparation, before child feeding, after defecation, and after attending to a child who has defecated [RC 11]	All caregivers of children age 0-23 months
	Number of children 0-23 months who received ORT/ORS/home available fluids for diarrhea	Number of children age 0-23 months with diarrhea in the past two weeks
Pneumonia Control Management	Number of children 0-23 who received treatment for suspected pneumonia from a trained provider within 24 hours	Number of children age 0-23 months with suspected pneumonia (rapid or difficult breathing) in the past two weeks
Control of Malaria	Number of children 0-23 months who received treatment for suspected malaria from a trained health provider within 24 hours	Number of children age 0-23 months with suspected malaria (fever, convulsions or malaria) in the past two weeks
	Number of caretakers with children 0-23 months treated at the HF for malaria in the past two weeks reporting drug completion	Number of children age 0-23 months treated at the HF for malaria in the past two weeks
	Number of children 0-23 months who slept under an ITN (ever treated or long-lasting net) the previous night [RC 9]	All children 0-23 months
Immunization	Number of children 12-23 months fully immunized (verified by card) before 24 months	All children 12-23 months
	Number of children age 12-23 months who are fully vaccinated before the first birthday (requires Polio 3, DPT 3 and Measles) [RC 7]	Number of children age 12-23 months with vaccination cards
	Number of caretakers with children age 12-23 months who received a measles vaccine. <i>Note: RC 8 is "recalled knowledge of the vaccine, while the program only measured documented vaccinations"</i>	All caretakers with children age 12-23 months
	Number of mothers with children 0-23 months who report receiving at least two tetanus toxoid injections before the birth of their youngest child [RC 4]	All mothers with children 0-23 months
Nutrition	Number of children 0-5 months who were exclusively breastfed during the past 24 hours, based on dietary recall [RC 5]	Number of children age 0-5 months
	Number of children 6-9 months who received breast milk and complementary foods during the last 24 hours, based on dietary recall [RC 6]	Number of children age 6-9 months
	Number of children 0-23 months weighed in last 3 months (verified by card)	All children 0-23 months
	Number of caretakers with malnourished children 0-23 months who received nutrition counseling	Number of caretakers with malnourished children age 0-23 months

	Number of malnourished children 0-23 months who receive daily nutritious weaning foods/enriched porridge after nutrition counseling	Number of caretakers with malnourished children age 0-23 months who received nutrition counseling
	Number of children age 0-23m who are underweight (-2SD from the median weight-for-age, according to the WHO/NCHS reference population) [RC 1]	Number of children 0-23 months
HIV/AIDS Prevention	Number of caretakers with children 0-23 months who cited at least two known ways of reducing the risk of HIV infection [RC 10]	All caretakers with children 0-23 months
	Number of caretakers with children 0-23 months who cited two or more symptoms of an STD	All caretakers with children 0-23 months
	Number of caretakers with children 0-23 months who cited two or more symptoms of AIDS	All caretakers with children 0-23 months
	Number of children age 0-23 months whose births were attended by skilled health personnel (Doctor, Nurse or Midwife) [RC 3]	All children age 0-23 months
Other	Number of children age 0-23 months who were born at least 24 months after the previous surviving child [RC 2]	Number of mothers with more than one biological child 0-59 months

Sampling Design

The sample size was determined using the CSTS+ KPC Module - 2 stage 30x10 clusters sampling method. This model uses the following formula to calculate the sample size:

$$N = \frac{Z^2(1-P)P}{E^2}$$

N= Sample size; Z=1.96 (for a confidence interval of 95%); P= Known prevalence; E=% within=±0.05.

Thirty clusters were randomly selected from a list of all the villages in Chokwe, taking into account the differences in population size of the villages (Proportional Population Cluster Sampling method). See Annex C for the sampling framework. For each cluster, interviews were conducted with 10 households having children under the age of two years. Upon arriving in a village, the village headman was asked to identify a place considered close to the central point of the village. At the central site, a member of the survey team spun a pen. The survey team started in the direction of the pen (pointed end) to the first house. If the object pointed in the direction where there were no houses, the procedure would be repeated until there were houses in that direction.

The interview started at the nearest household and continued to the next one in the same direction until the required number of households per cluster was met. In cases where the chosen direction had less than the required sample the object would be re-spun to change direction at the farthest household and the team proceeded in that direction until the total required sample in that cluster was met.

Interviewer Recruitment

Interviewers for the Final KPC survey included project staff and 10 external interviewers. The external interviewers were recruited with assistance from the project staff. Interviewers were conducted by project leadership and final candidates were chosen based on their reading and

writing skills. Most interviewers chosen were female and all had completed secondary school and were fluent in the local language (Shangaan) and Portuguese.

Interviewer and Supervisor Training

The interviewers completed four days of training to learn to read the questionnaire fluently and to code responses accurately. This training was conducted by program supervisors and coordinators, all of whom have thirteen years of experience with World Relief's child survival programs in Gaza Province and have participated in at least five previous KPC surveys as well as numerous monitoring surveys. The interviewers were divided into groups of four and each group was assisted by four supervisors. The supervisors used the time in small groups to explain the reason behind each question. The interviewers also received training on the objectives of the KPC survey and the household selection process. This aspect of the training was conducted by the Program Coordinator with assistance from the Director and Technical Advisor. See Annex D for a complete listing of person/roles involved with the surveying process and Annex E for the training schedule.

Data Collection

Data collection occurred from June 15-19th, 2009 and included ten teams that spent approximately two to three days per smaller districts and four to five days in the larger districts. The only major constraint was the long distances between villages and the average interview length was approximately 40 minutes. For quality control purposes, each interviewer was accompanied by a supervisor, who observed every interview that took place.

Data Analysis

The data was hand tabulated June 22-24th, 2009 by the supervisors, coordinators and interviewers. The data was also entered into EpiInfo and analyzed by a MCH Specialist. For quality control purposes, the data from hand tabulations was compared to the data entered into EpiInfo and then conflicts between the two were investigated and resolved. Additionally, frequency distributions were run on all variables to identify outliers.

V. RESULTS

Table 3: Program Results by Indicator

INDICATOR	BASELINE Percentage	MIDTERM Percentage	FINAL			EOP Target
			Numerator Denominator	Percent	Confidence Interval	
IMCI						
Percentage of caretakers with children 0-23 months who know at least two childhood illness danger signs for seeking care immediately [RC 12]	23.7%	65.5%	248/300	82.7%	77.3%- 88.0%	75% ▲
DIARRHEA						
Percentage of children 0-23months who were offered increased fluids during illness	8.2%	31.3%	48/110	36.4%	35.1%- 52.2%	60% ▼

Percentage of children 0-23 months who were offered increased or continued feeding during illness	17.5%	46.3%	66/110	60.0%	49.4%-70.6%	60%▲
Percentage of children 0-23 months who were offered increased fluids and continued or increased feeding during illness [RC 13]	2.9%	24.7%	40/110	36.4%	27.2%-45.6%	RC
Percentage of caretakers with children 0-23 months who reported washing hands before food preparation, before child feeding, after defecation	3.0%	14.2%	89/300	29.7%	21.1%-38.2%	50%▼
Percentage of caregivers of children 0-23 months who report washing their hands with soap/ash before food preparation, before child feeding, after defecation, and after attending to a child who has defecated [RC 11] <i>*BL includes only the first three times</i>	3.0%	6.7%	20/300	6.7%	3.4%-10.0%	RC
Percentage of children 0-23 months who received ORT/ORS/home available fluids for diarrhea <i>*BL includes all diarrhea cases, MT and Final include only diarrhea more than 3 times</i>	54.3%	74.5%	37/52	71.2%	59.2%-83.1%	70%▲
PNEUMONIA						
Percentage of children 0-23 who received treatment for suspected pneumonia from a trained provider within 24 hours <i>*BL criteria for suspected pneumonia included cough and difficult breathing while MT and Final includes all cases of rapid/difficult breathing.</i>	10.0%	33.7%	7/11	63.6%	33.1%-94.2%	50%▲
MALARIA						
Percentage of children with suspected malaria (fever) treated within 24 hours at a HF <i>*BL criteria for suspected malaria included only fever</i>	17.4%	56.9%	39/63	61.9%	46.7%-77.1%	75%▼
Percentage of caretakers with children 0-23 months treated at the HF for malaria in the past two weeks reporting drug completion	60.7%	80.1%	37/54	68.5%	53.3%-83.7%	70%►
Percentage of children 0-23 months who slept under an ITN (ever treated or long-lasting net) the previous night [RC 9] <i>*BL is an estimate based on 43 children who slept under a net, and that 56.3% of nets in the survey were dipped.</i>	8.1%	14.1%	60/300	20.0%	14.0%-26.0%	50%▼
IMMUNIZATIONS						
Percentage of children 12-23 months fully immunized (verified by card) before 24 months (Includes all children regardless of card presence)	77.3%	78.1%	86/106	81.1%	72.3%-89.9%	80%▲

Percentage of children age 12-23 months who are fully vaccinated before the first birthday [RC 7] <i>*BL includes all children vaccinated by 23 months</i>	77.3%	67.5%	69/101	68.3%	57.4%-79.5%	RC
Percentage of mothers with children 0-23 months who reported receiving at least two tetanus toxoid injections before the birth of their youngest child [RC 4]	56.1%	83.7%	264/300	88.0%	83.4%-92.6%	RC
Percentage of caretakers with children age 12-23 months who recalled that their child received a measles vaccine [RC 8] <i>*Includes only measles verified by card</i>	95.5%	80.6%	88/106	83.0%	75.9%-90.2%	RC
NUTRITION						
Percentage of children 0-5 months who were exclusively breastfed during the past 24 hours, based on dietary recall [RC 5]	17.4%	67.0%	68/85	80.0%	70.7%-89.3%	40%▲
Percentage of children 6-9 months who received breast milk and complementary foods during the last 24 hours, based on dietary recall [RC 6]	50.7%	90.5%	61/72	84.7%	75.9%-93.6%	70%▲
Percentage of children 0-23 months weighed in last 3 months (verified by card)	76.9%	84.0%	263/300	87.7%	82.9%-92.4%	80%▲
Percentage of caretakers with malnourished children 0-23 months who received nutrition counseling	14.0%	73.3%	20/25	80.0%	63.9%-96.1%	80%▲
Percentage of malnourished children 0-23 months who receive daily nutritious weaning foods/enriched porridge after nutrition counseling	42.8%	82.2%	16/20	80.0%	59.1%-100%	70%▲
Percentage of children age 0-23m who were underweight (-2SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population) [RC 1] <i>*BL includes children outside of the normal curve on the Mozambique health card</i>	16.7%	9.0%	31/299	10.4%	6.4%-14.4%	RC
HIV/AIDS PREVENTION						
Percentage of children age 0-23 months whose births were attended by skilled health personnel (Doctor or nurse) [RC 3]	58.5%	63.7%	204/300	68.0%	58.4%-77.6%	70%►
Percentage of caretakers with children 0-23 months who cited at least two known ways of reducing the risk of HIV infection [RC 10]	10.3%	65.6%	238/300	79.3%	72.8%-85.8%	50%▲
Percentage caretakers with children 0-23 months who cited two or more symptoms of an STD	11.4%	66.8%	220/300	73.3%	67.0%-79.7%	50%▲
Percentage of caretakers with children 0-23 months who cited two or more symptoms of AIDS	24.8%	71.4%	260/300	86.7%	81.5%-91.8%	50%▲

OTHER						
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child [RC 2]	N/A	69.0%	81/111	73.0%	64.5%-81.4%	RC

See Annex F for a detailed description of Baseline, Midterm and Final KPC results and Annex G for raw data tables

VI. DISCUSSION

Community Integrated Management of Childhood Illness

The Final KPC survey revealed that mothers' knowledge of two or more danger signs for immediate care-seeking increased from 24% (17%-31%) at Baseline to 83% (77%-88%) at end-of-project surpassing the EOP target of 75%.

Control of Diarrheal Disease

The survey revealed that the percentage the percentage of sick children offered increased or continued feeding increased from 17.5% (9.5%-25.6%) at Baseline to 60% (50%-69%) at Final, meeting the target of 60%. The percentage of sick children offered increased fluids increased from 8% (0%-7%) to 36% (27%-46%), while this represented a greater percent change than increased feeding it fell below the program target of 60%. Staff commented that there may have been confusion regarding the use of the term "sick"; while mothers know that treating diarrhea involves increasing fluids, they may not necessarily offer increased fluids for other illnesses.

Another indicator for diarrheal disease, percentage of children with diarrhea treated with ORT did exceed the end-of-project target of 70% (71%, CI 59%-83%). Moreover, if the caretakers who replied that they took the child to the HF were included the percentage of children treated for diarrhea rises to 85% (74%-95%).

The percentage of mothers/caretakers who reported washing their hands with soap before food preparation, before child feeding, and after defecation increased from 3% at Baseline to 14% (8%-20%) at Midterm to 30% (25-35%) at Final, but fell short of the program target of 50%. The project staff noted that while people wash their hands after defecation and before preparing food, few people wash their hands before feeding a child, particularly if the child is still exclusively breastfed (28% of the children in this survey were 0-5 months old). This was evident during the interviews when many mothers breastfed their children during the interview without stopping to wash their or the child's hands as well as from the survey itself when the individual responses were analyzed; 73% reported washing before food preparation, 90% after defecation and only 39% before feeding a child. Soap (or soap substitute) was readily available in most homes (72%, CI 64%-80%). Using the Rapid CATCH definition, hand washing with soap at the four critical times was just 7% at Midterm and Final. Unfortunately, this indicator was not measured at Baseline and is therefore difficult to compare over time.

Pneumonia Case Management

The survey found that the percentage of children taken to a health center or hospital within 24 hours of onset of rapid or difficult breathing increased from 10% (0%-22%) at Baseline to 33.7% at Midterm and 64% (33%-94%) at Final. Of note, the Baseline criteria for suspected pneumonia included cough and rapid or difficult breathing, while the Midterm and Final questionnaires required only rapid or difficult breathing as recommended by the KPC standards. The confidence interval is quite large due to the very small number of reported cases of suspected pneumonia with only 11 cases out of a survey size of 300. The placement of 136 Socorristas at community built health posts in villages with at least 1,000 population and at least 7 km from the nearest health facility enabled caregivers to seek treatment at a nearby health facility when their children exhibited danger signs of particular illnesses.

Malaria Prevention and Case Management

The KPC survey revealed that care-seeking within 24 hours for suspected malaria has increased from 34% (26%-42%) at Baseline to 62% (49%-74%) at Final but fell below the 75% target. There may have been some confusion in either how mothers responded to treating for fever within 24 hours or how interviewers coded the response. For example, it is possible that a child treated the next day but within 24 hours was coded incorrectly. The survey also revealed that reported compliance with the treatment regimen increased from 61% (53%-69%) at Baseline to 82.8% (73%-90%) at Midterm to 69% (54%-89%) at Final falling just short of the 70% target.

The percentage of children who slept under an (ever-treated) ITN the previous night increased from 8% (4-13%) at Baseline to 20% (14%-26%) at Final. One contributing factor to slow progress in this indicator is the fact that only 56% of households reported owning nets. Even so, usage by those who own nets was only 36% (27%-44%). Another contributing factor is that the Final KPC was conducted during the cold months when the *perceived* risk of malaria is low. Routine supervision surveys show the average usage of ITNs among those who own nets during the summer months of (November-February) rose from 47% in 2007/2008 to 88% in 2008/2009.

Immunization

The percentage of children 12-23 months who are fully immunized by 24 months increased from 77% (66%-88%) at Baseline to 81% (72%-90%) at Final surpassing the 80% EOP target. It is important to note that this indicator includes all children 12-23 months who had been fully immunized by the date of the survey in the numerator, without regard to whether the full series of immunizations had been completed prior to the child's first birthday. In addition, the program indicator uses a denominator of all children regardless of card presence. In order to bring this indicator in line with accepted international standards, the stricter guideline of only including children who had been fully immunized by their first birthday over the number of children with vaccination cards was also calculated. This percentage held steady at 68% at the Midterm and Final with confidence intervals of 54%-81% and 57%-80% respectively. The Baseline for this indicator is not able to be measured.

The percentage of mothers with children ago 0-5 months who received at least two tetanus toxoid injections before the birth of their youngest child rose from 56% (48%-64%) at Baseline to 88% (83%-93%). While this Rapid CATCH indicator was not included as a project indicator, it is worth noting this achievement.

Exclusive Breast Feeding and Nutrition

The survey showed an increase in exclusive breast feeding (EBF) from 17% (7%-28%) at Baseline to 80% (71%-89%) at Final, doubling the EOP target of 40%. Additionally, the project succeeded in surpassing the EOP targets for several other nutrition interventions: 85% (76%-94%) of children 6-9 months received complementary feeding, 88% (83%-92%) of children were weighed regularly in Growth Monitoring Counseling (GMC), 80% (64%-96%) of caretakers with malnourished children received nutrition counseling and 80% (59%-100%) of malnourished children received nutritious weaning foods/enriched porridge after nutrition counseling. Overall, the Final KPC survey highlighted nutrition as a strong program component.

The percentage of underweight children 0-23 months of age based on the Mozambique Road to Health Card (below the third percentile from the mean) decreased in half from 17% (10%-23%) at Baseline to 8% (5%-12%) at Final. When compared to the WHO reference population the percentage is similar at 9% to 10% based on the 2006 and 1978 samples. While it is likely that annual variations between when the Baseline and Final evaluations were conducted could influence these figures, the project's achievement in achieving high exclusive breastfeeding rates coupled with strong results in other areas of nutrition are likely contributing factors in this achievement.

HIV/AIDS

Awareness of HIV prevention methods and symptoms of AIDS have increased dramatically since the Baseline survey. The percentage of caretakers who know two or more ways to prevent HIV has increased from 10% (5%-16%) to 79% (73%-86%); the percentage of caretakers who know at least two symptoms of AIDS has increased from 25% (17%-32%) to 87% (82%-92%). Additionally, the percentage of caretakers who know two or more symptoms of STDs increased from 11% (6%-17%) at Baseline to 73% (67%-80%) at Final.

The percentage of children age 0-23 months whose births were attended by skilled health personnel rose from 59% (51%-66%) at Baseline to 68% (58%-78%) at Final, falling just short of the 70% EOP target but within the margin of error. When including trained TBAs, the percentage increases from 64% (56-71%) at Baseline to 71% (61%-80%) at Final.

Other

The percentage of children age 0-23 months were born at least 24 months after the previous surviving child held constant from 69% (58%-80%) at Midterm to 73% (65%-81%) at Final. This Rapid CATCH indicator was not a project indicator and there is no Baseline data available. However, the percentage of non-pregnant women using a modern form of birth control rose significantly from 10% (5%-15%) at Baseline to 30% (22%-38%) at Midterm and 37% (29%-45%) at Final.

Since the project began, Intermittent Presumptive Therapy during pregnancy (IPTp) with Sulfadoxine- Pyrimethamine (SP) has been introduced for prevention (prophylactic treatment) of

malaria in pregnant women. Since Midterm, the percentage of women who received at least two doses of SP during their last pregnancy rose from 77% (70%-84%) to 85% (80%-91%) at Final.

Table 4: External Comparison

Available Indicators	Project BL 2004	Project Final 2009	DHS 2003*
Children with diarrhea treated with ORS, HAFs, or increased fluids *BL value is from the project Midterm in 2007	74%	85%	83%
Sought treatment <24h for fast/difficult breathing *DHS includes all ever treated at HF, not limited to 24 hours	10%	64%	60%
Children with suspected pneumonia who sought treatment at a health facility *BL value is from the project Midterm in 2007	85%	91%	60%
Children 0-5 months EBF	17%	80%	30%
Children 6-9 months receiving complementary foods	51%	85%	79%
Sick children offered increased fluids and continuous feeding *DHS includes increased foods OR continuous feeding	3%	36%	58%
Sick children offered continuous feeding	17%	60%	38%
Sick children offered increased or continued feeding *BL value is from the project Midterm in 2007	56%	67%	58%
Children 12-23m who were fully immunized at the time of the survey	77%	81%	82%
Children > 6 months who received Vitamin A supplementation	77%	74%	55%
Women who received 2 TT during last pregnancy	56%	88%	71%
Delivery by a trained health provider (Doctor, Nurse or TBA)	64%	71%	61%
Caretakers who know 2 ways to prevent HIV	10%	73%	39%
Children underweight (-2SD by 1978 WHO standard)	17%	10%	23%

*Includes data from Gaza province, children aged 0-59 months unless otherwise stated

Information Dissemination

A presentation of the KPC results was given on the 24th of July 2009 at the USAID mission in Maputo which included donors such as UNICEF and the Malaria Consortium as well as new partners in Nampula province, Save the Children, PSI, Pathfinder, CARE, and CLUSA. Results were also shared informally at the community and district level with community members and administrators during the Final evaluation and a formal presentation of KPC results including findings from the Final evaluation was held on August 4th, 2009 in the provincial capital of Xai Xai.

VI. BIBLIOGRAPHY

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ANNEX A: ENGLISH SURVEY QUESTIONNAIRE

District _____ Supervision Code: _____ Number: _____

**WORLD RELIEF MOZAMBIQUE
Vurhonga IV Expanded Impact Program**

Final Survey for the Vurhonga Expanded Impact C-IMCI Project.

All questions are to be addressed to the mother with a child less than 24 months of age.

CIRCLE THE NUMBER OF THE ANSWERS MENTIONED

Date of interview Day -----/ Month-----/Year -----

Time of interview Start ___:___ am / pm End ___:___ am / pm_____

Name of interviewer -----

Supervisor -----

Community (Aldeia) ----- Bairro -----

Name of Mother -----

Mother's age in years -----

How many children living in this household are under age five? -----

How many of those children are your biological children? -----

READ ONE OF THE FOLLOWING QUESTIONS BASED UPON MOTHER'S RESPONSE TO Q.3

ONLY 1 CHILD UNDER FIVE: "What is the name, sex, and date of birth of that child?"

MORE THAN 1 CHILD UNDER FIVE: "What are the names, sexes, and dates of birth of your two youngest children?"

	NAME	SEX	DATE OF BIRTH	AGE IN MONTHS
1		MALE FEMALE	___ / ___ / ___ DD MM YY	

2		MALE FEMALE	____ / ____ / ____ DD MM YY	
---	--	----------------	--------------------------------	--

IF THE YOUNGEST CHILD IS 24 MONTHS OR OLDER, STOP AND GO TO THE NEXT HOUSE.

[THE REST OF THE QUESTIONS ARE RELATED TO THE YOUNGEST CHILD ABOVE OR THE MOTHER OF THE CHILD]

MOTHER'S EDUCATION

Have you had the opportunity to go to school?

Yes

No → **GO TO Q-7**

What was the highest level you attained in school?

Primary, does not read

Primary, reads

Secondary and higher

BREASTFEEDING

Are you breastfeeding (name of child) now?

a. Yes → **Go to 9**

No

Have you ever breastfeed (name of child)?

a. Yes

No → **Go to 10**

How long after birth did you first put (name of child) to the breast?

Immediately/within first hour after delivery

After the first hour after delivery

After eight hours after delivery

Doesn't remember

10. I would like to ask you about the types of liquids and foods that (name of child) consumed yesterday during the day or at night. Did (name of

child) have. . .

READ EACH OF THE FOLLOWING AND PLACE A CHECK MARK IN THE BOX NEXT TO EACH ITEM CONSUMED.

	LIQUID/FOOD	CONSUMED IN LAST 24 HOURS?
A	Breastmilk?	
B	Plain water?	
C	Other liquids?	
D	Mashed, pureed, solid, or semi-solid foods?	
E	Anything else? SPECIFY:	<hr/> <hr/> <hr/>

11. When should a mother start adding foods to breastfeeding?

- Earlier than 4 months
- Between 4-6 months of age
- About 6 months of age
- After 6 months of age
- Doesn't know

GROWTH MONITORING AND COUNSELING

12. Does (name of child) have a growth monitoring card?
(ASK THE MOTHER IF YOU CAN HAVE A LOOK AT IT.)

- Yes
- No → **Go to Q 13b)**
- Lost Card → **Go to Q 13b)**

13a) LOOK AT THE GROWTH MONITORING CARD OF THE CHILD AND RECORD THE FOLLOWING INFORMATION: HAS THE CHILD BEEN WEIGHED IN THE LAST 3 MONTHS (JUNE, JULY, AUGUST 2007).

- Yes
- No

13b) May I weigh (name of child)?

- Yes
- No → **Go to Q-14, only if 13a) is also No**

13c) *IF MOTHER AGREES, WEIGH THE CHILD AND RECORD WEIGHT BELOW. RECORD TO THE NEAREST TENTH.*

___ ___ . ___ KILOGRAMS

13d) DO NOT ASK; JUST RECORD INFORMATION: Look at the weight of (name of child). Is (name of child) underweight?

Yes

No → **Go to Q 14**

13e) Have you been told how to feed (name of child) to improve his/her weight?

Yes

No → **Go to Q 14**

13f) Who told you? DO NOT PROMPT.

- a. Health worker (includes nurse or Socorrista)
- b. Volunteer
- c. Other (specify)_____

13g) What did you give (name of child) daily to improve his/her weight?

Improved Soft porridge

Oil

Marula nuts/Peanuts

Doesn't know

Nothing

Anything else (specify)_____

ILLNESS RECOGNITION AND CARE SEEKING

Sometimes children get sick and need to receive care or treatment for illnesses. What are the signs of illness that would indicate your child needs treatment? DO NOT PROMPT. CIRCLE ALL MENTIONED.

Doesn't know

Looks unwell or not playing normally

Not eating, drinking, or breastfeeding

Lethargic or difficult to wake

High fever
Fast or difficult breathing
Vomits everything
Convulsions
Gets worse despite home care
Other _____
(SPECIFY)

Did (name of child) experience any of the following in the past two weeks?

READ CHOICES ALOUD AND CIRCLE ALL MENTIONED BY RESPONDENT.

Diarrhea

a.1 How many times did the child have a loose stool?
Less than 3 3 or more (CIRCLE ONE)

Blood in stool
Cough
Rapid or difficult breathing
Fever
Malaria
Convulsions
Other _____
(SPECIFY)

None of the above → **GO TO Q-18**

When (name of child) was sick, was he/she offered less than usual to drink, about the same amount, or more than usual to drink?"

Less than usual
Same amount
More than usual

When (name of child) was sick, was he/she offered less than usual to eat, about the same amount, or more than usual to eat?

Less than usual
Same amount
More than usual

What important actions should you take if (name of child) has diarrhea?
(DO NOT PROMPT. MULTIPLES RESPONSES POSSIBLE)

Doesn't know
Initiate liquids rapidly

Give the child more to drink than usual
Give the child small frequent meals
Proper mixing and administration of ORS
Take child to the hospital/health clinic
Feed more after diarrhea so that the child can gain weight
Withhold fluids
Withhold foods
Other (specify) _____

What signs would cause you to seek help or treatment if (name of child) has diarrhea? (DO NOT PROMPT. MULTIPLES RESPONSES POSSIBLE)

Doesn't know
Vomiting
Fever
Dry mouth, decreased urine output (dehydration)
Diarrhea of prolonged duration (2 weeks)
Blood in stool
Loss of appetite
Weakness (tiredness)
Other (specify) _____

What signs would cause you to take (name of child) to the hospital when he has pneumonia?
(DO NOT PROMPT. MULTIPLES RESPONSES POSSIBLE)

Doesn't know
Rapid breathing/breathing difficulty
Sub/Inter-costal rib retraction
Lost appetite
Fever
Groaning / coughing
Others (specify) _____

DIARRHEA

THE FOLLOWING QUESTION PERTAINS ONLY TO THE CHILDREN WHOSE MOTHERS ANSWERED "YES" TO QUESTION 15-A and "3 OR MORE" TO QUESTION 15-A-1

When (name of child) had diarrhea, did you give the child anything? DO NOT PROMPT. MULTIPLE RESPONSES POSSIBLE. AFTER EACH RESPONSE, ASK: ANYTHING ELSE?

Nothing
ORS Sachet
Sugar-salt solution
Cereal based ORT (rice water, maize water)
water
Other available drinks
Medication for diarrhea
Take child to the hospital/clinic
Other (specify) _____

PNEUMONIA

THE FOLLOWING QUESTIONS PERTAIN ONLY TO THE CHILDREN WHO HAD RAPID OR DIFFICULT BREATHING IN Q-15-D.

From whom did you seek treatment when (name of child) had difficulty in breathing? DO NOT PROMPT. MULTIPLE RESPONSES ALLOWED.

General hospital like _____
Health Center/post like _____
Injectionist
Socorrista (Local Health Worker)
Traditional birth attendant
Traditional Healer
Pharmacy/shop
Relatives and friends
Others (specify) _____

IF “YES” to 22-A, 22-B, OR 22-D, ASK: How soon after the difficulty in breathing began did (name of child) receive treatment?

Less than one day (within 24h)
After one day (24h – 48h))
Two days or more
Doesn't know

MALARIA CONTROL

THE FOLLOWING QUESTIONS PERTAIN ONLY TO THE CHILDREN WHOSE MOTHERS ANSWERED YES TO QUESTION 15-E (FEVER), 15-F (MALARIA), OR 15-G (CONVULSIONS).

When (name of child) had fever, what treatment did you give? DO NOT PROMPT. MULTIPLE RESPONSES POSSIBLE.

Home treatment

Wet the child to decrease fever.

Take the child to the hospital or health center

Take the child to the Socorrista

Other (specify) _____

IF THE MOTHER ANSWERED (C) OR (D) ABOVE, ASK: How soon after the fever started was (name of child) treated at the health center or by the Socorrista?

Less than one day (within 24h)

After one day (24h – 48h)

Two days or more

Did not receive treatment → **GO TO Q 27**

Doesn't know

ASK THE MOTHER TO SHOW YOU THE PACKETS OF TABLETS, AND THEN RECORD THE INFORMATION BELOW. IF THE CHILD IS STILL TAKING THE MEDICINES, MARK RESPONSE (A).

Finished the tablets

PACKAGE SEEN

PACKAGE NOT SEEN

Didn't finish the tablets

Doesn't have the packets

MALARIA PREVENTION

(TO ALL MOTHERS)

Do you have any mosquito nets in your house? IF YES, ASK: Can I see it?

Yes – net observed hanging

Yes – net observed but not hanging

Yes – net not observed

No → **GO TO Q-30**

c. Doesn't know → **GO TO Q-30**

Who slept under a mosquito net last night? CIRCLE ALL THAT APPLY.

a. Child (NAME)

b. Respondent

c. Other individual(s) _____

(SPECIFY)

d. Did not use a net

Was the mosquito net ever soaked or dipped in a liquid to repel mosquitoes or bugs?

Yes. ASK: When last?

Month Year

--	--	--	--

No

Long-lasting net; does not need to be retreated

Doesn't know

IMMUNIZATIONS

DOES THE MOTHER HAVE A CARD WHERE (name of child's) VACCINATIONS ARE WRITTEN DOWN?

Yes → SEEN BY INTERVIEWER

Not available (lost/misplaced, not in home) → **GO TO Q-33**

Never had a card → **GO TO Q-33**

Doesn't know → **GO TO Q-33**

RECORD INFORMATION EXACTLY AS IT APPEARS ON (NAME'S) VACCINATION CARD.

	DAY	MONTH	YEAR
BCG	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
POLIO 0	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
POLIO 1	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
POLIO 2	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
POLIO 3	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
DPT 1	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
DPT 2	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
DPT 3	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
MEASLES	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>
VITAMIN A	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>	<input style="width: 20px; height: 15px;" type="text"/>

While you were pregnant with (name of child) did you receive an injection in the arm to prevent you and the baby from getting tetanus, that is, convulsions after birth?

Yes

No → **GO TO Q-34**

Doesn't know → **GO TO Q-34**

How many times did you receive a tetanus injection?

Once

Twice

More than two times

Doesn't know

MATERNAL CARE AND FAMILY PLANNING

Did you go to the health center during your last pregnancy? If yes, how many times?

Once

Twice

Three times

Four or more times

Never **GO TO Q-36**

Doesn't know

During your last pregnancy, did a health worker give you any medicines to prevent malaria? If yes, how many times?

Once

Twice

Three

More than three

Never

Doesn't know

Now I would like to ask you about the time when you gave birth to (Name of child). Who assisted you with (name of child) delivery? **DO NOT PROMPT.**

Doctor

Nurse/midwife

Traditional birth attendant _____
(NAME)

Community health workers/Socorrista

Family member or friend _____
(SPECIFY RELATIONSHIP TO RESPONDENT)

Other _____
(SPECIFY)
No one.

Are you pregnant now?

Yes → **GO TO Q-41**
No

Are you or your husband currently using any method to avoid/postpone getting pregnant?

Yes
No → **GO TO Q-41**

What is the main method you or your husband are using now to avoid/postpone getting pregnant? DO NOT PROMPT. MULTIPLE RESPONSES POSSIBLE.

Tubal ligation
Vasectomy
Injections
Pill
IUD
Diaphragm
Condom
Foam/gel
Exclusive breastfeeding
Rhythm
Abstinence
Coitus interruptus
Others (specify) _____

When you were pregnant with (name of child) was the amount of food you ate...? (READ CHOICES 1-4 TO THE MOTHER)

More than usual?
Same as usual?
Less than usual?
Doesn't know
STI/HIV AND AIDS

Have you ever heard of an illness called AIDS?

Yes
No → **Go to Q-45**

What can a person do to avoid getting AIDS or the virus that causes AIDS? (DO NOT PROMPT. CIRCLE ALL MENTIONED.)

Abstain from sex
Use condoms
Limit sex to one partner/Stay faithful to one partner
Limit number of sexual partners
Avoid sex with prostitutes
Avoid sex with persons who have many partners
Avoid intercourse with persons of the same sex
Avoid sex with persons who inject drugs intravenously
Avoid blood transfusions
Avoid injections
Avoid sharing razors, blades

Avoid kissing
Avoid mosquito bites
Seek protection from traditional healer

Nothing
Other _____
(SPECIFY)
Doesn't know

What are the signs of AIDS?

Weight loss
Fever
Diarrhea (prolonged for one month or more)
Cough for one month or more, tuberculosis
Skin infections/herpes
Swollen lymph nodes
Night sweats
Other (specify) _____
Don't know

What are the signs of STI?

Discharge
Burning urine
Abdominal pain
Sores between the legs
Doesn't know
Other _____

Do you have any orphans staying with you in the same house?

- a. Yes
- b. No

SUSTAINABILITY

Is there a _____(Village Health Committee) in this village?

- a. Yes
- b. No
- c. Don't know

Have you been visited by a volunteer during the last month?

- a. Yes
- b. No
- c. Don't know

HAND-WASHING PRACTICES

Before we end, I'd like to ask two more questions. When do you wash your hands with soap/ash?
DO NOT PROMPT. CIRCLE ALL MENTIONED.

- Never
 - Before food preparation
 - Before feeding child
 - After defecation
 - After attending to a child who has defecated
 - Other _____
- (SPECIFY)

ASK TO SEE SOAP OR OTHER SUBSTANCE USED FOR HANDWASHING.

- Soap observed
- Soap substitute (e.g. ash) observed
- Soap NOT observed

THANK THE MOTHER, FOR THE TIME SHE GAVE TO ANSWER YOUR QUESTIONS.

ANNEX B: SHANGAAN SURVEY QUESTIONNAIRE

Distrito _____ **Supervisora codico** _____ **Numero** _____

WORLD RELIEF MOZAMBIQUE

Vurhonga IV Impacto do projecto em expansao.

Avalicao do meio termo para a verificacao do impacto do projecto Vurhonga C- IMCI.

Swivutiso hinkwaswo swi fanela ku kongomisiwa eka mamana loyi a nga ni nwana loyi a nga ehansi ka 24 wa tinwheti

Siku ra swivutiso -----/ Nh'weti-----/Lembe -----

Nkarhi waku vutisa: Ku sukela hi awara ya _____ Na mixo/ ni nhlekane
Ku ghama hi awara ya _____ na mixo/ ni hlekane.

Vito ra muvutisi -----

Mulanguteri -----

Xitshungu ----- Bairro -----

Vito ra mamana -----

1. Vukhale (malembe) -----
2. Xana i vatsonguana vangani va nga ehansi ka 5 wa malembe va nga kona lana kaya? -----
--
3. Eka lavaya, xana i vatsonguana vangani va nga velekiwa hi wena mamana? -----
4. HLAYA XIVUTISO XIN'WE HI KU YA HI NHLAMULO YA XIVUTISO 3:

NTSENA NWANA UNWE LOYI A NGA EHANSI KA 5 WA MALEMBE: “I mani vito, wa yini (sexo), ni siku ra ku velekiwa ra nwana?”

LOKO VA TLULA NWANA UNWE ANGA EHANSI KA 5 WA MALEMBE: “I va mani mavito, i va yini (sexos), ni masiku ya vona ya ku velekiwa (lava tsongo ntsena loko va tlula vambirhi)?”

	VITO	WA YINI	SIKU/VELEKIWA	TINHWETI
1		1. WANUNA 2. WANSATI	___ ___ / ___ ___ / ___ ___ SIKU NHWETI LEMBE	

2		1. WANUNA 2. WANSATI	____ / ____ / ____ SIKU NHWETI LEMBE	
---	--	-------------------------	---	--

Loko nwana lontsongo endyangweni ari ni 24 wa tinwheti kumbe ku tlula, unga yi mahlweni ni swivutiso kambe yane eka ndyango wunwana.

LAHA MAMANA A NGA DYONDZA A FIKA KONA

Xana u vile na wona nkateko wa ku nghena a xikolo ke?

Ina

E-e → **Yana eka 7**

Xana u dyondzile ku fika eka ntlawa wihi exikolweni ke?

Xikolo xa ku sungula, kambe a ndzi koti ku hlaya

Xikolo xa ku sungula na kona ndza swi kota ku hlaya

Xikolo Secundaria ni ku ya emahlweni

KU YANWISA / NI MADYELO

Xana wa nwi yanwisa (vito ra nwana) sweswi ke?

a. Ina → **Yana eka 9**

E-e

Xana u ke u nwi yanwisa (vito ra nwana)?

a. Ina

E-e → **Yana eka 10**

Xana u nwi yanwise endzaku ka nkarhi muni (vito ra n'wana) loko u mu velekile?

Eka awara ya ku sungula endzaku ka ku veleka

Endzaku ka awara

Ku tlula 8 wa tiawara endzaku ka ku veleka

A ndza ha tsundzuki

10. Ni navela ku tiva swakunwa ni swakudya leswi (vito ra nwana) a nga swi kuma tolo ku sukela ni mixo ku ya fika vusiku. Xana (vito ra nwana) u nwi nyikile...

(HLAYELA MAMANA TINHLAMULO HINKWATO LETI NGA EHANSI, KUTANI TSALA MAYELANO NI TINHLAMULO TA YENA LOMU A PFUMELAKA KONA EKA MBANGO LEYI U NGA NYIKIWA KU SUKELA (A-E).

	SWAKUNWA / SWAKU DYA	LESWI NWANA A NGA DYA NDZENI KA SIKU RA TOLO?
A	Mafi?	
B	Mati?	
C	Swakunwa swinwana?	
D	Swakudya swa ku vevuka kumbe swa ku tiya?	
E	Swinwana? (Hlamusela:)	_____ _____ _____

11. Xana mamana u fanela ku sungula ku nyika (vita ra nwana) swakudya swinwana ehandle ka ku yanwisa loko a ni ntanga muni?

Sungula ku engetela ku nga si fika 4 wa tin’hweti
 Sungula ku engetela exikarhi ka 4-6 wa tin’hweti
 Sungula ku engetela loko a hlanganisile 6 wa tin’hweti
 Sungula ku engetela endzaku ka 6 wa tin’hweti
 A nga tivi

MAKULELE YA NWANA / CONSELHO

12. Xana (vito ra nwana) u na rona cartao ra xibedlhela ke?

Ina

E-e → **Yana eka 13b)**

Ri lahlekele → **Yana eka 13b)**

13a) DYONDZA CARTAO RA NWANA, U TLHELA U LANGUTISISA KWATSI
 MAKULELE YA YENA, KUTANI TSALA LESWI LANDELAKA. Xana (vito ra nwana) u peziwile eka tinh’weti tinharhu leti nga hundza ke ? (Junho, Julho ni Agosto 2007.

Ina

E-e

13b) Xana swi nga koteka a kuva ni pesa (vito ra nwana)?

Ina

E-e → **Loko a ku “E-e” eka 13a) ni loko a hlamule “E-e” eka 13b), yana eka xivutiso 14**

13c) *LOKO MAMANA A KU INA, PESA NWANA KUTANI U TSALA PESO EKA MBANGO LOWU NGA NYIKIWA EHANSI (ARREDONDAR O PESO EM APROXIMACAO A CADA 100 GRAMAS).*

___ ___ . ___ KILOGRAMS

13d) Unga vutisi: kambe tsala mahungu lawa uma vonaka: Langutisisa pezu ra nwana. Xana a ni baixo pesu ke?

Ina

E-e → **Yana eka Q 14**

13e) Mamana wa (vito ra nwana). Xana u hlamuseriwile tindlela ta ku antswisa madyelo ni makulele ya nwana ke?

Ina

E-e → **Yana eka 14**

13f) Xana u hlamuseriwile hi mani tindlela ta ku antswisa madyelo ni makulele ya (vito ra nwana) – UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA.

a. Vatirhi va xibelhela- Ku vuriwa a Enfermeiro kumbe socorrista

b. Va voluntaria (vadyondzisi va mindyangu)

c. Vanwana (hlamusela) _____

13g) Xana u nwi nyikile yini (vito ra nwana) siku ni siku ku antswisa makulele ya yena ke?

Mphungu wa ku patsela

Mafurha

Timongo / Timanga

A nga tivi

A nga si mu nyika nchumu

Swinwana swa risima (hlamusela) _____

VUTIVI BYA MAMANA HI TLHELO RA MALAPHELE YA MAVABYI

Minkarhi yinwana vana va khomiwa hi mavabyi lawa ma lavaka ku landzeleriwa ni ku laphiwa hi vuxiya-xiya. Xana hi swihi swikombiso leswi nga ta ku komba leswaku nwana a fanela ku laphiwa hi xihatla? (U NGA MU KHUTAZI. TSALA XIRHENDZEVUTANA EKA TINHLAMULO HINKWATO LETI A TI NYIKAKA.)

A nga tivi

Loko a nga tlangi

A nga pfumeri kudya kumbe kunwa, kumbe ku yanwa mafi ya manana.

Ku kala matimba

Ku hisa muzimba

Ku hefemula hi ku hatlisa ni hi ku karhateka
Ku hlanta hinkwaswo
Phuva
Mavabye matlule mpimo hambu loko a pfuniwile na ari ekaya.
Swinwana (hlamusela) _____

Eka maviki mambirhi lawa ma nga hundza xana (vito ra nwana) u vile na?

(HLAYELA MAMANA TINHLAMULO HINKWATO U TLHELA U KOMBISA HI
XIRHENDZEVUTANA EKA NHLAMULO YINWANA NI YINWANA).

Ku huda

a.1 Xana nwana a tirhume ka ngani ka siku?
(Tsala xirhendzevutana eka nhlamulo yinwe).

Hanse ka makhambe ya 3 Makhambe ya 3 kumbe ku ulula.

Ngati loko a kokota
Ku khohlolela
Ku hefemula hiku hatlisa, a karhateka .
Ku hisa muzimba
Muzototo
Phuva
Swinwana (hlamusela) _____
Ni xinwe eka hinkwaswo → **YANA EKA 18**

Nkarhi lowu (vito ra nwana) a a vabya a nyikiwile *swakun'wa* katsongo, kumbe ku fana, kumbe ku tlula leswi a a tolovele ku nyikiwa swona loko a nga vabyi?

Ka tsongo
Ku fana
Ku tlula leswi a a swi toloverile

Nkarhi lowu (vito ra nwana) a a vabya a nyikiwile *swakudya* katsongo, kumbe ku fana, kumbe ku tlula leswi a a tolovele ku nyikiwa swona loko a nga vabyi?

Ka tsongo
Ku fana
Ku tlula leswi a a swi toloverile

Xana hi swihi swa risima leswi u fanelaka ku swi endla loko (vito ra nwana) a huda ke – UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. (TINHLAMULO TI NGA TLULA YIN'WE, TSALA HINKWATO)

A nga tivi
Nyika swa kunwa hi ku hatlisa
Engetela swakunwa ku tlula makhambi manyingi hi siku
Nyika swakudya switsongo makhambi manyingi hi siku
Nyika mistura kumbe SRO
Heleketa tsonguana exibedlhela
Yantswisa madyele loko swi yantswa ku huda ku endlela leswaku pesu yi tlakuka
U nga nwi nyiki ntsonguana swakunwa
U nga nwi nyiki a ntsonguana swakudya
Loko swi ri kona swinwana (hlamusela) _____

Xana hi swihi swikombiso swa nghozi leswi nga ta endla leswaku u lava ku pfuniwa, kumbe ku heleketa (vito ra nwana) exibedlhela loku a huda ke? – (UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. TINHLAMULO TI NGA TLULA YIN'WE, TSALA HINKWATO)

A nga tivi
Loko a hlanta
Loko a hisela muzimba
Loko a oma milomo a tlhela a xixita ka tsongo (swi kombisa ku hela ka mati emuzimbeni)
Loko a huda nkarhi wa ku leha
Loko a patsela ni nagti
A nga tsakeli swakudya
Loko a hela matimba a tlhela a va ni gome kumbe ku karhala
Swinwana loko swa ha ri kona (hlamusela) _____

Xana hi swihi swikombiso swa pneumonia leswi nga ta ku endla leswaku u heleketa (vito ra nwana) exibedlhela ke? – (UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. TINHLAMULO TI NGA TLULA YIN'WE, TSALA HINKWATO)

A nga tivi
Hefemula hi ku hatlisa kumbe ku tikeriwa
Ku nghena ka timbambu endzeni loko a hefemula
A nga tsakeli swakudya
Ku hisela ka muzimba
Ku khohlolola / ku konya
Swinwana (hlamusela) _____

MAVABYI YA KU HUDA

SWIVUTISO LESWI LANDZELAKA SWI KONGOMA NTSENA VANA LAVA NGA KHOMIWA HI MAVABYI YA KU HUDA EKA XIVUTISO 15 – A NI ‘MAKHAMBE YA 3 KUMBE KU TLULA” EKA XIVUTISO XA 15-A-1

Xana loko (vito ra nwana) a huda swikona unga nwi nyika swona ke? – (UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. TINHLAMULO TI NGA TLULA YIN’WE, TSALA HINKWATO). **Unga vutisa uku swinwane ke?**

A ndzi nwi nyikanga nchumu
Ndzi nwi nyike mistura (soro)
Ndzi nwi nyikile mati ya ku patsiwa ni chukela (vulombe) xikanwe ni munyu
Ndzi nwi nyikile mati ya mpunga, tikhovolo
Ndzi nwi nyikile mati yakunwa.
Ndzi nwi nyikile swinwane swakunwa
Ndzi nwi nyikile murhi wa ku yimisa ku huda
Ndzi nwi yisile exibedlhela
Swinwana loko swi ri kona (hlamusela) _____

MAVABYI YA XIFUVA

SWIVUTISO LESWI LANDZELAKA SWI KONGOMA NTSENA VANA LAVA A VAMANANA VA KONA VA NGA NYIKA NHLAMULO EKA YA “D” EKA XIVUTISO 15

Xana i mani loyi a nga lapha (vito ra nwana) eka nkarhi lowu a hefemula hi ku hatlisa a tlhela a tikeriwa loko a hefemula ke? – (UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. TINHLAMULO TI NGA TLULA YIN’WE, TSALA HINKWATO).

Xibelhela lexi kulu (ku fana ni le _____)
Xibelhela lexi tsongo (ku fana ni xa aldeia/posto/saude)
Mutlhavi wa majasawu
Mutirhi wa xibedlhela wa le aldeia/socorrista
Muvelekisi wa le kaya
Nyanga
Farmacia kumbe exitolo
Maxaka ni vanghana
Vanwana (hlamusela) _____

LOKO NHLAMULO YA XIVUTISO XA 22-A, 22-B, KUMBE 22-D YIRI INA, VUTISA UKU: Xana i masiku mangani lawa (vito ra nwana) a nga hefemula hi ku hatlisa ni hi ku tikeriwa na anga si dahiwa exibelhela ke?

Ku nga si hela siku
Endzaku ka siku rinwe
Ku tlula masiku mambirhi
A nga tivi

MALAPHELE YA MUZOTOTO

SWIVUTISO LESWI LANDZELAKA SWI KONGOMA NTSENA VANA LAVA A VA MANANA VA KONA VANGA NYIKA NHLAMULO YAKU INA HITA MAVABYAE YA KU HISA KA MIRHI EKA XIVUTISO 15-E (MUZIMBA), EKA 15-F (MUZOTOTO), KUMBE EKA 15-G(PHUYA).

Xana eka nkarhi lowu (vito ra nwana) a hisa musimba u nwi laphise ku yini?- (UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. TINHLAMULO TI NGA TLULA YIN'WE, TSALA HINKWATO).

Ndzi nwi nyike murhi wa le kaya
Ndzi nwi tsakamise hi mati
Heleketa exibelhela
Heleketa nwana eka socorrista
Swinwana (hlamusela)_____

LOKO MANANA A TSUKE A HLAMULA KU FAMBELANA NA (C) KUMBE (D) EKA XIVUTISO XALE HENHLA, VUTISA UKU: Xana (vito ra nwana) u hisile muzimba masiku mangani a nga si laphiwa exibelhela kumbe hi socorrista ke? (FUNDHELA MAMANA TINHLAMULO HINKWATO, KU SUKELA 1-4)

Ku nga si hela siku (24 horas)
Endzaku ka siku rinwe
Ku tlula masiku mambirhi
A nga kumanga ku laphiwa
A nga tivi

→ YANA EKA Q 27

Kombela ku vona swiphakana swa makinina, tslala laha ehansi eka ndhawu leyi fanelaka:Loko nwana a sungurila ku phuza makinina kambe anga sena heta, tsala xirhendzevutana eka A swanga hi nhlamulo leyi fanelaka.

A hetile makinina ya muzototo (Tsala xirhendzevutana eka nhlamulo yinwe).

XIPAKANI XI VONIWILE

XIPA NI AXI VONIWANGA

A nga hetanga makinina
A nga na swona

MAVIKELELE YA MUZOTOTO (MITXIKITELO)

Xana u na yona mitxikitelo eka yindlu ya wena? – LOKO NHLAMULO KURI INA, VUTISA UKU: Ndzi nga wu vona xana?

Ina – eka mitxikitelo leyi uyi voneke na yi hayekiwile
Ina – eka mitxikitelo leyi uyi voneke na wunga hayekiwanga.
Ina kambe a wuvoniwanga

E-e →YANA EKA Q-30
c. A nga tivi →YANA EKA Q-30

I mani a nga etlela endzeni ka mitxikitelo tolo ni vusiku? TSALA XIRHENDZEVUTANA EKA NHLAMULO YINWANA NI YINWANA

- a. I nwana (vito) _____
- b. Muhlamuri
- c. Vanwana va ndyangu (hlamusela) _____
- d. A nga kona munhu

Xana mitxikitelo wu tshama wu petiwa eka murhi ke?

Ina – VUTISA UKU: xana wupetiwe rini hi khambi lo hetelela?

Nweti Lembe

--	--	--	--

E-e
Loyi i mitxikitelo leyi nga laviki ku petiwa ku murhi, yi teka nkarhi waku leha na wuni matimba yaku vikela.
A nga tivi

TINHEZANA / MAVACINA

XANA MAMANA A NA RONA CARTAO RA MA VACINA RA (vito ra nwana)? (TSALA EHANSI EKA MBANGO LOWU FANELAKA)

Ina → (RI VONIWA HI MUVUTISI)
A nga na cartao (ri lahlelele, a ri kona ekaya) →YANA EKA Q-32
A nga tshami a va ni cartao →YANA EKA Q-32
A nga tivi →YANA EKA Q-32

TSALA TINYEZANA HINKWATO LETI NGA TSARIWA EKA CARTAO RA (VITO RA NWANA) KU FANA NI LESWI TI NGA TSARISIWA XI SWONA EKA CARTAO

SIKU	NHWETI	LEMBE
------	--------	-------

BCG	<input type="checkbox"/>				
POLIO 0	<input type="checkbox"/>				
POLIO 1	<input type="checkbox"/>				
POLIO 2	<input type="checkbox"/>				
POLIO 3	<input type="checkbox"/>				
DPT 1	<input type="checkbox"/>				
DPT 2	<input type="checkbox"/>				
DPT 3	<input type="checkbox"/>				
SARAMPO	<input type="checkbox"/>				
VITAMINA A	<input type="checkbox"/>				

Eka nkarhi lowu awuni nyimba ya (vito ra nwana) u tshama u tlhaviwa nyezana yo sivela wena ni nwana eka mavabye yaku oma swirho(tetano) ximunguamunguana?

- a. Ina
- b. E-e → **YANA EKA - 34**
- c. A nga tivi → **YANA EKA - 34**

Xana u tlhaviwile tinyezana tingani?

- Yinwe
- Timbirhi
- Ku tlula timbirhi
- A nga tivi

MAVELEKELE YA MAMANA NI PLANEAMENTO FAMILIAR

Xana u yile exhibedhlhela eka nkarhi lowu a wuni nyimba ke ? loko nhlamulo yiri ina, ufambe kangaki exhibehlela ?

- Kanwe
- Ka mbirhi.
- Ka nharho.
- Ka mune kumbe ku tlula.
- Anga tshamanga a famba. → **YANA EKA 36**
- Anga tivi. → **YANA EKA 36**

Eka nkarhi lowu a wuni kwirhi, xana u nyikiwile murhi waku vikela mozototo hiva xibehlela ke?
YIMELA NHLAMULO “INA” KUMBE “E-E.” LOKO NHLAMULO YIRI INA, VUTISA
UKU: U fambe kangani kuya teka murhi ?

Kanwe
Ka mbirhi.
Ka nharho.
Ku tlula makhambe manharu
Anga tshamanga a famba ni kanwe,
Anga tivi.

Sweswi ni lava kuku vutisa hita nkarhi lowu unga veleka ha wona (vito ra nwana)? Xana I mani
loyi anga ku pfuna eka nkama lowu unga veleka (vito ra nwana) ? - - UNGA PFUNISI
MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA.

Dokodela.
Enfermeiro/ parteira.
Parteira unwana waxinto.
Socorrista
Unwe ka va ndyango/ kumbe muanghana.
Anga kona anwi pfuneke.

Xana wena ungava na nyimba sweswi ?

Ina → **YANA EKA 40**
E-e

Xana wena mamana xikanwe na bava mi nga va mi tirhisa nchumu wo karhi wa ku sivela ku
kuma khwirhi ke?

Ina
E-e → **YANA EKA Q-40**

Xana wena mamana xikanwe na bava mi nga va eka nkarhi wa sweswi mitirhisa yihi ndlela ya
ku sivela khwirhi ke? – UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI
NYIKAKA.

Ku hundzula mbeleko ya mamana
Ku hundzula mbeleko ya bava
Xijassawana
Makinina
Aparelho
Diafragma
Kamisa/Condom

Espermicido
Ku yanwisa
Metodo natural
Ku avana
Coito interropido
Loko ti ri kona tin'wana tindlela (hlamusela) _____

Xana eka nkarhi lowu a wu ri ni khwirhi ra (vito ra nwana) mpimo wa swakudya leswi a wu swi dya a wu (FUNDHELA MAMANA TINHLAMULO HINKWATO 1-4)

Tlula, kumbe
Ku fana, kumbe
A wu ri wutsongo eka swakudya leswi a wu tolovele ku swi dya ke
A nga tivi

MAVABYI YA DTS NI SIDA

Xana u tshama u twa hi ta mavabyi ya SIDA?

Ina
E-e **→ Yana eka 44**

Xana munhu a nga endla yini ku ti vikela leswaku a nga khomiwi hi mavabyi ya SIDA? (UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. TINHLAMULO TI NGA TLULA YIN'WE, TSALA HINKWATO)

Ku kala ku hlangana hi ndlela ya masango
Ku tirhisa camisa
Ku tshembeka eka nuna ni nsati
Ku hunguta ntsengo wa vanhu lava u hlanganaka na vona hi ndlela ya masango
U nga fambi masango ni tinguavava
Ku vikela masango ni vanhu va hlanganaka masango ni vanhu va ku tala
Va va nuna va vikela ku hlangana hi xivona
Ku vikela ku hlangana ni lava tlhavaka majasawu ya ma droga
Ku vikela ku nyikiwa ngati
Ku vikela ku tlhaviwa majasawu
Ku vikela ku tirhiselana swisinguana

Ku vikela makisi
Ku vikela ku lumiwa hi tinsuna
Ku lava ku sivelewa hi tinyanga ku kuma SIDA

A ku na nchumu
Swinwana (hlamusela) _____

A nga tivi

Xana hi swihi swikombiso swa mavabyi ya SIDA?

Ondza

Hisa muzimba

Ku huda ku tlula n'wheti

Ku khohlola ku tlula n'wheti (TBC)

Mavabyi ya xikhumba

Pfimba (nhamu, makehele, timbiyapho)

Ku badlha (ni vusiko)

Swin'wana (hlamusela) _____

A nga tivi

Xana hi swihi swikombiso swa mavabyi ya masangu ke?

Corrimento/Nsila

Ku hisa kumbe ku vava loko munhu a xixita

Ku vava eka xinene

Swilondza exikarhi ka milenge

A nga tivi

Swin'wana (hlamusela) _____

Xana ku ni vatsonguana va ku feliwa hi vatswele u hanyaka na vona lana kaya?

a. Ina

b. E-e

SUSTENTABILIDADE

Xana yi kona a _____ (Comite de Saude) eka aldeia leli? TIRHISA MARITO
YA MUGANGA WOLOWO AKU HLAMUSELA COMITE DE SAUDE.

a. Ina

b. E-e

c. A nga tivi

Xana u tshame u pfuxeliwa hi voluntaria wa saude endzeni ka n'wheti leyi nga hundza?

a. Ina

b. E-e

c. A nga tivi

MINTOLOVETO YA KU HLAMBA MAVOKO

Na hi nga si heta swivutiso, a ni rhandza ku endla swivutiso swinwana swimbirhi. Hi nkarhi wihi u tolovelaka ku hlamba mavoko hi nsipho kumbe nkuma? (UNGA PFUNISI MUHLAMURI EKA NHLAMULO LEYI AYI NYIKAKA. TSALA HI XIRHENDZEVUTANA TINHLAMULO TA YENA HINKWATO)

A nga swi endli.

Loko a lava ku lulamisa swakudya

Loko a lava ku dyisa nwana

Endzaku ka ku tirhisa xikoti

Endzaku ka ku hlayisa nwana loko a tirhumile

Sinwana (hlamusela) _____

Kombela ku vona n'sipho kumbe swiwana leswi nga tirhisiwaka ku hlamba mavoko.

Kombela ku vona n'sipho

Kombela ku vona swinwana leswi nga tirhisiwaka ku hlamba mavoko (nkuma)

A yi voniwanga n'sipho

KHENSA MAMANA HI NKARHI A KU NYIKEKE WONA KU HLAMULA SWIVUTISO SWA WENA.

ANNEX C: SAMPLING FRAME AND DATA POINTS

Village list and population numbers for Final evaluation of Expanded Impact CS project					
<i>No</i>	<i>Aldeia</i>	<i>Population</i>	<i>Cumulative</i>	<i>Clusters</i>	
1	Tihovene	5352	5352	1	3340
2	Canhane	1270	6622		
3	Cubo	1659	8281		
4	Mahlaule	505	8786		
5	Makhavene	629	9415		
6	Chibotane	1348	10763		
7	Madingane	687	11450		
8	Chinhangane	1290	12740	2	12250
9	Marrenguele	324	13064		
10	Banga	1024	14088		
11	Chitar	629	14717		
12	Zulo	635	15352		
13	Macaringue	2573	17925		
14	Tchaque	1542	19467		
15	Timhondzweni	629	20096		
16	Mucatine	1912	22008	3	21160
17	Nheleti	648	22656		
18	Decad da Vitoria	525	23181		
19	Ringane	201	23382		
20	Makwaxane	622	24004		
21	Nkuzi	726	24730		
22	Munhamane	667	25397		
23	Chipandzo	233	25630		
24	Makhongele	739	26369		
25	Manhica	667	27036		
26	Chicualacuala	6000	33036	4	30070
27	Chassanga	512	33548		
28	Mugugugo	369	33917		
29	3 Fevereiro	525	34442		
30	Mahatlane	823	35265		
31	Chitlavanine	285	35550		
32	Malongueta	467	36017		
33	Malambane	298	36315		
34	Maunge	467	36782		

35	Muzila	415	37197		
36	Chale	1082	38279		
37	Mapai-sede	2657	40936	5	38980
38	Mapai-sede	1899	42835		
39	16 Junho	2884	45719		
40	Regua	531	46250		
41	Litlatla	1652	47902	6	47890
42	Hoxa-ribye	667	48569		
43	Chicualac. "B"	421	48990		
44	Madulo	337	49327		
45	Chidulo	907	50234		
46	Ligome	616	50850		
47	Mepuzi	966	51816		
48	Mukhatxuane	739	52555		
49	Chilemane	654	53209		
50	Vuyela	518	53727		
51	Nghala	473	54200		
52	Muzamane	376	54576		
53	Chissapa	389	54965		
54	Maphuvule	454	55419		
55	Ndombe	505	55924		
56	Mafassitela	609	56533		
57	Bocoda	6603	63136	7	56800
58	Mabondzo	2307	65443		
59	Chicumbo	972	66415	8	65710
60	Cufamune	1853	68268		
61	Chizumbane	616	68884		
62	Chigamane	363	69247		
63	Mucambene	2164	71411		
64	Nhamadgio	330	71741		
65	Siqueto	732	72473		
66	Matchave	480	72953		
67	Mutcheli	298	73251		
68	Socote	616	73867		
69	Mavue	1387	75254	9	74620
70	Chimbandze	415	75669		
71	Matambuje	337	76006		
72	Muzamane	972	76978		
73	Mapanhe	784	77762		
74	Ndindiza	1588	79350		

75	Nongote	894	80244		
76	Keke	1626	81870		
77	Nhanale	1555	83425		
78	Nhamazane	1776	85201	10	83530
79	Cubo	1471	86672		
80	Chipimbe	888	87560		
81	Zinhane	1134	88694		
82	Machaila	1264	89958		
83	Mapungane	1017	90975		
84	Hariane	408	91383		
85	Hokwane	635	92018		
86	Hlecane	583	92601	11	92440
87	Chaimite Sede	4491	97092		
88	Chaimite "A"	2605	99697		
89	Makhalauane-1/Jun	2229	101926	12	101350
90	Makhalauane-Acordo	2372	104298		
91	Mukhotwene	6331	110629	13	110260
92	Sanguate	2404	113033		
93	Massuco	791	113824		
94	Mohambe	2676	116500		
95	Guve-Guve	758	117258		
96	Mbanhele	1801	119059		
97	Yomayaya	1458	120517	14	119170
98	Gogote	2786	123303		
99	Tlatlene	6046	129349	15	128080
100	Magondzwene	1626	130975		
101	Funguane	1277	132252		
102	Mitine	745	132997		
103	M'piane	629	133626		
104	Chimuine	577	134203		
105	Munhuane	577	134780		
106	Mazicolo (*)	447	135227		
107	Majecuza	91	135318		
108	Alto Changane	505	135823		
109	Chicambane	1750	137573	16	136990
110	Mazinhane	441	138014		
111	Bokwe	318	138332		
112	Mubotxwa	298	138630		
113	Cokane	1218	139848		
114	Nhacato	1056	140904		

115	Mavuiane	577	141481		
116	M'pucane	816	142297		
117	Nwaximixo	1315	143612		
118	Cucumezane	564	144176		
119	Chicuaxane	946	145122		
120	Nwamati	538	145660		
121	Maqueze	2339	147999	17	145900
122	Chiuanga	1380	149379		
123	Mahungu	1147	150526		
124	Matlecuane	1549	152075		
125	Chitsulwine	1601	153676		
126	Changanine	1166	154842	18	154810
127	Mahuhu	680	155522		
128	Catlene	842	156364		
129	Mangoro	1594	157958		
130	Hongonhi	1173	159131		
131	Maharril	680	159811		
132	Mabameko	376	160187		
133	Chihari	531	160718		
134	Tinwarini	706	161424		
135	Hati-Hati	525	161949		
136	Mudintswane	1017	162966		
137	Ndavene	5035	168001	19	163720
138	Maivene	4627	172628		
139	Mbambane	3421	176049	20	172630
140	Banganhane	1665	177714		
141	Nwavakene	596	178310		
142	E.Mondlane	5586	183896	21	181540
143	Chihenhe	2313	186209		
144	7/Setemb	9513	195722	22	190450
145	Khoxombane	2294	198016		
146	Nwahamuza	5320	203336	23	199360
147	C.Misava	13206	216542	24	208270
148	Guemulene	8022	224564	25	217180
149	Chegua	2540	227104	26	226090
150	Chiseguana	382	227486		
151	Chipadja	7692	235178	27	235000
152	Chiconelane	2223	237401		
153	Otine	1542	238943		
154	Mboane	1944	240887		

155	Khambanhane	1769	242656		
156	Madjavulane	5216	247872	28	243910
157	Meboi	2566	250438		
158	Mutxatxane	4594	255032	29	252820
159	Guaiane (*)	1374	256406		
160	Mabandlane	1782	258188		
161	Guetsemane	1776	259964		
162	Mutxuquete	3616	263580	30	261730
163	Bucuxa	2748	266328		
164	Muhlekiwa	972	267300		
	Total Population	267300			
	Clusters	30			
	Sampling Interval	8910			

ANNEX D: FINAL KPC SURVEY TEAM, PERSONS AND ROLES

ORGANIZERS:

PIETER ERNST
Director, Expanded Impact C/S Project

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Child Survival Technical Advisor, Expanded Impact C/S Project

ALFIADO MACHAILA
Program Coordinator, Expanded Impact C/S Project

INACIO CHITLANGO
Community Health Coordinator, Expanded Impact C/S Project

SARAH BORGER
MCH Specialist, World Relief Headquarters

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DELFINA MALULEQUE
PAUCILDA RUBAO CHAMBAL
VERONICA LEAO CUNA

SUPERVISORS:

ANTONIETA CHONGO
CACILDA ESTEVAO MAPILELE
CARMELIA MATEUS MACHAVA
CELINA DO CEU DANIEL MAPSANGANHE
CLEMENTINA PAULO MUGABE BILA
DULCE ESPERANCA MATOSSE
FELISMINA DANIEL MAPSANGANHE
ILDA JOAO TIMANA
LIGIA JEREMIAS CHAGUALA LANGA
LURDES ELIAS CUBAI MAMBULE
MARIA LUISA ALVARO COSSA
MARIA MARCELA FRANCISCO
MARIA ODETE HENRIQUE
MARIA ROSARIA ISAC ELIJA
MELITA ZACARIAS MAPSANGANHE
RAFA MEQUE MASSINGUE
RODA JOSSAI MASSINGUE
ROSITA CHAMBAL
RUTE PEDRO CHONGO
RUTE ZACARIAS CHAUQUE

INTERVIEWERS:

ARLINDO SAMBO
BINAIZA NHANTUMBO
SALVADOR CHUNGUANE
MINDOCA TIVANE
ALFREDO MACUACUA
EDIT CHONGO
LOURENCO QUINICA
AMIDA NHARI
FENIAS CHONGO
FELIX MASSINGUE
AMBROSIA DOS GUEIA
MILAGROSA BENZANE
RAMINA CHIVAMBO
DIOGO MASSINGUE
CARLOS MABUNDA
MARCIA SITEO
ILDA CHONGO
MARTA JAVANE
LAURENCO MUCHANGA
CARLITA COSSA

DRIVERS:

ALFREDO MACHAVA
ISAIAS JOSSAI MUIAMBO
RICARDO SILVANO SITEO
VIEGA CUZANE GOVENE
DANIEL JAMISSE MAPSANGANHE

ANNEX E: SURVEY TRAINING SCHEDULE FOR INTERVIEWERS AND SUPERVISORS

June 5, 2009	Recruitment of all interviewers
June 8, 2009	Introduction and background of project to interviewers Importance of an evaluation Responsibilities of an interviewer Responsibilities of a supervisor
June 9, 2009	Explanation of KPC questionnaire, question by question Division in 10 teams to practice correct reading of questionnaire
June 10, 2009	continue practicing questionnaire
June 11, 2009	continue practicing questionnaire Pilot survey practice in Chokwe in afternoon
June 12, 2009	Division of interviewers and supervisors into survey groups Logistics and preparations for survey
June 15-19 th , 2009	Survey in 5 districts
June 22, 2009	Manual tabulation
June 23, 2009	Manual tabulation
June 24, 2009	Analysis of survey results

ANNEX F: INDICATOR TABLE FOR PROGRAM AND RAPID CATCH INDICATORS

	BASELINE KPC December 2004			MIDTERM KPC September 2007			FINAL KPC June 2009			End of Project Target
	Numerator/ Denominator	Percent	Confidence Limits	Numerator/ Denominator	Percent	Confidence Limits	Numerator/ Denominator	Percent	Confidence Limits	
IMCI Percentage of caretakers with children 0-23 months who know at least two childhood illness danger signs for seeking care immediately [RC 12]	71/299	23.7%	16.9%-30.6%	265/380	65.5%	53.0%-77.9%	248/300	82.7%	77.3%-88.0%	75%
CONTROL OF DIARRHEAL DISEASE Percentage of children 0-23 months who were offered increased fluids and continued or increased feeding during illness [RC 13]	5/171	2.9%	0%-6.5%	40/161	24.7%	13.5%-35.9%	40/110	36.4%	27.2%-45.6%	RC
Percentage of sick children offered increased fluids	14/171	8.2%	2.4%-14.0%	55/161	31.3%	19.6%-43.1%	48/110	43.6%	35.1%-52.2%	60%
Percentage of sick children offered continued feeding	30/171	17.5%	9.5%-25.6%	75/161	46.3%	33.6%-59.0%	66/110	60.0%	49.4%-70.6%	60%
Percentage of caretakers with children 0-23 months who reported washing hands before food preparation, before child feeding, after defecation	9/299	3.0%	0.3%-5.7%	60/380	14.2%	8.7%-19.6%	89/300	29.7%	21.1%-38.2%	50%
Percentage of caregivers of children 0-23 months who report washing their hands with soap/ash before food preparation, before child feeding, after defecation, and after attending to a child who has defecated [RC 11] <i>*BL includes only the first three times</i>	9/299	3.0%	0.3%-5.7%	27/380	6.7%	3.3%-10.0%	20/300	6.7%	3.4%-10.0%	RC
Percentage of caretakers who wash hands after defecation and at least one other time.	N/A	N/A	N/A	252/380	61.3%	44.6%-77.9%	237/300	79%	73.5%-84.5%	N/A

Soap observed				329/380	88.6%	82.9%-94.2%	199/300	66.8%	60.2%-73.4%	
Soap substitute observed	NA	NA	NA	6/380	1.2%	0%-3.0%	16/300	5.3%	2.3%-8.5%	NA
Soap NOT observed				45/380	10.2%	5.2%-15.2%	83/300	27.7%	19.9%-35.8%	
Missing information				N/A	N/A	N/A	2/300	0.7%	0.1%-2.4%	
Hand washing by instance:										
Never	40/299	13.4%	7.9%-18.9%	15/380	3.9%	1.2%-6.4%	10/300	3.3%	0%-6.6%	
Before Food Preparation	87/299	29.1%	21.8%-36.4%	257/380	64.0%	49.4%-78.0%	217/300	72.3%	67.4%-77.3%	NA
Before Feeding a Child	27/299	9.0%	4.4%-13.6%	89/380	21.9%	15.8%-28.1%	117/300	39.0%	30.3%-47.7%	
After Defecated	125/299	41.8%	33.9%-49.7%	298/380	75.5%	63.8%-87.0%	270/300	90%	85.7%-94.3%	
After helping a child who has defecated	19/299	6.4%	2.5%-10.3%	128/380	29.3%	19.8%-38.7%	93/300	31.3%	24.6%-38.1%	
Diarrhea Prevalence:										
All Diarrhea	94/299	31.4%	24.0%-38.8%	80/380	22.3%	16.5%-28.2%	59/300	19.7%	14.9%-24.4%	NA
Diarrhea less than 3 times				19/380	4.8%	1.2%-8.5%	7/300	2.3%	0.5%-4.2%	
Diarrhea 3 or more times				60/380	17.3%	12.0%-22.5%	52/300	17.3%	13.1%-21.6%	
Percentage of children 0-23 months who received ORT/ORS/home available fluids for diarrhea										
<i>*BL includes all diarrhea cases, MT and Final include only diarrhea more than 3 times</i>	51/94	54.3%	40.0%-68.5%	49/60	74.5%	52.3%-96.6%	37/52	71.2%	59.2%-83.1%	70%
Percentage of children 0-23 months who received ORT or were taken to the HF for diarrhea	NA	NA	NA	53/60	81.5%	62.3%-100%	44/52	84.6%	73.8%-95.4%	NA

Diarrhea Treatment:										
Took to HF	25/94	26.6%	14.0%-39.2%	25/60	35.2%	24.9%-45.4%	29/52	55.8%	38.0%-73.6%	
Gave medicines	18/94	19.1%	7.9%-30.3%	11/60	20.5%	9.5%-31.5%	5/52	9.6%	1.3%-17.9%	
Nothing	7/94	7.4%	0-14.9%	4/60	10.7%	0%-25.6%	1/52	1.9%	0-5.9%	
ORS packet	40/94	42.6%	28.5%-56.7%	43/60	64.9%	44.1%-85.6%	36/52	69.2%	57.4%-81.1%	NA
Cereal based ORT	2/94	2.1%	0-6.2%	19/60	21.7%	7.4%-36.0%	6/52	11.5%	2.3%-20.8%	
Other drinks	8/94	8.5%	0.5%-16.5%	5/60	6.2%	0%-13.0%	3/52	5.8%	0%-11.7%	
Sugar-Salt Solution	1/94	1.1%	0-4.1%	8/60	12.8%	1.2%-24.3%	3/52	5.8%	0%-14.5%	
Water	0/94	0	0	8/60	8.6%	0%-19.4%	6/52	11.5%	1.7%-21.4%	
PNEUMONIA Percentage of children 0-23 who received treatment for suspected pneumonia from a trained provider within 24 hours <i>*BL criteria for suspected pneumonia included cough and difficult breathing while MT and Final includes all cases of rapid/difficult breathing.</i>	5/50	10.0%	0%-21.8%	13/26	33.7%	4.2%-63.2%	7/11	63.6%	33.1%-94.2%	50%
MALARIA 3-a) Percentage of children with suspected malaria (fever) treated within 24h at a HF Percentage of children with suspected malaria (fever, convulsions or malaria) treated within 24 hours at a HF <i>*BL criteria for suspected malaria included only fever</i>	19/109	17.4%	7.3%-27.5%	62/97	55.9%	40.4%-71.5%	36/58	62.1%	47.1%-77.0%	
				66/103	56.9%	42.9%-70.9%	39/63	61.9%	46.7%-77.1%	75%
Percentage of caretakers with children 0-23 months treated at the HF for malaria in the past two weeks reporting drug completion Using a malaria criteria of only fever	34/56	60.7%	42.6%-78.8%	72/87	80.1%	69.4%-90.9%	37/54	68.5%	53.3%-83.7%	
				66/81	77.7%	65.9%-89.6%	34/50	68.0%	53.4%-82.6%	70%
Percentage of children 0-23 months who slept under an ITN (ever treated or long-lasting net) the previous night [RC 9] <i>*BL is an estimate based on 43 children who slept under a net, and that 56.3% of nets in the survey were dipped.</i>	24/299	8.1%	3.7%-12.5%	66/380	14.1%	9.3%-19.0%	60/300	20.0%	14.0%-26.0%	50%

Net ownership reported	103/299	34.4%	26.8%-42.0%	191/380	50.3%	39.7%-54.1%	168/300	56.0%	47.3%-64.7%	NA
Net ownership verified	N/A	N/A	NA	182/300	47.9%	35.1%-52.2%	163/300	54.3%	45.5%-63.1%	
Net usage of those who owned nets	43/103	41.7%	28.2%-55.2%	66/191	30.1%	21.8%-38.5%	60/168	35.7%	27.3%-44.2%	
IMMUNIZATION										
Percentage of children 12-23 months fully immunized (verified by card) before 24 months (<i>Includes all children regardless of card presence</i>)	85/110	77.3%	66.2%-88.3%	108/139	78.1%	65.6%-90.6%	86/106	81.1%	72.3%-89.9%	80%
Percentage of children age 12-23 months who are fully vaccinated before the first birthday [RC 7] <i>*BL includes all children vaccinated by 23 months regardless of card presence</i>	85/110	77.3%	59.1%-95.5%	85/133	67.5%	53.7%-81.4%	69/101	68.3%	57.1%-79.5%	RC
Percentage of children whose vaccination card was seen by the interviewer	284/299	95.0%	91.5%-98.5%	366/380	97.1%	94.8%-99.4%	288/300	96.0%	93.7%-98.3%	NA
Percentage of mothers with children 0-23 months who reported receiving at least two tetanus toxoid injections before the birth of their youngest child [RC 4]	168/299	56.1%	48.1%-64.1%	320/380	83.7%	76.0%-91.5%	264/300	88.0%	83.4%-92.6%	RC
Percentage of caretakers with children age 12-23 months who recalled that their child received a measles vaccine [RC 8] <i>**Includes only measles vaccines verified by card</i>	105/110	95.5%	76.8%-99.9%	111/139	80.6%	69.9%-91.3%	88/106	83.0%	75.9%-90.2%	RC
NUTRITION										
Percentage of children 0-5 months who were exclusively breastfed during the past 24 hours, based on dietary recall [RC 5]	19/109	17.4%	7.4%-27.5%	78/117	67.0%	55.6%-78.5%	68/85	80.0%	70.7%-89.3%	40%
Percentage of children 6-9 months who received breast milk and complementary foods during the last 24 hours, based on dietary recall [RC 6]	35/69	50.7%	34.0%-67.4%	65/78	90.5%	81.5%-99.5%	61/72	84.7%	75.9%-93.6%	70%
Percentage of children 6-23m who received complementary feeding	NA	NA	NA	221/263	85.6%	81.3%-89.9%	159/215	74.0%	67.9%-80.0%	NA
Percentage of children 12-23m who received complementary feeding				118/139	83.9%	77.8%-89.9%	68/106	64.2%	54.8%-73.5%	

Percentage of children 0-23 months weighed in last 3 months (verified by card)	230/299	76.9%	70.2%-83.7%	322/380	84.0%	77.4%-90.7%	263/300	87.7%	82.9%-92.4%	80%
Percentage of caretakers with malnourished children 0-23 months who received nutrition counseling	7/50	14.0%	0.4%-27.6%	25/31	73.3%	55.5%-91.1%	20/25	80.0%	63.9%-96.1%	80%
Percentage of malnourished children 0-23 months who receive daily nutritious weaning foods/enriched porridge after nutrition counseling	3/7	42.8%	0%-94.7%	21/25	82.2%	67.2%-97.2%	16/20	80.0%	59.1%-100%	70%
Percentage of children age 0-23 months who are underweight according to the Mozambique "Road to Health" card	50/299	16.7%	10.4%-23.0%	31/377	7.3%	3.7%-10.9%	25/299	8.4%	5.2%-11.5%	NA
Percentage of children age 0-23m who were underweight (-2SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population) [RC 1] <i>*BL includes children outside of the normal curve on the Mozambique health card</i>	50/299	16.7%	10.4%-23.0%	32/378	9.0%	5.9%-12.1%	31/298	10.4%	6.4%-14.4%	RC
Percentage of children age 0-23m who were severely underweight (-3SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population) <i>*BL includes children outside of the normal curve on the Mozambique health card</i>	NA	NA	NA	5/378	1.5%	0.2%-2.8%	9/298	3.0%	1.0%-5.0%	NA
Percentage of children age 0-23m who were underweight (-2SD from the median weight-for-age, according to the 2006 WHO/NCHS reference population) <i>*MT and FE include an estimated design effect of 2</i> <i>*BL includes children outside of the normal curve on the Mozambique health card</i>	NA	NA	NA	17/378	8.4%	0%-22.3%	27/299	9.1%	4.5%-13.7%	NA
Percentage of children age 0-23m who were severely underweight (-3SD from the median weight-for-age, according to the 2006 WHO/NCHS reference population) <i>*MT and FE include an estimated design effect of 2</i> <i>*BL includes children outside of the normal curve on the Mozambique health card</i>	NA	NA	NA	3/378	2.1%	0%-7.7%	10/299	3.4%	0.5%-6.2%	NA

HIV/AIDS PREVENTION										
Percentage of children age 0-23 months whose births were attended by skilled health personnel (Doctor or nurse) [RC 3]	175/299	58.5%	50.6%-66.4%	232/380	63.7%	56.0%-71.5%	204/300	68.0%	58.4%-77.6%	70%
Percentage of children 0-23 months whose births were attended by skilled health personnel (including trained TBAs)	190/299	63.5%	56% – 71%	265/380	72.3%	64.3%-80.3%	212/300	70.7%	61.4%-80.0%	NA
Percentage of caretakers with children 0-23 months who cited at least two known ways of reducing the risk of HIV infection [RC 10]	27/262	10.3%	5.1%–15.5%	268/380	65.6%	52.7%-78.4%	238/300	79.3%	72.8%-85.8%	50%
Percentage caretakers with children 0-23 months who cited two or more symptoms of an STD	34/299	11.4%	6.3%–16.5%	262/380	66.8%	53.8%-79.8%	220/300	73.3%	67.0%-79.7%	50%
Percentage of caretakers with children 0-23 months who cited two or more symptoms of AIDS	65/262	24.8%	17.4%-32.2%	289/380	71.4%	58.3%-84.6%	260/300	86.7%	81.5%-91.8%	50%
Caretakers who are not pregnant and reported using a modern method of birth control	29/287	10.1%	5.2%-15.0%	107/374	30.2%	22.4%-38.0%	107/288	37.2%	29.1%-45.2%	NA
Caretakers who reported having orphans staying with them in the same home	52/299	17.4%	11.3%-23.5%	43/379	9.8%	6.0%-13.6%	55/298	18.5%	13.8%-23.1%	NA
OTHER										
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child [RC 2]	N/A	N/A	N/A	111/163	69.0%	57.6%-80.4%	81/111	73.0%	64.5%-81.4%	RC
Percentage of mother of children 0-23 months who recalled receiving two or more doses of IPTp of SP during their last pregnancy	N/A	N/A	N/A	294/380	77.0%	69.7%-84.2%	256/300	85.3%	80.2%-90.5%	NA

*The Baseline survey includes confidence intervals with an estimated design effect of 2; the Midterm LQAS survey was analyzed in EpiInfo, weighted by supervision area and run by cluster; the Final 30 cluster survey was analyzed in EpiInfo taking in account the cluster effect.

ANNEX G: RAW DATA TABLES

DEMOGRAPHIC INFORMATION

Mother's age in years

	<i>Frequency</i>	<i>Percent</i>
>10 - 19	44	14.7%
>20 - 29	164	54.7%
>30 - 39	79	26.3%
>40 - 49	13	4.3%
Total	300	100.0%
25 or older	159	53.0%
Under 25	141	47.0%
Total	300	100.0%

The mean maternal age was 26.5 years and the median maternal age is 25.

How many children living in this household are under age five?

	<i>Frequency</i>	<i>Percent</i>
1	145	48.3%
2	114	38.0%
3	29	9.7%
4	9	3.0%
5	3	1.0%
Total	300	100.0%

The mean number of children living in a household was 1.7, with a median of 2.

How many of those children are your biological children?

	<i>Frequency</i>	<i>Percent</i>
1	189	63.0%
2	107	35.7%
3	4	1.3%
Total	300	100.0%

The mean number of biological children was 1.4, with a median of 1.

Youngest child's age in months

	<i>Frequency</i>	<i>Percent</i>
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0-05	85	28.3%
06 - 09	72	24.0%
10 - 11	37	12.3%
12 - 23	106	35.3%
Total	300	100.0%

The mean child age was 9.9 months, with a median of 9 months.

MOTHER'S EDUCATION

Have you had the opportunity to go to school?

	<i>Frequency</i>	<i>Percent</i>
Yes	214	71.3%
No	86	28.7%
Total	300	100.0%

What was the highest level you attained in school?

	<i>Frequency</i>	<i>Percent</i>
Missing	1	0.5%
Primary, does not read	44	20.6%
Primary, reads	128	59.8%
Secondary	41	19.2%
Total	214	100.0%

BREASTFEEDING

Are you breastfeeding (name of child) now?

	<i>Frequency</i>	<i>Percent</i>
Yes	265	88.3%
No	35	11.7%
Total	300	100.0%

Have you ever breastfeed (name of child)?

	<i>Frequency</i>	<i>Percent</i>
Yes	34	97.1%
No	1	2.9%
Total	35	100.0%

How long after birth did you first put (name of child) to the breast?

	<i>Frequency</i>	<i>Percent</i>
Doesn't know	4	1.3%
Immediately/within one hour of delivery	159	53.2%
More than 8 hours after delivery	14	4.7%
More than one hour after delivery	122	40.8%
Total	299	100.0%

Liquids and foods consumed by the child in the last 24 hours:

		<i>Yes</i>		<i>No</i>	
		<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
A	Breastmilk?	266	88.7%	34	11.3%
B	Plain water?	183	61.0%	117	39.0%
C	Other liquids?	54	18.0%	246	82.0%
D	Mashed, pureed, solid, or semi-solid foods?	195	65.0%	105	35.0%

When should a mother start *adding* foods to breastfeeding?

	<i>Frequency</i>	<i>Percent</i>
About 6 months of age	197	65.7%
After 6 months of age	25	8.3%
Between 4 and 6 months	48	16.0%
Doesn't know	2	0.7%
Earlier than 4 months	28	9.3%
Total	300	100.0%

GROWTH MONITORING AND COUNSELING

Does the child have a growth monitoring card?

	<i>Frequency</i>	<i>Percent</i>
Lost card	2	0.7%
No	9	3.0%
Yes	289	96.3%
Total	300	100.0%

Has the child been weighed regularly?

	<i>Frequency</i>	<i>Percent</i>
Yes	263	87.7%
No	27	9.0%

Missing	10	3.3%
Total	300	100.0%

Was permission given to weigh the child?

	<i>Frequency</i>	<i>Percent</i>
Yes	299	99.7%
No	1	0.3%
Total	300	100.0%

Is the child underweight (according to the health card)?

	<i>Frequency</i>	<i>Percent</i>
Yes	25	8.3%
No	274	91.3%
Missing	1	0.3%
Total	300	100.0%

Have you been told how to feed (name of child) to improve his/her weight?

	<i>Frequency</i>	<i>Percent</i>
Yes	20	80.0%
No	5	20.0%
Total	25	100.0%

Who told you? MULTIPLE RESPONSES POSSIBLE.

	<i>Frequency</i>	<i>Percent</i>
Health worker (nurse or Socorrista)	7	35.0%
Volunteer	15	75.0%

What was given to the child daily to improve his/her weight?

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Improved Soft porridge	15	75.0%	5	25.0%
Oil	4	20.0%	16	80.0%
Marula nuts/Peanuts	10	50.0%	10	50.0%
Doesn't know	0	0%	20	100%
Nothing	0	5.0%	19	95.0%

ILLNESS RECOGNITION AND CARE SEEKING

What are the signs of illness that would indicate your child needs treatment?

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Doesn't know	4	1.3%	296	98.7%
Looks unwell or not playing normally	132	44.0%	168	56.0%
Not eating, drinking, or breastfeeding	60	20.0%	240	80.0%
Lethargic or difficult to wake	90	30.0%	210	70.0%
High fever	237	79.0%	63	21.0%
Fast or difficult breathing	27	9.0%	273	91.0%
Vomits everything	97	32.3%	203	67.7%
Convulsions	58	19.3%	242	80.7%
Gets worse despite home care	18	6.0%	282	94.0%

Did (name of child) experience any of the following in the past two weeks?

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Diarrhea	59	19.7%	241	80.3%
Less than 3	7	2.3%	293	97.7%
3 or more	52	17.3%	248	82.7%
Blood in stool	2	0.7%	298	99.3%
Cough	46	15.3%	254	84.7%
Rapid or difficult breathing	11	3.7%	289	96.3%
Fever	58	19.3%	242	80.7%
Malaria	18	6.0%	282	94.0%
Convulsions	3	1.0%	297	99.0%
None of the above	190	63.3%	110	36.7%

When (name of child) was sick, was he/she offered less than usual to drink, about the same amount, or more than usual to drink?"

	<i>Frequency</i>	<i>Percent</i>
Missing	2	1.8%
About the same	25	22.7%
Less than usual	35	31.8%
More than usual	48	43.6%
Total	110	100.0%

When (name of child) was sick, was he/she offered less than usual to eat, about the same amount, or more than usual to eat?"

	<i>Frequency</i>	<i>Percent</i>
Missing	3	2.7%
About the same	26	23.6%

Less than usual	41	37.3%
More than usual	40	36.4%
Total	110	100.0%

What important actions should you take if (name of child) has diarrhea?
(DO NOT PROMPT. MULTIPLES RESPONSES POSSIBLE)

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Doesn't know	3	1.0%	297	99.0%
Initiate liquids rapidly	90	30.0%	210	70.0%
Give the child more to drink than usual	46	15.3%	254	84.7%
Give the child small frequent meals	25	8.3%	275	91.7%
Proper mixing and administration of ORS	212	70.7	88	29.3%
Take child to the hospital/health clinic	253	84.3%	47	15.7%
Feed more after diarrhea so that the child can gain weight	9	3.0%	291	97.0%
Withhold fluids	3	1.0%	297	99.0%
Withhold foods	4	1.3%	296	98.7%

What signs would cause you to seek help or treatment if (name of child) has diarrhea? (DO NOT PROMPT. MULTIPLES RESPONSES POSSIBLE)

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Doesn't know	9	3.0%	291	97.0%
Vomiting	166	55.3%	134	44.7%
Fever	123	41.0%	177	59.0%
Dry mouth, decreased urine output (dehydration)	28	9.3%	272	90.7%
Diarrhea of prolonged duration (2 weeks)	125	41.7%	175	58.3%
Blood in stool	82	27.3%	218	72.7%
Loss of appetite	58	19.3%	242	80.7%
Weakness (tiredness)	120	40.0%	180	60.0%

What signs would cause you to take (name of child) to the hospital when he has pneumonia?
(DO NOT PROMPT. MULTIPLES RESPONSES POSSIBLE)

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Doesn't know	61	20.3%	239	79.7%
Rapid breathing/breathing difficulty	193	64.3%	107	35.7%
Sub/Inter-costal rib retraction	113	37.7%	187	62.3%
Lost appetite	33	11.0%	267	89.0%
Fever	66	22.0%	234	78.0%

Groaning / coughing	76	25.3%	224	74.7%
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DIARRHEA

When (name of child) had diarrhea, did you give the child anything? DO NOT PROMPT. MULTIPLE RESPONSES POSSIBLE. AFTER EACH RESPONSE, ASK: ANYTHING ELSE?

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Nothing	1	1.9%	51	98.1%
ORS Sachet	36	69.2%	16	30.8%
Sugar-salt solution	3	5.8%	49	94.2%
Cereal based ORT (rice water, maize water)	6	11.5%	46	88.5%
Water	6	11.5%	46	88.5%
Other available drinks	3	5.8%	49	94.2%
Medication for diarrhea	5	9.6%	47	90.4%
Take child to the hospital/clinic	29	55.8%	23	44.2%

PNEUMONIA

From whom did you seek treatment when (name of child) had difficulty in breathing? DO NOT PROMPT. MULTIPLE RESPONSES ALLOWED.

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
General hospital	8	72.7%	3	27.3%
Health Center/post	2	18.2%	9	81.8%
Injectionist	0	0%	11	100%
Socorrista (Local Health Worker)	0	0%	11	100%
Traditional birth attendant	0	0%	11	100%
Traditional Healer	0	0%	11	100%
Pharmacy/shop	0	0%	11	100%
Relatives and friends	1	9.1%	10	90.9%

How soon after the difficulty in breathing began did (name of child) receive treatment?

	<i>Frequency</i>	<i>Percent</i>
Less than one day (within 24 hrs)	7	63.6%
More than one day (24-48 hrs)	1	9.1%
Two days or more	3	27.3%
Total	11	100.0%

MALARIA CONTROL

When (name of child) had fever, what treatment did you give? DO NOT PROMPT.
MULTIPLE RESPONSES POSSIBLE.

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Home treatment	3	4.8%	60	95.2%
Wet the child to decrease fever.	21	33.3%	42	66.7%
Take the child to the hospital or health center	52	82.5%	11	17.5%
Take the child to the Socorrista	2	3.2%	61	96.8%
Other	7	11.1%	56	88.9%

How soon after the fever started was (name of child) treated at the health center or by the Socorrista?

	<i>Frequency</i>	<i>Percent</i>
After one day (24-48 hrs)	13	20.6%
Did not receive treatment	7	11.1%
Less than one day (within 24 hrs)	39	61.9%
Two days or more	4	6.3%
Total	63	100.0%

Did the child complete the malaria treatment?

	<i>Frequency</i>	<i>Percent</i>
Missing	1	1.8%
Did not finish tablets	14	25.0%
Doesn't have the packets	3	5.4%
Finished tablets - package NOT seen	27	48.2%
Finished tablets - package seen	11	19.6%
Total	56	100.0%

MALARIA PREVENTION

Do you have any mosquito nets in your house?

	<i>Frequency</i>	<i>Percent</i>
No	132	44.0%
Yes, net NOT observed	5	1.7%
Yes, net observed hanging	86	28.7%
Yes, net observed, not hanging	77	25.7%
Total	300	100.0%

Who slept under a mosquito net last night? MULTIPLE ANSWERS POSSIBLE

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Child	85	28.3%	215	71.7%
Mother/Caregiver	83	27.7%	217	72.3%
Other	16	5.3%	284	94.7%
Did not use a net	81	27.0%	219	73.0%

Was the mosquito net ever soaked or dipped in a liquid to repel mosquitoes or bugs?

	<i>Frequency</i>	<i>Percent</i>
Long-lasting net	78	46.4%
No	58	34.5%
Yes - more than 6 months ago	9	5.4%
Yes - within past 6 months	23	13.7%
Total	168	100.0%

IMMUNIZATIONS

DOES THE MOTHER HAVE A CARD WHERE (name of child's) VACCINATIONS ARE WRITTEN DOWN?

	<i>Frequency</i>	<i>Percent</i>
Never had a card	4	1.3%
Not available (lost, misplaced, not in home)	8	2.7%
Yes, seen by interviewer	288	96.0%
Total	300	100.0%

RECORD INFORMATION EXACTLY AS IT APPEARS ON (NAME'S) VACCINATION CARD.

	<i>Vaccinated</i>		<i>Not Vaccinated</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
BCG	291	97.0%	9	3.0%
Polio 0	284	94.7%	16	5.3%
Polio 1	254	84.7%	46	15.3%
Polio 2	243	81.0%	57	19.0%
Polio 3	213	71.0%	87	29.0%
DPT 1	255	85.0%	45	15.0%
DPT 2	241	80.3%	59	19.7%
DPT 3	213	71.0%	87	29.0%
Measles	135	45.0%	165	55.0%
Vitamin A	168	56.0%	132	44.0%

While you were pregnant with (name of child) did you receive an injection in the arm to prevent you and the baby from getting tetanus, that is, convulsions after birth?

	<i>Frequency</i>	<i>Percent</i>
Doesn't know	1	0.3%
No	9	3.0%
Yes	290	96.7%
Total	300	100.0%

How many times did you receive a tetanus injection?

	<i>Frequency</i>	<i>Percent</i>
More than two times	159	54.8%
Once	26	9.0%
Twice	105	36.2%
Total	290	100.0%

MATERNAL CARE AND FAMILY PLANNING

Did you go to the health center during your last pregnancy? If yes, how many times?

	<i>Frequency</i>	<i>Percent</i>
Doesn't know	4	1.3%
Four or more times	234	78.0%
Never	1	0.3%
Once	1	0.3%
Three times	41	13.7%
Twice	19	6.3%
Total	300	100.0%

During your last pregnancy, did a health worker give you any medicines to prevent malaria? If yes, how many times?

	<i>Frequency</i>	<i>Percent</i>
Doesn't know	2	0.7%
More than three times	75	25.4%
Never	4	1.4%
Once	33	11.2%
Three times	96	32.5%
Twice	85	28.8%
Total	295	100.0%

Who assisted you with (name of child) delivery? DO NOT PROMPT.

	<i>Frequency</i>	<i>Percent</i>
Doctor	4	1.3%
Family member or friend	60	20.0%
No one	11	3.7%
Nurse/midwife	200	66.7%
Socorrista	17	5.7%
TBA	8	2.7%
Total	300	100.0%

Are you pregnant now?

	<i>Frequency</i>	<i>Percent</i>
Yes	12	4.0%
No	288	96.0%
Total	300	100.0%

Are you or your husband currently using any method to avoid/postpone getting pregnant?

	<i>Frequency</i>	<i>Percent</i>
Yes	128	44.4%
No	160	55.6%
Total	288	100.0%

What is the main method you or your husband are using now to avoid/postpone getting pregnant? DO NOT PROMPT. MULTIPLE RESPONSES ARE POSSIBLE.

	<i>Frequency</i>	<i>Percent</i>
Abstinence	19	14.8%
Coitus interruptus	1	0.8%
Condom	12	9.4%
Exclusive Breastfeeding	1	0.8%
Injections	30	23.4%
Pill	65	50.8%
Total	128	100.0%

When you were pregnant with (name of child) was the amount of food you ate...?

	<i>Frequency</i>	<i>Percent</i>
Doesn't know	2	0.7%

Less than usual	106	35.3%
More than usual	117	39.0%
Same as usual	75	25.0%
Total	300	100.0%

Have you ever heard of an illness called AIDS?

	<i>Frequency</i>	<i>Percent</i>
Yes	298	99.7%
No	1	0.3%
Total	299	100.0%

What can a person do to avoid getting AIDS or the virus that causes AIDS? (DO NOT PROMPT. CIRCLE ALL MENTIONED.)

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Abstain from sex	10	3.3%	290	96.7%
Use condoms	249	83.0%	51	17.0%
Limit sex to one partner	152	50.7%	148	49.3%
Limit number of sexual partners	14	4.7%	286	95.3%
Avoid sex with prostitutes	18	6.0%	282	94.0%
Avoid sex with persons who have many partners	14	4.7%	286	95.3%
Avoid intercourse with persons of the same sex	1	0.3%	299	99.7%
Avoid sex with IDUs	5	1.7%	295	98.3%
Avoid blood transfusions	6	2.0%	294	98.0%
Avoid injections	94	31.3%	206	68.7%
Avoid sharing razors, blades	156	52.0%	144	48.0%
Avoid kissing	0	0%	300	100%
Avoid mosquito bites	0	0%	300	100%
Seek protection from traditional healer	0	0%	300	100%
Nothing	0	0%	300	100%
Doesn't know	13	4.3%	287	95.7%

What are the signs of AIDS?

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Weight loss	268	89.3%	32	10.7%
Fever	51	17.0%	249	83.0%
Diarrhea (prolonged for one month or more)	195	65.0%	105	35.0%
Cough for one month or more, tuberculosis	92	30.7%	208	69.3%
Skin infections/herpes	67	22.3%	233	77.7%

Swollen lymph nodes	43	14.3%	257	85.7%
Night sweats	13	4.3%	287	95.7%
Other	62	20.7%	238	79.3%
Don't know	7	2.3%	293	97.7%

What are the signs of STI?

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Discharge	220	73.3%	80	26.7%
Burning urine	54	18.0%	246	82.0%
Abdominal pain	119	39.7%	181	60.3%
Sores between the legs	199	66.3%	101	33.7%
Doesn't know	26	8.7%	274	91.3%
Other	8	2.7%	292	97.3%

Do you have any orphans staying with you in the same house?

	<i>Frequency</i>	<i>Percent</i>
Yes	55	18.3%
No	243	81.0%
Missing	2	0.7%
Total	300	100.0%

SUSTAINABILITY

Is there a Village Health Committee in this village?

	<i>Frequency</i>	<i>Percent</i>
Doesn't know	35	11.7%
No	15	5.0%
Yes	250	83.3%
Total	300	100.0%

Have you been visited by a volunteer during the last month?

	<i>Frequency</i>	<i>Percent</i>
Doesn't know	5	1.7%
No	118	39.3%
Yes	177	59.0%
Total	300	100.0%

HAND-WASHING PRACTICES

When do you wash your hands with soap/ash? DO NOT PROMPT. CIRCLE ALL MENTIONED.

	<i>Yes</i>		<i>No</i>	
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>
Never	10	3.3%	290	96.7%
Before food preparation	217	72.3%	83	27.7%
Before feeding child	117	39.0%	183	61.0%
After defecation	270	90.0%	30	10.0%
After attending to a child who has defecated	94	31.3%	206	68.7%
Other	29	9.7%	271	90.3%

ASK TO SEE SOAP OR OTHER SUBSTANCE USED FOR HANDWASHING.

	<i>Frequency</i>	<i>Percent</i>
Missing	2	0.7%
Soap NOT observed	83	27.7%
Soap observed	199	66.3%
Soap substitute (e.g. ash) observed	16	5.3%
Total	300	100.0%

ANNEX H: PROJECT RESOURCE REQUIREMENTS

The Expanded Impact Child Survival Project spent approximately \$13,139 to conduct and analyze the Final KPC survey.

Item	Total	
	Mt	USD
Interviewers	10,300	\$381
Field Staff	204,000	\$7,556
Per diems	75,400	\$2,793
Fuel	41,100	\$1,522
Administrative expenses (including photocopies)	12,250	\$454
Accommodation/ housing	11,700	\$433
International flight for HQ staff	NA	\$1,951
Total	Mt 354,750	\$15,090

Annex 9. Community Health Worker Training Matrix

Table 7.1. Types of Community-level Workers Trained by the Project

Project area (Name of district or community)	Type of CHW	Official government CHW or Grantee-developed cadre	Paid or volunteer	Number trained over life of project	Focus of training
Massinger, Chibuto, Chicualacuala, Chigubo and Massangena Districts in Gaza Province	Female Community Health Worker (<i>Socorrista</i>)	Cadre is recognized and authorized by the Government	Paid (with fees collected from local villagers)	59	First aid, prevention and treatment of common illnesses (including diagnosis and treatment of childhood pneumonia and malaria with antibiotics)
Massinger, Chibuto, Chicualacuala, Chigubo and Massangena Districts in Gaza Province	APE	Official Government	Paid (Originally, they were paid MOH staff but were no longer active. Now they are paid with fees collected from local villagers)	20	First aid, prevention and treatment of common illnesses (including diagnosis and treatment of childhood pneumonia and malaria with antibiotics)
Massinger, Chibuto, Chicualacuala, Chigubo and Massangena Districts in Gaza Province	Female Community Health Worker (Animator)	Grantee-developed cadre	Paid	129	Guiding Care Groups, teaching Care Group Volunteers key educational messages
Massinger, Chibuto, Chicualacuala, Chigubo and Massangena Districts in Gaza Province	Village Health Workers	Grantee-developed cadre	Volunteer	4,071	Key educational messages to transmit to neighbors

Annex 10. Evaluation Team Members and Their Titles

The Evaluation Team consisted of the following persons:

- Henry Perry, MD, Johns Hopkins University, Evaluation Team Leader
- Pieter Ernst, MD, Director, *Vurhonga IV* Child Survival Project, World Relief/Mozambique
- Stacy Grau, MPH, Technical Advisor, Child Survival, World Relief/Mozambique
- Alfiado Machaila, Program Coordinator, *Vurhonga IV* Child Survival Project, World Relief/Mozambique
- Melanie Morrow, MPH, Director of Maternal and Child Health Programs, World Relief Headquarters
- Sarah Borger, MPH, Maternal and Child Health Specialist, World Relief Headquarters
- Anna Summer, MPH, Maternal and Child Health Specialist, Salvation Army World Service Organization (SAWSO) International
- Lauren Platt, World Relief Intern

Annex 11. Evaluation Assessment Methodology

The Final Evaluation took place in July 2009 with all the team members present. A household knowledge, practice and coverage (KPC) survey had been carried out in June 2009 by the Project staff. It was analyzed by hand and discussed immediately following the completion of the survey. The data were then entered into EPI INFO for reanalysis by the senior Project staff members with assistance from the HQ MCH Specialist.

The Evaluation Team worked together in the Project area to review the KPC findings and information available in the Project's health information system (HIS). The Evaluation Team designed a set of questions for focus group discussions (FGDs) with community members and Project staff members and for interviews with key individuals at the MOH. Communities selected for FGDs were selected at random with the Evaluation Team present after eliminating distant villages that were not feasible to reach in the time available.

Once all of this information had been gathered together and reviewed, the Evaluation Team discussed the findings and their implications.

The KPC report is shown separately in Annex X. The end of this report lists the questions for the FGDs and individual interviews.

The schedule of evaluation activities was as follows:

June 15-19	Household interviews for KPC survey
June 22-24	Manual tabulation of KPC survey results and discussion of findings by Project Staff
7 July	Departure of Henry Perry, Melanie Morrow, and Sarah Borger from the US
8 July	Arrival of Henry Perry and Sarah Borger in Maputo
9 July	Arrival of Melanie Morrow in Maputo, Evaluation planning
10 July	Travel to Chokwe, day-long meeting with Project staff to plan field evaluation
11 July	Review of KPC and C-HIS data, planning for FGDs
12 July	Review of KPC and C-HIS data, planning for FGDs
13 July	Visit communities and MOH for FGDs and interviews
14 July	Visit communities and MOH for FGDs and interviews
15 July	Visit communities and MOH for FGDs and interviews
16 July	Review of findings from FGDs and interviews
17 July	Interviews with MOH officials from Chicualacuala and Chigubo Districts (who traveled to Chokwe to be interviewed)
18 July	Review of findings from FGDs and interviews
19 July	No evaluation activities
20 July	FGDs with the Project field staff, final wrap-up of evaluation findings with

Project field staff

21 July Discussion of key findings from the evaluation and preparation of seminar presentations

22 July Discussion of key findings from the evaluation and preparation of seminar presentations

23 July Visit to Gaza Province MOH office, return to Maputo, and presentation of evaluation findings to World Relief/Mozambique country-level staff

24 July Dissemination seminar at USAID in Maputo

25 July Departure of expatriate members of Evaluation Team

August 2009 Preparation of Final Evaluation report

Questions Asked during Visits to Ministry of Health Offices and to Communities

MINISTRY OF HEALTH DISTRICT OFFICIALS

1. How has the *Vurhonga* project helped you in the MOH to reach your own goals and objectives? What were the challenges that you encountered in working with the *Vurhonga* project?
2. What was the *Vurhonga* project trying to achieve? Do you believe that the project has met this goal?
3. What aspects of the program do they value the most?
4. Have you seen any changes in attitudes or behaviors that you think are attributable to the project?
5. Has the project's HIS been helpful to you in your programs? If so, how?
6. How do you see the APEs (*Socorristas*) continuing? What strategies do they have in place for supporting them? (supervision)
7. We have heard that sometimes the *Socorristas* have not been able to obtain the medicines they need. Has this been a problem in your district? If so, how long? Why do you think this occurred? How do you resolve problems like this?

VILLAGE LEADERS (includes members of the VHC and *Socorristas*)

1. What health changes have you seen in your village as a result of the *Vurhonga* project? What other changes have you seen in your village as a result of the *Vurhonga* project?
2. What information collected by the volunteers for the VHC do you find useful? How have you used this information to make changes in your community? Can you give any examples?
3. What is your desire for the health of this village in the future? How do you think the village can achieve this?
4. How have the volunteers been helpful in the community?
5. Does your village have an emergency transport plan? If so, when was it developed and how has it been used?
6. *For village leaders only without Socorristas:* How has the *Socorrista* been helpful in the community? Is there any way that your *Socorrista* could be more helpful?

SOCORRISTAS

1. What health changes have you seen in your village as a result of the *Vurhonga* project? What other changes have you seen in your village as a result of the *Vurhonga* project?
2. Of the activities that you perform now, are there any that may be difficult to continue in the future? If so, why?
3. How often do you refer patients? Do they go when you refer them?
4. How do you and the VHC work together?
5. Does the MOH value you or support you in your work? If so, how?
6. Have you had any difficulty getting the medicines that you need? How do you deal with stock outs? Ask to see the records and HIS community forms and review the medications in stock. Look specifically for stock out history.

ANIMATORS

1. What health changes have you seen in your village as a result of the *Vurhonga* project?
What other changes have you seen in your village as a result of the *Vurhonga* project?
2. How well did the project prepare you to do your work?
3. How many times a month did your supervisor meet with you? In what ways did your supervisor enable you to do your job? Do you think you would have been able to do this without a supervisor? Can you do it in the future without a supervisor?
4. What challenges did you encounter in performing your work?
5. Which of your current activities as an animator do you think you would want to or be able to continue in the future?
6. Were there any health messages that were more difficult to understand? Were there any messages that were more difficult to teach? What are they and why?
7. Which health behaviors were more difficult for mothers to accept and adopt?
8. Did you feel supported in your role as an animator? By whom and in what ways?
9. How has your life changed because of this project?

VOLUNTEERS

1. What health changes have you seen in your village as a result of the *Vurhonga* project?
What other changes have you seen in your village as a result of the *Vurhonga* project?
2. How well did the project prepare you to do your work?
3. How many times a month did your animator meet with you? In what ways did your animator enable you to perform your responsibilities?
4. What challenges did you encounter in performing your work?
5. Which of your current activities as a volunteer do you think you would want to or be able to continue in the future?
6. Were there any health messages that were more difficult to understand? Were there any messages that were more difficult to teach? What are they and why?
7. Which health behaviors were more difficult for mothers to accept and adopt?
8. Did you feel supported in your role as a volunteer? By whom and in what ways?
9. Tell me a problem in performing your role as a volunteer that you've had in the last few months? What did you do to address it?
10. Did you have any challenges collecting information on births and deaths from your households? How easy will it be to continue to collect this information?
11. In the future, if you see a child who is not growing well what would you do to help?
12. What has motivated you to serve as a volunteer? How has being a volunteer benefited you and your family?
13. How has your life changed because of this project?

MOTHERS

1. What health changes have you seen in your village as a result of the *Vurhonga* project?
What other changes have you seen in your village as a result of the *Vurhonga* project?
2. Do you feel that this program has had an effect on reducing the number of child deaths in the village?
3. How has the *Socorrista* been helpful in the community? Is there any way that your *Socorrista* could be more helpful?
4. Are there things that you can do that improve the health of your child? If so, what?

5. Of the health behaviors you were taught, which were the most difficult to adopt? Why?
6. Have you seen any improvements in your child's health? If so, what were they?
7. In the future, if you see a child who is not growing well what would you do to help?
8. Is there anything else that you would have liked the volunteer to teach you?

Annex 12. List of Persons Interviewed and Contacted during Final Evaluation

On 10 July, the Project Evaluation Team interviewed the Project field staff members. Then, beginning on 13 July and continuing until 15 July, the Evaluation Team spent three days in the communities, interviewing community members as shown in Table 10.1. Altogether, nine villages were visited from two of the five districts which the Project covered. In each of these districts, the District Director of the Ministry of Health was also interviewed. The Evaluation Team split into three parts, with two to three members and a translator, for the village-based interviews. Dr. Perry conducted all of the interviews with District MOH officials. Interviews with the village leaders, Care Group Volunteers, and mothers were carried out separately, usually with about five to eight persons in attendance. Altogether, 27 focus group discussions were held, eight MOH officials were interviewed (from all five districts served by the Project), seven *Socorristas* were interviewed,³⁵ and 11 Animators were interviewed.³⁶

Table 10.1 Ministry of Health Official and Community Members Interviewed

Date	District	Village	MOH Officials	Village Leaders*	Socorrista	Animator	Care Group Volunteers	Mothers
13 July	Chibuto South		√					
		Mabandlane		√	√	√	√	√
		Nwamuza		√	√	√	√	√
		Khochombane		√	√	√	√	√
14 July	Chibuto North	Chaimite		√	√	√	√	√
		Chitsunguine		√	√	√	√	√
		Gogote		√	√	√	√	√
15 July	Massingir		√					
		Tihovene		√	√	√	√	√
		Madingane		√	√	√	√	√
		Macuachane		√	√	√	√	√
17 July	Chicualacuala		√					
	Chigubo		√					

*Including members of the Village Health Committee and *Socorristas* if applicable

On 20 July, the Evaluation Team interviewed members of the Project Field Staff in three focus groups discussions.

³⁵ Not all villages had a *Socorrista*.

³⁶ Some villages had more than 1 Animator.

Annex 13. Mortality Data and Indirect Estimates of Mortality Impact

Table 13.1 lists the numbers of births and under-5 deaths recorded by the Care Groups beginning in June 2007 through March 2009. These are listed by Project supervisory area, and rates are calculated for each month. The under-5 mortality rate is calculated as the number of under-5 deaths divided by the number of births during the same period and multiplied by 1000. These are the data used to calculate the mortality estimates in the body of the evaluation report.

With the assistance of James Ricca and Debra Prosnitz of the NGO support unit at MCHIP, an estimate of the number of lives saved was computed using LiST. This software is available at <http://www.jhsph.edu/dept/ih/IIP/list/index.html>. It takes estimates of the mortality impact of specific interventions and links this data to changes in coverage of these interventions, baseline mortality rates, and populations served by a program to estimate the number of lives saved. The under-5 mortality is estimated to have declined from 126.2 to 100.0 between 2005 and 2009 (a decline of 20.8%), and an estimated 534 lives of children aged less than 5 years of age were saved as a result of the Project.

A more direct estimate of the number of lives saved is based on the baseline estimate of the under-5 mortality rate in the Project area of 160 per 1,000 live births (based on current estimates of the under-5 mortality in the Gaza Province as a whole, derived from the most recent DHS and UNICEF data) and from the end-of-project estimate of 67. In Table 4 we estimate the number of lives saved by assume that the decline if under-5 mortality was evenly spread throughout the period of Project activity. This is 2,303, considerably higher than estimated by the indirect LiST method.

The calculations using the direct estimates of mortality impact are based on a crude birth rate of 40.0 births per 1,000 population were obtained at: http://www.unicef.org/infobycountry/mozambique_statistics.html.

Table 13.5 provides an estimate of the cost per life saved using the two methods of mortality impact. With the LiST methodology, the cost is \$6,242 per life saved compared to \$1,447 for the methodology based on direct estimates of under-5 mortality. The cost per DALY saved is \$208 and \$48 for the two methods.

Table 13.1. Births, Under-5 Deaths, and Under-5 Mortality Rates by District, June 2007-March 2009

	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	
Massangena																							
Births	51	52	64	56	35	53	53	45	32	49	54	50	30	40	48	61	41	35	48	44	44	40	
Deaths	4	8	3	2	3	3	3	5	1	2	7	3	2	3	3	0	5	4	1	1	1	1	
U5MR	78.4	153.8	46.9	35.7	85.7	56.6	56.6	111.1	31.3	40.8	129.6	60.0	66.7	75.0	62.5	0.0	122.0	114.3	20.8	22.7	22.7	25.0	
Chigubo																							
Births	20	48	30	41	27	56	29	10	34	48	69	47	33	40	67	44	49	36	34	28	28	22	
Deaths	2	7	0	0	3	5	1	0	0	3	1	4	3	3	3	1	4	0	0	0	0	0	
U5MR	100.0	145.8	0.0	0.0	111.1	89.3	34.5	0.0	0.0	62.5	14.5	85.1	90.9	75.0	44.8	22.7	81.6	0.0	0.0	0.0	0.0	0.0	
Massingir																							
Births	54	52	53	74	71	59	45	52	41	39	53	52	68	58	38	78	49	87	47	48	56	54	
Deaths	6	3	9	3	4	4	3	5	6	6	1	4	4	7	6	4	4	5	4	1	3	2	
U5MR	111.1	57.7	169.8	40.5	56.3	67.8	66.7	96.2	146.3	153.8	18.9	76.9	58.8	120.7	157.9	51.3	81.6	57.5	85.1	20.8	53.6	37.0	
Chibuto South																							
Births	nd	147	146	146	145	119	70	102	113	135	94	147	119	142	116	251	156	158	154	128	155	108	
Deaths	nd	8	11	11	14	10	4	8	15	16	11	4	9	11	8	3	4	8	2	8	6	2	
U5MR		54.4	75.3	75.3	96.6	84.0	57.1	78.4	132.7	118.5	117.0	27.2	75.6	77.5	69.0	12.0	25.6	50.6	13.0	62.5	38.7	18.5	
Chibuto North																							
Births	276	105	112	178	111	88	61	101	96	86	85	110	93	97	69	158	105	94	92	90	94	50	
Deaths	41	18	16	14	10	11	5	24	18	10	11	12	12	14	11	11	3	8	4	8	15	12	
U5MR	148.6	171.4	142.9	78.7	90.1	125.0	82.0	237.6	187.5	116.3	129.4	109.1	129.0	144.3	159.4	69.6	28.6	85.1	43.5	88.9	159.6	240.0	
Chicualacuala																							
Births	nd	41	30	48	75	51	84	56	57	71	68	60	56	58	35	60	60	62	80	59	58	58	
Deaths	nd	16	6	5	4	2	6	1	1	1	0	0	10	1	3	2	2	6	3	4	7	7	
U5MR		390.2	200.0	104.2	53.3	39.2	71.4	17.9	17.5	14.1	0.0	0.0	178.6	17.2	85.7	33.3	33.3	96.8	37.5	67.8	120.7	120.7	
Birth Totals		445	435	543	464	426	342	366	373	428	423	466	399	435	373	652	460	472	455	397	435	332	
Death Totals		60	45	35	38	35	22	43	41	38	31	27	40	39	34	21	22	31	14	22	32	24	
U5MR by Month		134.8	103.4	64.5	81.9	82.2	64.3	117.5	109.9	88.8	73.3	57.9	100.3	89.7	91.2	32.2	47.8	65.7	30.8	55.4	73.6	72.3	

nd: no data

Table 13.2. Findings from the LiST Analysis

Estimated additional child deaths prevented by intervention by year among children 0-59 months of age

	2005	2006	2007	2008	2009	TOTALS BY CAUSE
	Pregnancy					
Case management during pregnancy	0	0	5	5	6	16
Syphilis detection and treatment	0	0	0	1	1	3
Tetanus toxoid	0	4	9	13	18	44
Child birth	0	0	0	0	0	0
Antenatal corticosteroids for preterm labor	0	0	0	1	1	2
Antibiotics for pPRoM	0	0	1	1	1	3
Essential care for all women and immediate essential newborn care	0	0	1	1	1	3
Basic emergency obstetric care (clinic)	0	0	1	1	1	3
Comprehensive emergency obstetric care	0	1	3	4	5	13
Neonatal resuscitation (institutional)	0	0	1	1	1	3
	Postnatal (preventive)					
Complementary feeding - education only	0	1	3	5	6	16
Hand washing with soap	0	1	2	3	4	10
Insecticide treated materials or indoor residual spraying	0	11	22	33	45	111
Vitamin A for prevention	0	1	2	3	3	8
Vaccines	0	0	0	0	0	0
Measles vaccine	0	0	0	0	0	0
DPT vaccination	0	0	0	0	0	0
	Postnatal (curative)					
ORS	0	10	20	30	40	100
Antimalarials	0	21	41	59	75	198
Totals	0	52	110	161	211	534

Table 13.3. Spreadsheet of Baseline and End of Project Coverage Levels Used for LiST Analysis

World Relief/Mozambique Expanded Impact Project			
Baseline Project Target Beneficiary Data (from online form)			NOTES/EXPLANATIONS
Project duration in years	4		It was a 5 yr project, but it actually ended in early 2009 and didn't really start, of course, until early 2005
Total population of project area at baseline	247,002		
Number of 0-59 month olds in project area at baseline	33,451		
KPC data (check online form, DIP, and FE)	Baseline	Final	NOTES/EXPLANATIONS
ANC (LiST does not specify # visits. Please specify if this is ANC1, ANC4, etc.)	73.2	78	The 73.2 is from the MTE. This information was not collected at baseline.
IPT malaria			Information not collected-not a project intervention
Tetanus Toxoid x 2	56.10%	88.00%	Percentage of mothers with children 0-23 months who reported receiving at least two tetanus toxoid injections before the birth of their youngest child
Micronutrient supplementation (IFA) during last pregnancy			Information not collected-not a project intervention
Facility Based Birth (Use Skilled Birth Attendance from KPC)	58.5	68	
Home-based birth with clean delivery (use KPC Trained TBA indicator)			The Project has info on home births, but not if those were were attended by trained TBAs.
Home-based birth with neonatal resuscitation			Information not collected-not a project intervention
Preventive Postnatal Care visits, within either 2 or 3 days (please specify)			The Project did not track this.
Breastfeeding improvement (EBF, 0-5 months)	17	80	Percentage of children 0-5 months who were exclusively breastfed during the past 24 hours, based on dietary recall
Complementary feeding - education only (usual KPC indicator)	51	84.7	Percentage of children 6-9 months who received breast milk and complementary foods during the last 24 hours, based on dietary recall
Complementary feeding - supplementation & education			Not applicable. No supplements were given. Information not collected.
Use of water connection in home (POU water treatment)			Information not collected-not a project intervention
Improved excreta disposal (latrine use)			Information not collected-not a project intervention

Handwashing with soap	3	6.7	Percentage of caregivers of children 0-23 months who report washing their hands with soap/ash before food. *BL includes only the first three times preparation, before child feeding, after defecation, and after attending to a child who has defecated
Hygienic disposal of children's stools			Information not collected-not a project intervention
ITN use last night, 0-59 month olds	8.1	36	We have estimate the final evaluation number from routine surveillance data in August of 2009 since the end-of-project survey actually took place during a month of low malaria transmission and lower usage of bed nets
Vitamin A - 2 doses	44.1	51.7	
Zinc for prevention			Information not collected-not a project intervention
Rotavirus vaccination			Information not collected-not a project intervention
Measles vaccination	67.6	70.8	Baseline data not available. The data put in the baseline box are from the MTE. The data refer to measles immunization obtained before the 1st b-day
Hib vaccination			Information not collected-not a project intervention
Pneumococcal vaccination			Information not collected-not a project intervention
DPT3	80.6	81.1	Baseline data not available. The data put in the baseline box are from the MTE. The data refer to immunization obtained before the 1st b-day
Case management of serious neonatal illness, community or facility			Information not collected-not a project intervention
ORS use in last diarrheal episode	54	71.2	Percentage of children 0-23 months who received ORT/ORS/home available fluids for diarrhea. *BL includes all diarrhea cases, MT and Final include only diarrhea more than 3 times
Anti-malarials promptly in 24 hrs	17.4	61.9	Percentage of children with suspected malaria (fever, convulsions or malaria) treated within 24 hours at a HF. *BL criteria for suspected malaria included only fever
Malnutrition prevalence, weight for age Z score \leq 2 (LiST actually has Stunting)	16.7	10.4	Percentage of children age 0-23m who were underweight (-2SD from the median weight-for-age, according to the 1978 WHO/NCHS reference population). *BL includes children outside of the normal curve on the Mozambique health card

Table 13.4. Direct Estimate of Number of Lives Saved

Year of Project	Estimate of under-5 mortality rate if the Project had not been present	Estimate of number of under-5 deaths if the Project had been present (column 3)	Estimate of under-5 mortality rate actually present in the Project area	Estimate of actual number of under-5 deaths in the Project area (column 5)	Estimate of actual number of lives saved (column 3 minus column 5)
Year 1	160.0	1,581	160.0	1,581	0
Year 2	160.0	1,581	137.0	1,354	227
Year 3	160.0	1,581	113.0	1,116	465
Year 4	160.0	1,581	90.0	889	692
Year 5	160.0	1,581	67.0	662	919
Total					2,303

Note: The calculations in columns 3 and 5 are based on a total Project population of 247,000 people and a crude birth rate of 40.0 births per 1,000 population. Also, the decline in under-5 mortality is assumed to be evenly spread throughout the Project life.

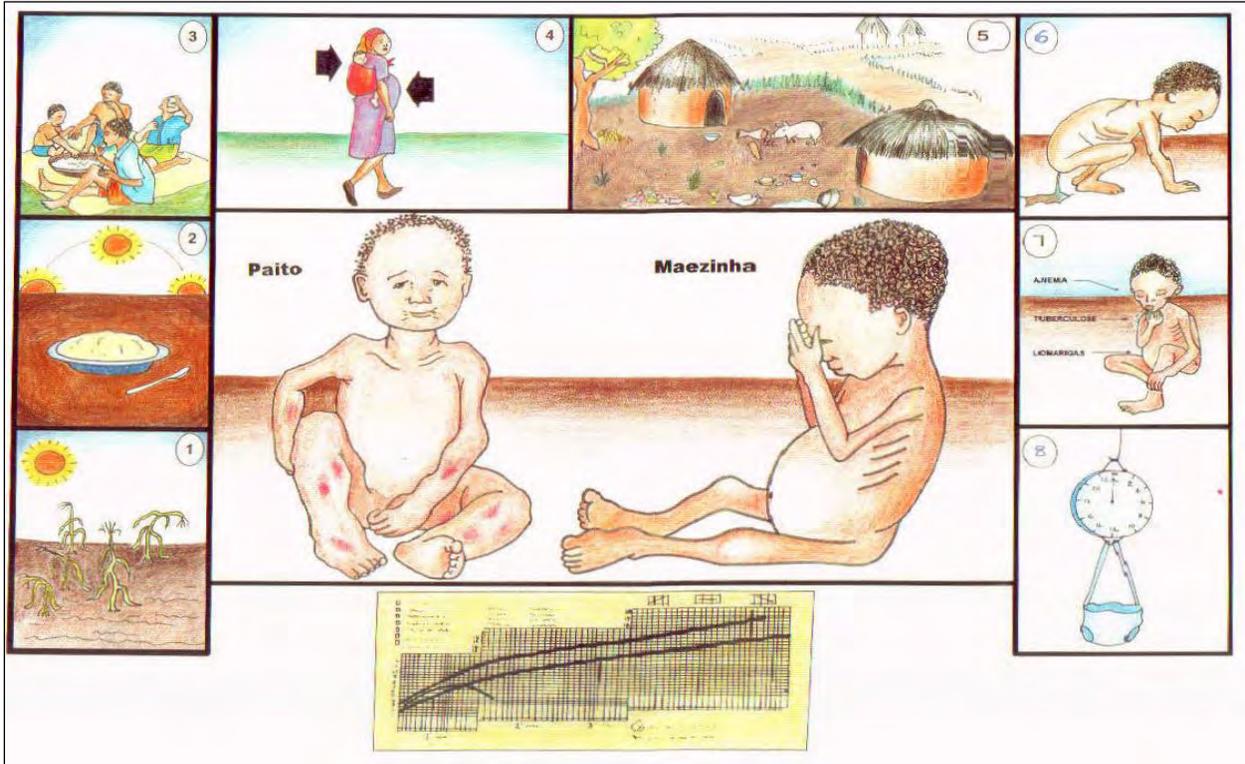
Table 13.5. Estimate of Number of Lives Saved, Cost per Life Saved, and Cost per DALY Averted during the Life of the Project

Methodology	Estimate of number of lives saved	Project cost	Cost per life saved	Cost per DALY saved
LiST Analysis	534	\$3,333,333	\$6,242	\$208
Analysis based on direct under-5 mortality estimates	2,303	\$3,333,333	\$1,447	\$48

Note (1): DALY is disability-adjusted life year

Note (2): These calculations are based on the assumption that one life saved is equivalent to 30.0 DALYS averted.

Annex 14. Example of an Educational Aide Used by Care Group Volunteers during a Home Visit



ANNEX 15. Report of Focus Group Discussions with Project Coordinators and Supervisors

July 10, 2009

Compiled by Anna Summer

On the first day of the field evaluation, the Evaluation Team met with the Supervisory Field Staff (the five district-level Coordinators and 20 Supervisors). We asked them what they thought we should ask when we travel into the field, and they responded with the following questions:

Questions for Field Visit

- How did the project benefit you?
- How much knowledge did villagers gain on selected topics? What were the knowledge levels before the Project began and at the end of the Project?
- What will happen after the Project ends?
- What can the villagers do to improve their health in the future?
- What does the Ministry of Health see as the benefits of the Project?

We then asked the supervisory staff what they understood the overall purpose of the Project to be. This was their response.

Overall Purpose of the Project

- To reduce under-5 mortality and mortality of women of reproductive age
- To give women knowledge to set them free from bad habits
- To give mothers the knowledge to help their children survive, to prevent diseases, and to know when to seek help
- To teach women of reproductive age about the danger signs of childbirth and what to do when these signs develop

Next, we divided into three discussion groups to talk about specific issues. We then returned to a general session to give each group the opportunity to share their conclusions with the others. The following are their comments, listed by theme.

I. Strengths and Weaknesses of the Project Leadership, Management and Administration

1. Planning/objectives

No one mentioned that scaling up was one of the overall project goals. They reported that they knew about the expansion, but they concentrated on the technical aspects of the work.

Weaknesses: The distances to be covered by motor bike were too great. The number of Care Groups per Animator and Supervisor was too great. Some objectives were not included that should have been, such as family planning and safe motherhood.

Sometimes the Animator would not solve problems. She would rather refer them all to her Supervisor.

Strengths: The supervisory staff members never had problems going to the field. They spent much of their time in the communities and they involved the community. They were able to easily explain their objectives to the community. There was sufficient time in the Care Group meetings to meet with everyone. The number of Care Group Volunteers in the Care Group was appropriate.

It was good that the supervisory staff stayed and lived in the villages.

2. Human resources/staffing

Strengths: It was good that Animators were chosen from the villages. If they are well-trained and eager and willing to learn more, they can continue in the village as a resource after the Project ends. If you have a local Animator from the village, the people feel she is theirs. There was a good ratio of Supervisors to villages. The fact that all the supervisory staff continued until the end of the Project demonstrates that we weren't over-worked. The supervisory structure was good because if a Care Group Volunteer had a problem, she could go to the Animator, who could then go to her Supervisor, who could then go to the district-level Coordinator.

Weaknesses: Some of the villages proved to be difficult. If in these villages the Animator is not fully committed, it will affect her Care Group Volunteers and the impact of the Project in the village. The Animator should be an example for the village. If she does not practice what she preaches, the village will not be convinced. Another disadvantage is that in the villages there are not many people who can read and write. Some of the Animators were chosen simply because they were literate even though they might not have been the best in terms of attitude and example.

Based on this discussion, the Project Director made the following suggestion: If there were someone based in the community who could monitor households by doing spot checks, it would be a good quality check to make sure that the Care Group Volunteers are visiting the households. If there were someone like that, the Project could stay in better touch with the realities on the ground. Also, some Care Group Volunteers had difficulties with reading such things as vaccination cards and weights on growth charts. If the drivers had been trained at the beginning, they could have helped the Care Group Volunteers with this. They would have had to meet with groups of Care Group Volunteers since it would not have been culturally acceptable for them to do home visits.

The Project would have liked to have been able to have had more meetings with the MOH. The MOH agreed at the outset to meet monthly, but often the MOH officials did not appear to give high importance to these meetings; they would not show up for meetings or they would change the time of the meeting. The group suggested that the MOH should have someone at the district level who is solely responsible for community work (the work of the *Socorristas*, Animators, and Care Group Volunteers).

Rarely would an existing MOH staff member go to visit a community. For example, it would have been ideal for them to visit and learn from our Hearth activities. As a result, they only reviewed our reports. Sick people were not received well when they went to a health facility.

Some of the village leaders are not mature. If a Supervisor goes to them with certain problems they can feel threatened and accused.

There are great distances for MOH nurses to travel to vaccinate. Animators are local people living with the community which is a benefit. However, the Animators

do not do their work if they are not closely supervised. The Supervisors had too many Animators and Care Groups to supervise. Often, because of the distances involved, Supervisors had to stay overnight in a village because they had not completed their work.

Why did the Project's supervisory staff stayed with project?

The project was helpful to the supervisory staff members themselves for their own knowledge and their families, and they saw the importance of the Project helping the communities.

They were motivated by the positive feedback they got from the communities about the ways people were assisted.

They got a lot of satisfaction from the respect the communities gave them. It was a relationship of love and respect.

It was very motivating when people look up to you and respect you – then you enjoyed your work.

3. Supervision

Weaknesses: One weak point in the supervisory system was between the Animators and the Care Group Volunteers. Sometimes Supervisors would discover that a household was not being visited by a Care Group Volunteer. The Animator should have been aware of this. One day a Supervisor might go to visit a certain family who says the Care Group Volunteer had never visited the family, but then you learn that the Animator was not aware of the problem. More emphasis should have been put on Animator-Care Group Volunteer supervision right from the beginning. One disadvantage of having a local Animator from the village is that she has lots of other tasks and responsibilities. Thus, she is not solely focused on her role as an Animator and her supervision of the Care Group Volunteers.

More emphasis should have been placed on choosing the right Animator at the outset – someone with the right attitude and vision. This would have improved the supervision of the Care Group Volunteers. This was difficult because there were others who would have been better but they could not read or write.

The question was asked if the Project ever replaced an Animator for not performing well. One was replaced because she married, but she was someone who did not have a good relationship with the village. The Project was patient and waited to see if the Animator would change and improve. In Chigubo District one Animator was removed, but others who should have been were not. One way of trying to get the best Animators would have been to choose three or four candidates at the outset of census activities when the Project began, work with all of them during the census-taking activities to get to know them better, and then choose the best one.

They were not able to supervise as often as they wanted to. The training was insufficient. Supervisory support was less than ideal because of the long distances required for Supervisors to travel.

4. Logistics (transport, supplies, etc.)

Transport was good. Vehicles and motorbikes were well-managed and well-maintained. Some vehicles were old, but they got fixed promptly when they broke down. We always had the transport we needed. No one had to stop work because of a lack of fuel. The mechanics and the maintenance team were very helpful, even coming to the field to help if necessary. We were more fortunate than people working in other organizations, who had many more logistical problems. Even if the photocopier in the office broke down, the staff would be able to go to town to pay for photocopying. The Project always had what it needed.

Strength: Communication from Chokwe to the field the field was good.

Weakness: Motorbikes often needed repair.

5. Finances (timeliness and availability of funds, use of resources)

Activities were interrupted more than five times because money was delayed. Even if sometimes it took a while for money to arrive, eventually we were able to do the work. Even if money was not available to buy fuel to go out to the field, the salaries were still paid. There may have been some small delays, but they were always paid.

The Animators also received their salaries on time (twice monthly), but the villagers were not aware that the Animators were being paid.

6. Health Information System (including reporting of vital events by Care Group Volunteers and monitoring surveys by Supervisors)

The mini-KPC surveys helped us because they helped us to discover where we had problems (such as a low vaccination rate). This enabled us to discuss what we could do to correct the problem. It not only helped us as Supervisors but it also helped the community to know how many children were malnourished, how many families did not have toilets, and so forth. The MOH also asked for this information. The community would look at these statistics and then could make decisions about what it should do. The reports were not burdensome.

How complete was the reporting? In the smaller villages where they know each other, the Care Group leader for the village would give the statistics. Others in the village would also know the families and could verify the data presented to the Village Health Committee. The vaccination data might be incorrect if the Care Group Volunteer could not read the vaccination card, for instance.

The quarterly mini-KPC survey helped us to monitor how well the Project was achieving its objectives. The Village Health Committees took actions based on the results of information obtained in the village. One Village Health Committee took an example of a village leader's wife dying in childbirth as an opportunity to teach the community to give birth at a health facility. The Committee required that women who gave birth at home would have to hoe the yard at the village's *Socorrista* health post.

II. Technical Issues

1. Training

What was good and bad about the training provided at all levels? We could have used more specific training about how to do our new jobs when we got promoted to be Supervisors and district-level Coordinators. It was good to have the Animators come to the Scale-squared Center in Chokwe for three months of training at the beginning of the Project and to do refresher training for one week before (at the district level) when a new intervention/topic began (every 3 months or so). Animator training skills improved over time. The behavior change communication messages were clear.

2. Scale

What was learned from trying to scale up this project as compared with previous Vurhonga projects? Animators are not full-time staff. Since they were living in their home village, they had their routine day-to-day tasks to tend to. Previously they did the training; now the Animators in the village do so. Due to low literacy of Animators, it is difficult to get them to do the job. The biggest problem they faced was that people were slow to understand/accept messages; weak Animators produced weak Care Group Volunteers.

3. Specific Interventions

Easy to implement: diarrhea and malaria. This was easy because they were the cause of such frequent illnesses. When we started in Massingir District, there was a cholera epidemic underway, so this meant that people were receptive to the training on diarrhea. Also, the people could readily see that there is more diarrhea in those households where good hygiene is lacking.

More difficult to implement: pneumonia, immunizations and malnutrition. This was because traditional beliefs were still very powerful that were related to these topics. The Project possibly had its greatest impact on reducing deaths from malaria, diarrhea and malnutrition. When the Project began, the main cause of death among under-5 children was diarrhea. At the conclusion of the Project, they now believe that HIV-related problems are the main cause of death. They stated that they had not seen cases of neonatal tetanus and that fatal cases of pneumonia and cases of measles are now.

4. Mortality Reduction

When they look at their statistics they see a downward trend in mortality. Now they see that when children are dying it appears to be associated with HIV/AIDS.

Any perception of where they had the greatest impact on mortality? Malaria, because treatment seeking increased a lot. Diarrhea, because in the past mothers would stop breastfeeding their child, stop feeding, and stop giving liquids when he/she developed diarrhea. Malnutrition, because in the past Mothers would not realize that malnutrition was due to a lack of food and consequently the child would die without proper intervention.

Main causes of child death in past five years: malaria and diarrhea. Now the leading cause of death is HIV infection transmitted from the mother. The community believes that reductions in mortality are due to the Project's activities.

5. Special Problems Encountered

People were slow to understand and accept activities which the Project was proposing, such as Village Health Committee meetings. Also, if you have a weak Animator, then her Care Group Volunteers will also be weak.

6. Care Group Functionality

Could anything have been structured differently about the Care Groups to have made them better? The methodology we used in working with the Care Groups was very good. We called on people by name and encouraged participation by everyone. The size of Care Groups depended on the village's population. We sometimes added a few extra Care Group Volunteers to a Care Group in order to avoid having to hire an extra Animator.

The number of households covered by the Care Group members (Care Group Volunteers) varied according to how remote the households were. In very remote areas, the Care Group Volunteers had only six households. However, they might have as many as 15 households if the households were very close or if additional families had moved in after the Care Groups had been established.

If the Care Groups had met only once a month, the Care Group Volunteers would have forgotten to come, and furthermore they would not have remembered the educational messages as well. Meeting twice a month was better. (Sometimes, if there had been a holiday, there may have been a month between meetings.)

What is value of Care Group Volunteers giving a monthly report on births and deaths and other community-level statistics? It helps them to compare how things are going in the village over the course of the year and to determine if conditions are improving or getting worse. When they report deaths, they ask questions about why the children have died and what they can do to improve their work. It helps the Care Group Volunteers to better understand the situation in their community. When the community realizes that the number of child deaths is declining, they begin to see that what they have been taught actually works. Reporting information about which children had not been weighed or had gotten behind in their vaccinations also motivated them to follow up with these children. Reporting on mothers who had given birth at home (rather than in a health facility) motivates them to follow up and find out why they did not go to the health facility. This enabled a Supervisor to visit the home and try to determine the cause of death.

The Care Group methodology was very good because it encouraged participation of everyone.

III. Community Relationships

We did not encounter serious resistance to building relationships with the communities. But, people were slow in learning and changing. For example, it took many attempts to finally motivate people to dig their own latrines. The mothers were more willing to respond, but the men were the ones who should dig the toilets and they were slower to respond. There has been no resistance from grandmothers or mothers-in-law.

If villagers meet a Supervisor from another area, they often remark on the similarities among Supervisors in terms of attitude. (This would occur when Supervisors from different areas would come for monitoring surveys.)

Traditional healers: is there opposition? They are invited to meetings and they also learn from the Project, so they do not object to what the Project is doing. When the traditional healers saw malnourished children improve as a result of the Hearth session, they learned from it as well. We encountered no resistance from traditional healers because they were benefitting from the Project since they were learning things that helped them with their work.

How were relationships with village leaders? When other organizations come in to work with villages, the focus is usually on a short-term activity, and they give incentives to the village leaders. So, the village leaders are initially enthusiastic, but their enthusiasm fades over time. The advantage our Project had was that we as supervisory staff were living in the area and the village leaders could see that the training we were giving them would have a long-term benefit to them. Initially the village leaders did not take much interest, but they eventually began to give more importance to the Project. The Project was able to develop good long-term relationship with village leaders.

Are there any geographic areas or social groups where the numbers of deaths is higher? In villages where alcohol is a bigger problem and where the villagers do not take the training seriously, there are more child deaths. We think that child mortality is higher there because the villagers do not give the same attention to their children. Even the women drink. In some villages the leadership may be affected by alcohol. There, the leadership is weak. Another contributing factor to higher mortality might be that some villages are a very long distance from a Health Center.

What about the long-term viability of the Village Health Committees after the Project ends? We are not sure if the VHCs will continue to be very strong or if they will even continue after the Project ends. The previous project encouraged the village to select a strong man as the health chief for the village (*Chef Saude*). However, in the current Project the *Chef Saude* is usually the Animator, who is a woman. It seems that the Animators are not strong enough to continue without supervision. The VHCs are accepted by communities, but communities are slow to change.

IV. Other Comments

Mothers are quicker to respond than men. Villagers observed the strong and positive relationships which developed within the Care Groups and wanted to emulate them.

Examples of empowerment:

- We saw individual women who became empowered to take their children for care when they needed it.
- One mother was receiving teaching from the Care Group Volunteer in the community. She and her child had participated in the Hearth session and the child improved. This mother had previously taken the child to traditional healers but the child had not recovered. In response, this mother asked to become a Care Group Volunteer so that she could teach other mothers.

One mother had a malnourished child. She had sought help to no avail, and she had given up hope. After the Project started work in her village, the Care Group Volunteers went to her house and started to help her give her child enriched porridge. The child got better, and now the mother is a Care Group Volunteer.

ANNEX 16. Report of Focus Group Discussions with Ministry of Health Officials, Community-level Project Staff, *Socorristas*, Community Leaders, Care Group Volunteers, and Community Mothers

13 – 15 July 2009

Compiled by Anna Summer

Overall Themes:

The Final Evaluation Team held focus groups with Ministry of Health district officials, village leaders, mothers of children under five, Animators, Care Group members (Care Group Volunteers), and *Socorristas*. Several overarching themes emerged in the following headings.

- Sustainability
- Training/Supervision
- Empowerment/Community Ownership of and Responsibility for Health Issues
- Social Cohesion and Unity
- Environmental Changes/Improved Hygiene Practices
- MOH/Community Leadership Support
- HIS Data Management and Utilization
- Decreased Traditional Health Practices/Increased Use of Health Facility
- Role of *Socorristas*
- Knowledge and Behavior Change
- Decreased Child Mortality

Below, we give specific quotes from focus group discussions which are examples of these commonly expressed themes.

Sustainability: The Project's Work Will Be Sustained after the Project Ends

- Village Leader: "The seed has been planted because of the Care Group Volunteers. After the Project ends, they will remain and continue teaching us."
- Mother: "The children are changing because they now know they need to wash themselves. Children follow the behaviors that their mothers do, such as using a dish rack or cleaning the yard when they wake up."
- Care Group Volunteer: "*Vurhonga* has established roots here. These will not disappear. We will take our sick children to the Health Center. If a child is malnourished, we'll make enriched porridge for her/him."
- Care Group Volunteer: "Even though we will not have a Supervisor in the future, the seeds have been planted and they have taken root. They will continue to grow."
- Care Group Volunteer: "We start in our own families. The seed of change is in our own homes."

Training/Supervision: Training and Supervision Have Been Excellent

- Animator: "During the initial three-month training that we underwent, the trainers told me that as an Animator I must be a person who has a vision for my own community. Having a vision will help me to become successful in my community."
- Animator: "Our Supervisor encouraged us to stop by each of the homes of the Care Group Volunteers three hours before the Care Group meeting to see how they were doing."
- Animator: "Though the beginning was hard, as I went on it was easier and easier to do my job. By the end of the Project, my meetings with my Supervisor were quicker because I would say. 'I had this, this, and this problem, and I solved it this, this, and this way.'"

Empowerment/Community Ownership of and Responsibility for Health Issues: The Project Has Empowered Those Working in It

- Animator: “I feel my life has changed because I feel respected in the community. Before the training, I felt like any other person in the community. Now, everywhere I go, people know me and respect me, and they want to adopt healthy behaviors.”
- Animator: “I know I need to be an example to my people. Therefore, I decided I should go for HIV testing. Before I became an Animator, I had skipped vaccinations for myself when I was pregnant and for my children. Now I won’t do that.”
- Animator: “I had wanted to breastfeed my first child until she was two years old, but my mother-in-law and grandmother pressured me to stop earlier. When I had my second child, I was working as an Animator with the Project, and I decided I would continue breastfeeding my second child even though my mother-in-law and grandmother were pressuring me to stop. Now I can see that my second child is bigger and healthier than my first child.”
- Care Group Volunteer: “Our husbands were very supportive of us as Care Group Volunteers because they realized that having a wife who could teach others and save lives increased their own status in the community.”
- Care Group Volunteer: “Before the Project came to our village, we were considered to be simple people. Now that we are Care Group Volunteers, the community respects us.”
- Care Group Volunteer: “We were afraid that teaching the households about HIV would be very difficult. But we realized that this concern was just our own. The households were actually very open to talking about it. We were speaking to the mothers, husbands and other grown unmarried women in the households!”
- Village leader: “The Project has reduced the work load of women because there is less sickness. Now they have time to go to trainings and participate in associations.”

Social Cohesion and Unity: The Project Has Improved Social Cohesion and Unity in the Communities

- Care Group Volunteer: “I was a shy person and I didn’t like visiting other people. Now, as a Care Group Volunteer, I have developed strong relationships with my neighbors, and this has helped me to be friendlier to other people and to help them.”
- Village leader: “I was not united with my family and I was leaving my family behind. After the Project came to our village, the Care Group Volunteer came and gave teachings in my house. I was mobilized to be part of my family, and we joined together to clean the yard and improve our hygiene.”
- *Socorrista*: “Now, people don’t have as much friction with each because they know where diseases come from and they aren’t blaming each other.”
- Animator: “There is a greater sense of unity and love, both because of the home visitation and because people no longer go to the traditional healer when a child is sick to find out who to blame for the illness.”
- Mother: “We have been mixing the teachings of the Project with religious teachings. We now have more compassion for the poor. We are helping them get things they need, such as toilets and food.”
- Mother: “We help each other when one of us is sick. We see ourselves as part of a system because if someone dies, the death and its reason are reported back to the village leadership.”
- Volunteer: “There is much more love between us. By going to households, meeting with mothers, and joining the Village Health Committee, we share and form relationships.”
- Village leader: “Even those people who used to hide sick people in their houses do not do that anymore. The people are now confident to approach Care Group Volunteers when someone in their family is sick.”

- Village leader: “This is not only your child; it is our [the community’s] child because someday he will grow up to help all of us.”

Cleanliness and Hygiene: The Project Has Motivated Families to Improve the Cleanliness of Their Homes and Improve Their Hygiene Practices

- Village leaders: “The Project encouraged people to build toilets. This has been helpful because before we would use the bush and then dogs would go, eat the waste, and then come back to the home and lick our dishes.”
- MOH official: “Since the Project came, there are now many more toilets, dish racks, and rubbish pits. The people know how to reduce childhood malnutrition by using locally available foods.”
- Village leader: “There have been so many changes as a result of the Project. Before, the people didn’t know the importance of good hygiene, but now the people see. Before, we didn’t know the importance of using toilets and dish racks. But now we know that good hygiene and sanitation practices can prevent illness.”

MOH/Community Leadership Support: The Ministry of Health and Community Leaders Supported the Project

- *Socorrista*: “When I take a problem to the Village Health Committee, the Committee helps me resolve it. For example, a person might come to me who needs to be referred to a health facility but refuses to go. The Village Health Committee will help convince the person to go.”
- MOH official: “The Project helped us with our vaccination outreach program.”
- MOH official: “The Project was very good because it reached throughout the district and taught the people good health practices. The Project reinforced the MOH’s objectives and served as a link between the community and the health system. By working together, the Project and the MOH has been able to change more behaviors than the MOH would have been able to achieve working alone. The Project was able to reduce the number of people who developed illnesses. It also helped to end harmful myths [about disease causation] and to promote healthful behaviors, such as latrine use.”
- MOH official: “The Project served as a link between the community and the health system, and it backed up the lessons that the MOH is teaching.”
- Village leader: “We identified families that didn’t want to change their habits. The Care Group Volunteers in the village went to those families early in the morning before they were awake and cleaned up their yards for them. Then those families became ashamed because someone else had done the work they should have done. After this, we didn’t have any more problems.”
- Animator: “[When we had a problem with Care Group Volunteers not carrying out their duties,] the Supervisor talked with the village leaders who then talked with the Care Group Volunteers. The village leaders told them to come to the Care Groups meetings and carry out the activities they had agreed to do.”
- Animator: “When we were first trained as Animators, we didn’t believe they we would actually be able to change the whole community. However, when we came back to the village after our initial three months of training we were met by the village leaders, who provided support for our activities.”
- Care Group Volunteer: “It’s nice to have a ‘grandmother’ [referring to the Supervisor who worked with her Care Group].”

HIS Data Management and Utilization: The Community-based Health Information System Data Has Functioned Effectively

- MOH official: “Our MOH staff cannot reach everywhere. So the information the Project provides us about how many people are pregnant and how many children need to be vaccinated is helpful. It guides us in deciding which villages we should visit.”
- Care Group Volunteer: “We don’t have difficulty tracking births and deaths because we know the mothers. We know when a child has been fully immunized because we can see the card. It’s not a burden to us; we can easily do it.”
- Care Group Volunteer: “There is no problem in the collection of data because we only collect from ten households and we are aware of what is going on. We will continue doing this after the Project ends because the Village Health Committee uses this information.”
- Care Group Volunteer: “We collect information on deaths, child immunizations, and so forth. In the beginning, it was very difficult because we couldn’t interpret the health records with information about weights, vaccinations, and so forth. But eventually, with more training, we learned. The mothers didn’t know how to read the growth monitoring card either. We learned how to interpret it and showed them. Some of us [Care Group Volunteers] cannot write, so we just memorize information. Others of us borrow paper from our children and get them to write things down. It is easy to maintain this information and send it on to the Animator, who can then share it with the Village Health Committee.”
- Village leader: “We meet with the Care Group representatives [Care Group Volunteers] every month on the 26th or the 27th. Each Care Group leader attends. The Care Group leaders provide us with the number of births, deaths and pregnancies as well as the number of ante-natal care visits, the number of home births, and reasons for why the birth place took place at home rather than in a health facility. The *Socorrista* also reports on the number of patients she has seen and number of different kinds of illnesses she has treated. This information is useful to the Village Health Committee because it helps everyone to know the health status of the village.”

Traditional Health Practices/Use of Health Centers: Traditional Health Practices Have Diminished and Utilization of Health Facilities Has Increased

- *Socorrista*: “In the past, ill people had no ability to get to a health facility, and this led them to rely on traditional medicine. Now, because we have a Health Post in our village, our people can get help, even in the middle of the night.”
- Mother: “Many children died before the Project came because their mothers would take them to the traditional healer, who would give them treatments that would kill the children. This doesn’t happen anymore.”
- Animator: “At the outset, it was difficult for patients to adhere to the TB DOTS program because we always taught that TB was caused by an evil spirit. But, after we saw people improving with TB medications, more people were willing to accept treatment.”
- Mother: “Before the project came to our village, parents would take a child with malaria and convulsions to the rubbish pit and put dust on the child. Now, when a child has fever we wet a *capalana* [woman’s skirt], place it on the child through the night, and take the child to the Health Center the next morning.”
- Care Group Volunteer: “These health education lessons of the Project didn’t only influence the mothers of young children. They also affected the grandmothers. Grandmothers and mothers-in-law are not using traditional medicine anymore. Now they will take children to the Health Center to get treatment.”

The Role of *Socorristas*: The *Socorristas* Have Provided a Valuable and Important Service to the Community

- Mother: “It’s very helpful to have a *Socorrista* here because when we realize that a child is sick, immediately we run to the *Socorrista*. Even in the middle of the night, we will run to him and he can give us medicine.”

- *Socorrista*: “Every problem I have I report to the Village Health Committee. They are willing to help.”
- Ministry of Health official: “*Socorristas* helped us by bringing many more people to our health facilities.”
- MOH official: “The *Socorrista* program is good because it is a government program. We discovered a need to increase access to health care in rural areas and thought it would be good to have more staff there. The Project has helped to make this possible. It is the MOH’s obligation to continue to support the *Socorristas*, but there will be difficulties in reaching the farthest places.”
- MOH official: “We think we can continue to support the *Socorristas*. During vaccination outreach in the communities, we can visit the *Socorristas* and the Animators. The doctor based at the health facility can also go out and support the *Socorristas*.”
- Village leader: “I am grateful for the Project because it encouraged us to get a *Socorrista*. Because of her we can get help for our sick kids. Anytime someone is sick we feel as though we can call upon her, even at night. Before, obtaining treatment for malaria within 24 hours of the onset of symptoms was very difficult.”

Knowledge and Behavior Change: The Health-related Knowledge of Mothers Has Improved Greatly and Their Behavior Has Changed

- Mother: “In the past, a child who had convulsions would have died. Now, because of the Care Group Volunteer, we know such a child should go to the Health Center. We had such a child recently. We took her there and she survived.”
- Mother: “The Project taught us to plant small gardens, but there are problems with the elephants in our gardens. So, now we walk to Chignange to buy greens for our children.”
- Mother: “My little boy participated in the Hearth session because he was underweight. My Animator told me how to make porridge with oil, greens and peanuts. Now the child is better and healthy. He’s five years old. I am very grateful, and I think the Project should continue. Also, because of the Animator’s visit to my home, I learned that the traditional medicines I’ve been using to help my child were not effective.”
- Care Group Volunteer: “Mothers learned that caring for a child starts before the child is born by going to ante-natal clinics, getting immunized, eating high-quality food, delivering at the health facility, exclusively breastfeeding the child for 6 months, and after that offering breast milk and complementary foods until the child is two-years old. Children are healthier now.”
- Care Group Volunteer: “The teachings of the Project have even transferred to school. Kids with poor hygiene were being picked out and embarrassed, so they would come home and want to learn how to be more hygienic.”
- Care Group Volunteer: “My husband had been feeling free to go around to other women. Then we learned about HIV, and now he’s afraid. He stays with me the whole night.”

Decreased Child Mortality: Child Mortality Has Declined

- Village leader: “Fewer children are dying because mothers know how to prevent disease.”
- Mother: “The mortality of children is now reduced. Before the Project came to our village, children were dying from malaria. The parents and traditional healers would try their best, but the children would still die.”
- Mother: “Before, many children were dying. Now, when a child has fever they wet a *capalana* [skirt worn by African women] through the night and take the child to the health facility the next morning. Before, when children would get sick they would not take the child to the Health Center. Fewer adults are dying now. They know that if someone has symptoms of HIV/AIDS, that person can go for testing and obtain medicines if the test is positive.”

Summary of Comments from Ministry of Health Officials Interviewed

Ministry of Health officials felt positively about the Project, saying that it serves as a link between the MOH and the community. They reported that villagers regularly come to the health facilities with information they had learned from the Project. The villagers often sought care because they had learned to do so as a result of Project health messages. The MOH officials frequently stated that World Relief has been supporting the MOH objectives such as mobilizing and training APE's (*Socorristas*). In so doing, MOH goals are being achieved. There was a strong sense of appreciation by the MOH for the collaboration and support that the Project provided, even saying that the "Project is doing what the MOH could not do on its own." MOH officials understand what the Project was trying to achieve, and they consider it to have been successful. The officials were particularly appreciative of the community-based nature of the Project.

Summary of Comments from Care Group Volunteers Participating in Focus Group Discussions

Volunteers Mothers frequently stated that the "seed of change" had been planted because of the Project, and that they realize that this change needs to begin with them, in their homes. There was a strong sense of empowerment among the Volunteers Mothers, as many said that they had learned to change their own knowledge and behaviors. In so doing, they have become valued resources for their neighbors and they have become closer to them. Also, they have been supported by their village leaders. They have obtained a sense of agency, knowing that they can pass knowledge on to their neighbors that could save their lives. Volunteers Mothers never stated that their work was burdensome, and many said they wanted to continue their work into the future. Many found that the status that they get in the community as a result of their activities as a Care Group Volunteer is enough incentive for them to continue in this capacity.

Volunteers Mothers said that they had seen a reduction in the number of child deaths in their villages and that they believe this is due to the contributions of the Project in their village. Another positive impact the Project has had on the Care Group Volunteers is that it has enabled them to practice and improve their problem-solving skills. Care Group Volunteers are now able to resolve difficult situations within their community. They also know that they can go to the Animator and the village leader if necessary. Their desire to resolve problems and their persistence in doing so shows their level of personal investment in their work.

The veil of ignorance in communities has been lifted. This is both empowering and motivating to community members. People now realize they can address and solve problems in new and more effective ways. Individuals in the communities are now beginning to learn to link healthy behaviors with the positive benefits that these behaviors produce. Of particular significance is the power of peer-to-peer influence among women which can then become a vital force in the communities. The Care Group Volunteers influence others in their community to practice the same health behaviors. Care Group Volunteers were even referred to by other members of the community as "mothers," showing the level of respect that community members had for them. Lessons learned by Care Group Volunteers through their participation in the Project have had an impact on the community at large, not just on women of reproductive age, but on mothers-in-law, grandmothers, and neighbors who were adopting new behaviors as well.

Summary of Comments from Mothers Participating in Focus Group Discussions

Issues of sustainability arose when mothers stated several times that children are copying the healthy behaviors they see in their mothers. At times, the children themselves are encouraging their mothers to practice certain behaviors! This is encouraging; behaviors are being passed on from generation to generation. Many mothers stated that they had abandoned traditional practices and are now seeking care at Health Centers. Mothers spoke of their personal experiences. For example, one mother spoke of taking a child with convulsions to the Health Center because of the Care Group Volunteer's encouragement to do so. A theme that surfaced regularly was that the Project's activities had resulted in increased

community cohesion and care-taking. People are now taking increased responsibility for each other, and they have more compassion collectively for the poor. Because of the Project, mothers now feel that they are now a more important part of the community. Information about their health and the health of their children is now being reported regularly to the village leadership, which makes the women feel included and cared for by their community. Mothers stated that they are adopting healthful behaviors that they have learned from the Project. One woman even spoke of walking to a nearby village to buy greens, recognizing their nutritional importance, since elephants had destroyed their gardens. Women stated that they can now make informed decisions with regard to their children's health, which is a sign of empowerment. Many mothers now know about the value of enriched porridge for malnourished children, how to make it, and when to use it to prevent and treat malnourished children.

Summary of Comments of Animators Participating in Focus Group Discussions

Talking with the Animators revealed that they appreciated the support they received from their Supervisors. For example, one Animator reported that her Supervisor had told her to go around and check in on all the members of her Care Group members (Care Group Volunteers) three hours before the Care Group Volunteer meeting. Another Animator reported that her Supervisor would regularly inform her and the other Animators that they need to have a vision for their community. Not only did Animators feel supported by their Supervisors, they felt support from the whole village, especially from the village leaders. Many spoke of an increase in community cohesion and even more love within their villages as a result of the Project. With their continued success and acceptance by the village, the Animators became more confident and felt more respected, and this led to even more successes.

A common theme was that Animators stated they were grateful for being selected for their role, but they were overwhelmed and anxious at the beginning. The lessons were initially difficult for them to teach to the Care Group Volunteers, but success fed more success. When asked about the level of difficulty of teaching particular lessons, the Animators reported that the topic of immunizations was particularly difficult. The diseases prevented by immunizations were hard for them to understand, and the visual educational materials were not very helpful. Pneumonia, tuberculosis and malaria were closely linked to traditional cultural beliefs and were hard to teach. HIV/AIDS was also a challenge due to embarrassment and stigma in the community. Nonetheless, Animators felt empowered because of their knowledge and their ability to share that knowledge and because village leaders consider them to be the community's health representative. Animators stated that they feel respected by the communities. One Animator gave the example of standing up to her mother-in-law about continuing to breastfeed while she was pregnant with another child. Animators stated that they felt well-trained and, by and large, they want to continue with their activities.

Summary of Comments of Socorristas Participating in Focus Group Discussions

Socorristas commented that personal relationships in the community had improved as a result of the Project and that they themselves were quite pleased to be able to help others. The *Socorristas* we interviewed also were pleased that their communities were highly satisfied with their work. In addition to feeling the community's support, they also reported that they were pleased to know that the MOH officials and the village leaders were satisfied with their work, providing support for referral when needed. *Socorristas* said that they had observed health-related behavior changes in the communities, particularly with regard to sanitation and hygiene practices. They talked about the strong relationships they had developed with individuals in the community. For example, one *Socorrista* told us about a woman who was receiving HIV/AIDS medication (at a Health Center) but was regularly reporting in to the *Socorrista* as well. When asked about stock-outs, the *Socorristas* commented that this was a problem. However, they recognized that the problem originated at a higher level above the district (at the provincial and national levels).

Summary of Comments of Village Leaders Participating in Focus Group Discussions

Many village leaders commented on the improvements in behavior change in the community, especially with regard to hygiene and sanitation practices (such as hand washing, storing trash in rubbish pits, building and using latrines, sweeping the yards, and drinking boiled water). They said that many people in their communities were no longer using traditional medicine practices but rather were going to Health Centers for treatment. Overall, the village leaders reported that there is new knowledge among community members and a willingness to move away from traditional beliefs. Importance is now placed on appropriate care seeking behaviors and obtaining care at the Health Centers. In addition, the village leaders reported that they appreciate the role of *Socorristas* and that they are supportive of the contribution of the Care Group Volunteers.

Village leaders say that there has been a decrease in child mortality, specifically noting a decline in the number of convulsions in children and in the incidence of diarrhea. Overall, there is an increased availability and awareness of the health statistics of their community. The availability and use of this health information has stimulated the community to make changes. For example, some village leaders said they used to defecate in the bushes, where the dogs would then eat their feces. The dogs would return to people's homes and lick the people's plates. Upon learning this information, the community started building latrines. In another example, community members began "shaming" their neighbors into cleaning their yards. In the early morning, community members would clean the dirty yards of their neighbors, thereby motivating their neighbors to clean their yards themselves.

Another benefit of the Project was that there was less conflict and greater social cohesion. Neighbors were more involved in each others' lives, and fewer people were looking to blame others for sickness. An increased value was placed on healthy behaviors and utilization of appropriate available resources as well. For example, upon understanding the importance of hygiene, one village began using a previously-installed water pump instead of going to the river to obtain their drinking water. Discussions revealed that at present there are no functioning emergency transport systems, though many communities reported that they are now planning them as a result of encouragement by the Project. Overall, village leaders were hopeful that somehow the health education trainings provided by the Project would continue into the future.

**Annex 17. Operations Research I: Financing Mechanisms and Impact
of User Fees on Health Service Utilization and Equity**

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**World Relief Mozambique
Expanded Impact Child Survival Program**

OPERATIONS RESEARCH

*Financing Mechanisms and Impact of User Fees on Health
Service Utilization and Equity*

Author: Stacy Grau, Technical Advisor

Project Location: Chibuto District

Gaza Province, Mozambique

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Table of Contents

EXECUTIVE SUMMARY	125
1 Introduction	126
2 Background	126
2.1 User Fees in Sub-Saharan Africa	126
2.2 Mozambican Context	127
3 Objectives	128
4 Methodology	128
4.1 Instruments	128
4.2 Training of Surveyors and Field Work	129
4.3 Data Management	129
4.4 Analysis	129
5 Results and Discussion	129
5.1 User Fees	129
Figure 1. Problems in Paying for Health Care and Source of Money (Percent Users)	130
Figure 2. Caregiver Constraints in Taking Child to Health Facility	131
5.2 Exemptions from Payment	131
Figure 3. Number and Percent of Health Facilities with Exemption Policies, Chibuto District	Error! Bookmark not defined.
Figure 4. Reasons for Exemptions	132
5.3 Community Health Insurance Schemes	132
6 Recommendations	133
6.1 Province and District: Ministry of Health	133
6.2 Community: Village Health Committees	133
7 Dissemination of Results	134

8 References	135
Annex A: Survey Instruments	137
Annex B: Training Schedule	178
Annex C: Research Indicators	180

Acronyms

ANC	Antenatal Care
APE	Agentes Polyvalente Elementar (Community Health Worker)
CG	Care Group
CBHIS	Community Based Health Insurance Scheme
CHF	Community Health Fund
CHIS	Community Health Information System
CSP	Child Survival Project
DDS	District Health Department
DPS	Provincial Health Department
EIP	Expanded Impact Project
FGD	Focus Group Discussion
GHS	Government Health Service
HC	Health Center
HF	Health Facility
HP	Health Post
M&E	Monitoring and Evaluation
MOH	Ministry of Health
OHH	Orphan Head of Household
PVO	Private Voluntary Organization
VHC	Village Health Committee
WR	World Relief

EXECUTIVE SUMMARY

The formal public health system in Mozambique does not charge a fee for service to pregnant mothers or mothers of children under five. However, a large majority of the population in rural areas do not have access to these services. Through the Vurhonga Expanded Impact Project (EIP), community health workers called “socorristas” are identified and placed in communities with more than 100 families that are at least 7 km from the nearest health center. Socorristas are quasi-private health providers that receive a fee for service established by the Village Health Committee. The objective of this operations research was to formally examine the impact of the fees charged, both formal and informal, in terms of service utilization, equity and affordability. *Community health insurance schemes* have been shown to influence treatment seeking behavior, where exemptions have been shown to enhance early care seeking and compliance. This study examines the existence and operation of community health insurance schemes or lack thereof and documents the willingness to pay and fees charged at the health post, health center and hospital for sick child visits, which includes consultation and drugs. Mechanisms for determining eligibility for exemptions to the poor were also documented and studied to ensure equitable access to services. Interviews with 270 caregivers of children <5, key informant interviews with socorristas, and nurses and focus groups with Village Health Committees were all conducted in Chibuto district of Gaza, Mozambique. While the majority of caregivers reported that the fees charged were reasonable (86%), more than two-thirds reported difficulty in making the payment. Exemptions do exist, but they are not consistently applied and are less common and informal at the community level. Only a small percent of caregivers (7%) were aware of a community based health fund in their community and none of the village health committees in Chibuto district report having such a fund. Caregivers report delay in seeking care when they lack the ability to pay; thus, recommendations include instituting or formalizing mechanisms for installments or repayment. Mechanisms for ensuring community awareness of the fees charged, including clear policies for exemptions from payment, and establishment of community health funds for emergency transport should be prioritized.

1 Introduction

An extensive body of literature exists from many settings in sub-Saharan Africa that have analyzed the impact of user fees on utilization of health care services and equity in accessing care. In addition, several countries, including Uganda, Kenya, Burundi and Zambia have eliminated user fees for health care with varying degrees of success, but the evidence points to a marked increase in utilization of health care services in all cases. In response to the burden of paying for basic health services and to protect against the risk associated with a catastrophic health event, many community-based insurance schemes have been implemented throughout the region. Although community managed health funds differ in size, type of benefits packages offered, role of government, and type of management structure, the primary objective of such mechanisms is to mitigate the impact of a devastating illness as well as to reduce the cost of routine care.

While evidence gathered from other countries is extensive, there are few recent studies on user fees in Mozambique and few examples of functioning community-based health funds. This study was conducted in April-May 2008 in Chibuto district of Gaza province, Mozambique. It examines the existence and operation of community health insurance schemes or lack thereof and documents the willingness to pay and fees charged at the health post, health center and hospital for sick child visits, which includes consultation and drugs. Mechanisms for determining eligibility for exemptions to the poor were also documented and studied to ensure equitable access to services.

2 Background

2.1 User Fees in Sub-Saharan Africa

In the era of structural adjustment, many sub-Saharan African countries implemented user fees in order to generate revenue to finance health sector reforms. The widespread introduction of user fees was based on the assumption that fees are affordable for the majority of the population, exemptions can be applied to ensure equitable access to care, and the revenue generated by user fees can be used to improve quality of care at health facilities.³⁷ In addition, many African governments adopted the policies outlined in the Bamako Initiative, which emphasized that user fees should be administered in order to improve quality of health care services and ensure equity. Specifically, the proposal advocated the creation of community structures to manage revolving drug funds and user fees, whose profits would be reinvested in health facilities. Nevertheless, multiple studies corroborate that user fees have resulted in lower utilization rates and remain a significant financial barrier for the poor.

Several studies from Kenya, Ghana and Uganda demonstrate that in most cases, revenue generated from use fees cover only 5-10 percent of recurrent (non-salary) costs and are not always correlated with quality improvements. Findings from a study conducted in Volta Region in Ghana show that user fees may contribute to financial sustainability of public health facilities, but usually at the expense of ensuring equitable access. Due to inconsistent application of exemption criteria, many individuals who qualified for exemptions were excluded. In fact, less than one in 1000 patient contacts were granted exemption in 1995.³⁸ Most alarming, exemptions rates were low even for MOH

³⁷ Johannes P. Jutting. Do Community Based Health Insurance Schemes Improve Poor People's Access to Health Care? Rural Evidence from Senegal. *World Development*. 2003, 2:273-288.

³⁸ Nyongator and Kutzin. Health for some? The effects of user fees in the Volta Region of Ghana. *Health Policy and Planning* 1999, 14(4): 329-341.

approved cohorts. Additional challenges in the functioning of user fees that further limit access include numerous payments points, requirements to make deposits before receiving treatment, not distributing receipts and fees that are generally not publicized or widely known.³⁹ A similar study in Kenya also documented low exemption rates and identified complicated and time consuming procedures for obtaining approvals as substantial barriers to complying with exemption policies.⁴⁰ Even where exemptions are effective, many service users incur out of pocket costs for transportation, medication and unofficial fees charged by health providers to supplement inadequate salaries. A recent literature review published by the World Bank also underscores the futility of exemption mechanisms, which in the majority of cases did not increase access for the poor.⁴¹

Given widespread challenges to enforcing exemptions and narrowing the gap in access to care, community based health care financing were imbued with the potential to overcome the inequalities in service utilization and increase coverage. Community participation and management of a common fund to collect pre-payment for consultations or hospitalization can contribute to increased quality of care and enforce minimum standards of care. There is mounting evidence that the number of Community Based Health Insurance Schemes (CBHIS) are increasing particularly in West Africa, Rwanda and Uganda, with the capacity to reach millions of beneficiaries.⁴² Studies from several sub-Saharan countries, including Senegal and the Democratic Republic of Congo, show that members of such funds access health services more frequently and pay less for health care.⁴³

2.2 Mozambican Context

In Mozambique, according to MOH regulations, family planning, maternity/delivery care, and pediatric care for children under 5 should be offered free of charge. In 2000, the Swedish Development Corporation conducted an assessment which showed that in spite of this policy, 9% of service users paid for ANC, 8% for family planning, 13% for delivery, and 13% for child-related services. The same study reported that the fee structure and policies were frequently communicated verbally and the majority of service users did not know the fees charged prior to receiving care. Furthermore, income level and cost of services were closely associated with lower rates of utilization. Seventy-five percent of the sample population indicated that they encountered greater difficulty paying for medications as compared to consultations.⁴⁴

According to the Ministry of Finance and the World Bank, the revenue generated by user fees contributes a mere 2.6 percent to total spending on public health services. Based on a recent financial review performed by the World Bank, the majority of Mozambicans (52 percent) find it difficult to pay fees. Of those who found it difficult to pay for health care, 57 percent paid out-of-pocket, 20 percent borrowed money, and 17 percent sold assets.⁴⁵

³⁹ Nyonator and Kutzin *ibid*.

⁴⁰ Mwabu et al. User charges in government health facilities in Kenya: effect on attendance and revenue. *Health Policy and Planning* 1995, 10(2): 164-175.

⁴¹ Bitrán R, and Giedion U. Waivers and exemptions for health services in developing countries. *World Bank*, (Social Protection Discussion Paper Series No. 0308.), 2003.

⁴² Yogesh Rajkotia. Can Community-Based Health Insurance be Scaled up? The Case of Ghana. 2006.

⁴³ Jutting, *ibid*.

⁴⁴ Guy Hutton. User fees and other determinants of health service utilisation in Africa: A review of formal and informal health sectors. *Swiss Tropical Institute*, 2002.

⁴⁵ Robert Yates. International Experiences in Removing User Fees for Health Services – Implications for Mozambique. *DFID Health Resource Centre*. 2006.

Through the Vuronga Expanded Impact Project (EIP), community health workers called “socorristas” are identified and placed in communities with more than 100 families that are at least 7 km from the nearest health center. Socorristas are quasi-private health providers that receive a fee for service established by the Village Health Committee (VHC). In light of the evidence that even nominal fees can be burdensome for the poor in Mozambique, it is important to examine how fees charged by socorristas affect utilization rates and equitable access to health care. In the five districts where the Vurhonga IV project operates, socorristas charge approximately 8 -12 cents per visit. This amount goes towards paying a minimal salary to the socorrista, general upkeep and functioning of the health post, and transport of medicine. In addition to determining the amount, the VHCs also set the hours of the health post and oversee the socorrista. While the fees in general are quite minimal, the impact of these fees is not known. Also, while community health financing mechanisms exist in Mozambique, information on the structure, purpose, and payment system of these funds is not well-documented.

3 Objectives

The objective of this operations research was to formally examine the impact of the fees charged, both formal and informal, in terms of service utilization, equity and affordability. It also provides further insight into exemption policies and the functioning of community-based health funds in Chibuto district.

4 Methodology

Of the six rural districts in the Vuronga expanded impact project area, only Chibuto contained enough health facilities of the various types (health posts, health centers, and hospital) to provide an adequate size study population to be considered for this study. The decision was made to conduct surveys in all Government and Vuronga built health posts rather than randomly sample due to the overall low number of health facilities in the district. The following data collection methods were used in this analysis: 1) financial record reviews at the health facilities in order to obtain quantitative data on user fees; 2) informant interviews with two target groups: primary caregivers for children under 5 and socorristas and nurses at HF in Chibuto and 3) focus group discussions with Village Health Committee members.⁴⁶

Interviews were conducted with nurses at all government health centers in Chibuto, 10 in total, as well as the one hospital in the district. Vuronga helped establish 27 health posts in Chibuto; interviews were conducted with the socorristas at all 27 health posts. In total, financial record reviews and interviews were conducted at 38 HF in Chibuto district. Interviews were also conducted with 270 caregivers of children under five who were being seen at each of the ten health centers and the district hospital. In addition, focus groups were conducted with six Village Health Committees, three in Chibuto North and three in Chibuto South.

4.1 Instruments

Six instruments were used to conduct the record reviews and interviews and to facilitate FGDs. All six collect similar data from slightly different perspectives and allow for the same indicators to be calculated in alternate ways. The complete set of instruments can be found in Annex A.

⁴⁶ In many villages where Vurhonga operates, Village Health Committees (VHCs) determine the amount charged at health posts, supervise socorristas and managed community health funds.

4.2 Training of Surveyors and Field Work

The team of surveyors consisted of Vuronga EIP field staff working in Chibuto district. This included 2 coordinators and 9 supervisors. They were supervised by the program manager and community outreach coordinator. Both training and data collection were divided up in two stages for two reasons: 1) To ensure the quality of the data collected and 2) to coincide with the field and office based schedule of the EIP staff. The first stage consisted of the community level data collection which consisted of interviews with socorristas, and the focus groups with the village health committees. The training took place over a four day period immediately followed by field based data collection April 25- May 9, 2008. Plenty of time was given for practice and role-playing during the training. The second stage consisted of interviews with nurses and caregivers of children under five attending at health centers and the district hospital. The training took place over three days and included practice sessions and role-playing. The second stage of data collection took place immediately following the training from May 19-30, 2008. (See Annex B for the training curriculum.) A typical day of training consisted of reviewing the instruments question-by-question, role-plays, and practical work in local health facilities not included in the study. In-depth discussions were held with the surveyors, and modifications were made to the instruments according to their suggestions. Rules were developed for questions and items that could be misinterpreted. At the end of the training, the surveyors understood all of the instruments and used them effectively. Each team was provided with a vehicle and a driver. Generally, the teams paired up so two surveyors visited each facility. Each pair of surveyors visited one facility per day. The coordinators and supervisors had letters of introduction from the DDS GHS, which facilitated the introduction of the survey team to the health facility staff. All teams were able to complete their assignments on time.

4.3 Data Management

The coordinators were responsible for each of their teams of surveyors and for ensuring that all procedures were properly followed in the facilities. At the end of each day, surveyors reviewed their instruments and ensured that data had been collected properly. Surveyors were instructed to contact the survey organizers should any problems be encountered. Once the data collection was completed in each district, survey organizers reviewed all of the instruments. The instruments were brought back to Maputo for review and audit prior to hand tabulation in Chokwe. Discrepancies were re-hand tabulated until the number of responses equaled what was expected. Once the data was considered clean, indicators were calculated. For a complete set of indicators, see Annex C.

4.4 Analysis

Univariate analysis was conducted using mean, standard deviation, and range for continuous variables, and percentage in each category for categorical variables. Qualitative data from the FGDs were analyzed manually.

5 Results and Discussion

5.1 User Fees

The majority of individuals who do not pay a consultation fee are children, who are entitled to free government health services. Despite this policy, 36% of all government health centers and the hospital in Chibuto district are charging for children under five. Nearly half (44%) of caregivers of children under five reported paying a consultation fee. This is slightly higher than what was reported in a 2004 study by the World Bank (35% nationally).¹ Thus, there is no improvement in the consistency of applying this exemption for children under five. This did not seem to be a problem at the district level hospital, but rather in the lower level health centers. HPs are charging one amount which covers both consultation and medication while HCs are not charging a consultation fee but are charging for medication.

Multiple payments were all but non-existent; in all but two instances (n=75), only one payment was made. Just over half (56%) were given a receipt for payment.

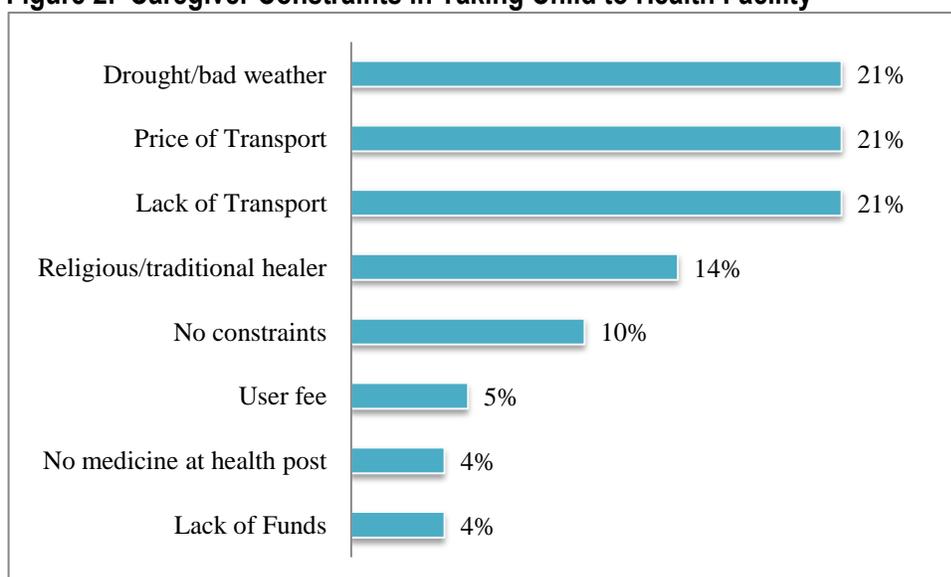
In general, payments are quite low. However, the median payment is 5 MT which is five times the 1MT average payment as reported by the World Bank in 2004. Despite relatively low average payments, two thirds of those interviewed reported some degree of difficulty in obtaining money for payment of such fees. Not surprisingly, perhaps due to the five-fold increase in costs over the last 5 years, the percentage of people reporting difficulty is up from nearly one half to two-thirds of those interviewed. Despite this, 87% said that they thought that the fees charged at the health facility were reasonable and were able to pay the amount required. Figure 1 highlights the difficulty of health care users in finding money for health related expenses. Nearly two thirds reported borrowing the money or selling items in order to pay for health related services.

Figure 1. Problems in Paying for Health Care and Source of Money (Percent Users)

<i>Source</i>	<i>Region</i>	<i>Difficult or very difficult to find money</i>	<i>Had money</i>	<i>Borrowed money</i>	<i>Sold Items</i>	<i>Other</i>	<i>Total</i>
World Bank, 2004	South	31.4	75.4	16.5	4.8	3.3	100
World Relief, 2009	Chibuto District	66.4	33.3	25.3	38.7	2.7	100

Given that the main source of income in rural Gaza is through subsistence farming, the drought or lack of rain in recent years has likely hindered the ability to generate income. Figure 2 illustrates constraints in accessing formal health care. Drought or bad weather, price of transport, and lack of transport were equally cited as the top three constraints. User fee or lack of funds was cited only 5 and 4 percent, respectively; however, it is likely that those who cited drought or bad weather meant that this inhibited their ability to generate income. Of those who were unable to pay, all delayed or ceased seeking treatment for the child.

Figure 2. Caregiver Constraints in Taking Child to Health Facility



The lack or cost of transport is a serious barrier to both overall functioning and access to the formal health care system in Mozambique. Unlike other countries, government run health facilities constitute the formal health care system as privately run health facilities have been nationalized. With only four 24-hour inpatient care facilities in the district, those in rural areas are forced to travel great distances to receive a higher level of care. Access to transport, particularly in cases of emergency, is therefore critical. There is an inherent bias in interviewing those at the health facility who presumably, either 1) did not have to travel far or 2) were able to pay/access transport to the facility. However, even though the sample size at the rural hospital was small (n=10), nearly all those at the district hospital reported difficulty in obtaining money for transport to and from the hospital. The amount paid for transport varied significantly, however the mean amount spent on roundtrip transport was 113 MT; this amount is significantly greater than the 8.5MT reportedly spent by those interviewed at the health centers. Such a trend shows that the higher level the facility, the less likely the poor living in rural areas far from the district capital are able to access treatment.

5.2 Exemptions from Payment

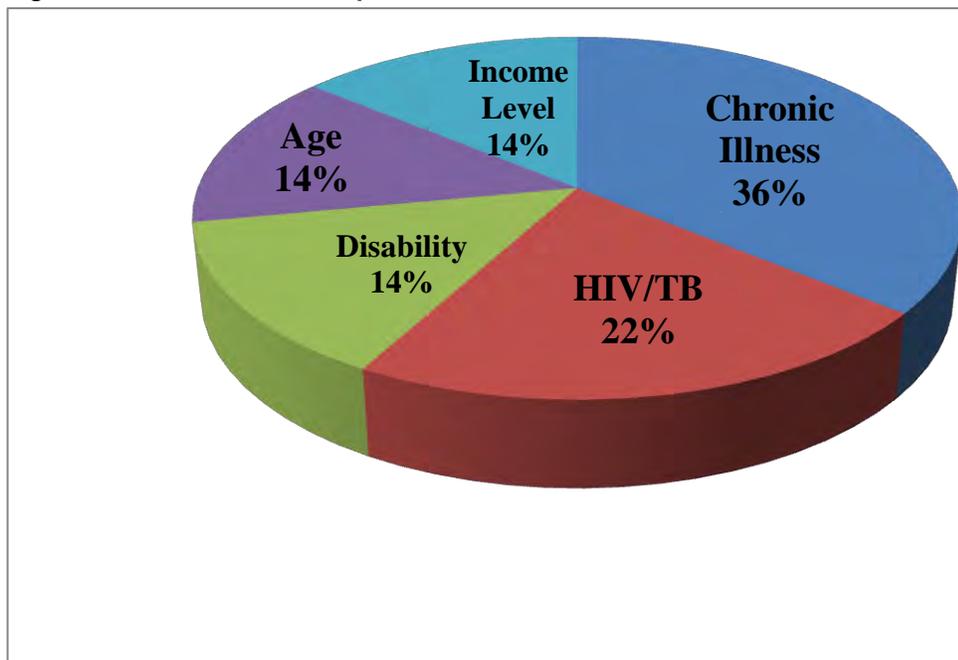
Caregivers were asked whether they were allowed to pay less than the normal amount. Eighteen percent received some level of discount from payment but this amount (or guidelines for who qualifies for exemption from payment) does not seem to be consistently applied. More than one fifth of those surveyed did not know whether they had been allowed to pay less than the normal amount, probably due to the fact that they were unaware of the regular fees charged; 83% did not know how much they would be charged before coming to the health facility. This is a problem that needs to be highlighted, particularly since Mozambican law mandates that signs and placards indicating user fees be visibly posted. Our research team found that none of the 38 facilities in Chibuto were in compliance with this mandate.

Exemption policies varied greatly among and between types of facilities. Almost half of the hospitals and health centers had some type of exemption, compared with only 7% of the socorrista health posts. While it is widely known or accepted that exemptions have been proven to be ineffective, they are more likely to succeed in relatively small rural communities which have a management body such as a village health committee. One could argue that rather

than charge a user fee, the VHC could collect a fee on a monthly basis from all community members for maintaining the health post and transport of medicine from the district capital. However, given the need to use such fees for transport to the district hospital in emergencies, the VHCs may find it difficult to generate enough income to cover these competing priorities. Thus, exemptions from payment, rather than abolishment of the user fee, should be considered as one option, in order to insure equitable access to services. This may also be an appropriate short term solution given the much awaited rollout of the government’s plan for MOH Community Health Workers (called “APE”) whereby the socorristas would be transitioned to APEs under the new plan and thus paid a salary.

Of those facilities that currently have an exemption policy, qualification criteria for exemption from payment also varies. Figure 3 illustrates the reasons for exemptions from payment. Chronic illness and HIV/TB patients made up the majority of those exempt, followed by age, income level, and disability, each at 14%. The data demonstrates that there are no universal criteria for exemption from payment; thus, one group may be exempt from payment at one facility but not at another. It also shows that exemptions from payment are not necessarily for the poor, perhaps due to the difficulty in documenting level of income. Interestingly, orphans as head of households were never once cited as being exempt from payment however, this could have been due to its exclusion as a category in the survey form.

Figure 3. Reasons for Exemptions



5.3 Community Health Insurance Schemes

Community health insurance schemes were found to be rare or non-existent in Chibuto district. None of the HF reported any knowledge of CBHIS. Only 7% of caregivers surveyed (n=100) were aware that their community had a community health fund. Of those, less than half contributed money to the health fund which they expressed was too low to have any real impact.

Through the Vuronga EIP, 6 village health committees were formed and are currently operational in Chibuto district. Focus groups were conducted with six VHCs. All of them expressed the need and desire to establish a community

health fund (CHF) but none had one in place. Obtaining buy-in from the community was cited as the main barrier as to why one hadn't yet been established. Half (3/6) of the VHCs have thought about instituting procedures for providing emergency transport. One VHC stated that such a fund could allow them to hire a car during emergencies. Another said the money could be used to purchase a wagon for emergency transport. Thus, the need for transport in an emergency was cited as the primary reason for establishing a community health fund.

6 Recommendations

The following recommendations are made for action by various stakeholders at the district and community level.

6.1 Province and District: Ministry of Health

- Enforce compliance at health facilities in displaying the cost of various services to its users to gain trust and confidence of users and to prevent overcharging and misuse of funds
- Ensure health center compliance with not charging a fee for consultation or for medicine for pregnant mothers and children under five
- Put mechanisms in place to educate the public of the cost of services, particularly those services which are free of charge
- Ensure health facilities are consistently issuing receipts for payments; receipts should be in duplicate so that income from user fees can be tracked appropriately and compared to the patient register log
- Exemptions from payment should be re-examined in line with national policy including how classification of an individual is determined
- Standardize and enforce criteria and classification of groups across all Government Health Services in the district
- Train health personnel on exemption policies including proof of documentation for determining eligibility
- Institute procedures for enforcing exemption policies such as including compliance checks via patient registers as part of supervisory visits

6.2 Community: Village Health Committees

- Review the user fee amount on a regular basis
- Consider an amount that every family can pay
- Institute a WRITTEN exemption policy for those who cannot pay
- Take appropriate action to ensure that everyone in the community is aware of the fee
- Ensure that all community members are aware that they should seek treatment at the health facility immediately during an emergency even if they don't have the money for payment (institute a repayment policy/plan)
- Socorristas should keep records of all patients who are seen, regardless of whether they were exempt from payment or able to pay (they can use the register to make note that a repayment is required and when it was received)
- Ensure that user fees go toward health improvements (transportation for medicine, broom for keeping health post clean, repair of toilet at the health post, etc.) and is not used for other business

7 Dissemination of Results

Results of this operations research were presented in early May 2009 to Vuronga staff in conjunction with preparation for training the village health committees. The main purpose of the Village Health Committee training was to prepare them for maintaining community health activities including reporting and liaising with the DPS after the Vurhonga program ends. However, training on establishing a community based health fund was also included due to the results of this research. The recommendations listed above were also included as part of the VHC trainings. In addition, the best responses from the FGD were provided to the staff for mentoring the VHCs on model VHC actions. Staff were asked to find key words or phrases that made these model responses; they also received handouts of the key responses as a training aid for the VHC trainings.

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Annex A: Survey Instruments

**Form 1 Record Review
Chibuto District, Gaza Province, Mozambique**

Reviewer: _____

Date: ____/____/____

Name of Facility: _____ Region: Chibuto North
 Chibuto South

Type of Facility: Health Post Hospital Health Center

Nearest referral facility: _____ Distance: _____ km

of < 5s seen in last 6 months: O ____ N ____ D ____ J ____ F ____ M ____ TOTAL: _____

of < 5s referred : O ____ N ____ D ____ J ____ F ____ M ____ TOTAL: _____

Information for each child <5 referred

#	Name of Patient	Record #	Age (Months)	Sex (M/F)	Address	Amount Charged (Mt.)	Amount Paid (Mt.)	Receipt Given? (Y/N)	Exempt? (Y/N)	Referral Date (DD-MM-YY)	Causes of Referral
											1. 2. 3.
	Referred To (Facility Name)	Referral Slip Given? (Y/N)	Complied? Y/N and Date	Arrived w/ Referral Slip? (Y/N)	Diagnosis	Admitted? (Y/N)	2 nd Referral? (S/N)	Causes of 2nd Referral	Referred to: (Facility Name)	Referral Slip Given? (Y/N)	Complied Y/N and Date Arrived with Referral Slip?. (Y/N)

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

								1.			Complied:
								2.			Date:
								3.			Slip:
	Notes:										

**Form 1 Record Review
Chibuto District, Gaza Province, Mozambique**

#	Name of Patient	Record #	Age (Months)	Sex (M/F)	Address	Amount Charged (Mt.)	Amount Paid (Mt.)	Receipt Given? (Y/N)	Exempt? (Y/N)	Referral Date (DD-MM-YY)	Causes of Referral
											1. 2. 3.
	Referred To (Facility Name)	Referral Slip Given? (Y/N)	Complied ? Y/N and Date	Arrived w/ Referral Slip? (Y/N)	Diagnosis	Admitted? (Y/N)	2nd Referral? (S/N)	Causes of 2nd Referral	Referred to: (Facility Name)	Referral Slip Given? (Y/N)	Complied Y/N and Date Arrived with Referral Slip?. (Y/N)
								1. 2. 3.			Complied: Date: Slip:
Notes:											

#	Name of Patient	Record #	Age (Months)	Sex (M/F)	Address	Amount Charged (Mt.)	Amount Paid (Mt.)	Receipt Given? (Y/N)	Exempt? (Y/N)	Referral Date (DD-MM-YY)	Causes of Referral
											1. 2. 3.
	Referred To (Facility Name)	Referral Slip Given? (Y/N)	Complied ? Y/N and Date	Arrived w/ Referral Slip? (Y/N)	Diagnosis	Admitted? (Y/N)	2nd Referral? (S/N)	Causes of 2nd Referral	Referred to: (Facility Name)	Referral Slip Given? (Y/N)	Complied Y/N and Date Arrived with Referral Slip?. (Y/N)
								1. 2. 3.			Complied: Date: Slip:
Notes:											

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

Instructions: Form 1 Record Review

General Instructions	REMEMBER: This is the most important instrument of all, so it should be filled out very carefully. This instrument is filled out in all facilities, including health posts, health centers and the district hospital. Each of the facilities you visit may have a different way of keeping the information of children that are seen there. You should ask the health workers in the facilities how they keep the records and ask their advice for the best way to obtain the necessary information.
Page Number	Each time you begin a new form, write the page number in the first blank space on the top right hand side of the form. Once all referrals for children under 5 in the last 6 months have been recorded, count the number of pages you used at this health facility and write the number in the second space at the top right hand side of the page.
Reviewer	The name of the person who completed the record review
Date	The date the review was completed
Name of Facility	Name of the facility where the record review was conducted
Region	Indicate whether the facility is located in Chibuto North or Chibuto South
Type of Facility	Type of facility where the record review was conducted
Name of closest referral facility	Before arriving at the facility, using available data, identify the nearest referral facility (whether it is inside the district or not). If the nearest referral facility is outside of the district, write the name of the facility followed by "OD" for "outside district" and circle the "OD" for emphasis.
Distance	Distance to the referral facility should be described in kilometers, only in .5 increments for example: 1 km, 1.5 km, 2 km, etc.
Number of <5s seen during the last 6 months	Record the number of children less than five years of age seen at this facility for each month beginning with October 2007. At the health centers and hospital, you should start with the monthly statement of outpatients for the total number of <5s seen each month. If this sheet is not available or if the information is confusing, you will need to count the number of <5s from the patient register. Important: Health facilities that have inpatient facilities (CS-Cidade, Alto-Changane, Malehice, and Hospital Rural) need to include both inpatient and outpatient data. Hopefully, these facilities have monthly summary data that either include both or list each separately (inpatient and outpatient). If listed separately, add the two totals for each month and record in the appropriate month.
Number of <5s referred	Record the number of children less than five years of age referred at this facility for each month beginning with October 2007. At the health centers and hospitals, the number of referrals of children <5 should be found in the monthly or quarterly summary reports (often listed as transfers). Then, the patient register or in the case of health centers and the hospital, the patient register needs to be checked to verify the information captured in the monthly summary report and to identify the individual children who were referred. If any information is missing, or if the entry looks doubtful, the individual patient record should be checked. If there is a discrepancy between the number of referrals in the monthly tally sheet and those in the register, use the number in the register. Important: Health facilities that have inpatient facilities (CS-Cidade, Alto-Changane, Malehice, and Hospital Rural) need to include both inpatient and outpatient referrals. Hopefully, these facilities have monthly summary data that either include both or list each separately (inpatient and outpatient). If listed separately, add the two totals for each month and record in the appropriate month.
Children <5 referred	Ask the health provider at the health facility for all the health records of children under 5 that were referred to another facility during the last six months: October 2007- March 2008. You may need to gather information from various sources in order to complete all the fields of the

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

	form such as referral notes, patient register, financial register, etc. Use these documents to complete each field of the form starting from left to right and continuing with the second row. In total, there are 24 possible fields to complete for each person referred. The shaded portion describes the information requested. Complete the response in the white space below. After completing the first referral, each subsequent page can record 2 patients each. Continue completing a new form until you have recorded all patients less than five years of age who were referred to a higher level facility during the last 6 months. At health posts, you need to identify all the children that were referred to another facility. The patient register should be the starting point for identifying children who were referred (indicated as transfers) to another facility. At health centers and the hospital, you need to look for the children who were found at the health post or health center that were referred to this facility as well as identify new children who were referred to another facility. To find the children who were indicated as having been referred to this facility, use the patient register to find the name you are looking for. If the patient register is in order by date, look for the date the child was referred up to and including 7 days after the date referred for the patient's name.
#	Number. Start with 1 and continue with each referral. You should end up with the same number of total referrals listed under "Number of <5s referred at the top of page 1 of the form.
Child's Name	The name of the child/patient who was referred. This can be found in the patient register.
Patient Record #	Each patient should have been assigned a patient record number. This can be found in the patient register.
Age	Record the age of the child in months. If the child is less than one month old, write age in days and be sure to write the word "days" after the number. This should be found in the patient record.
Sex	Male or Female; this should be found in the patient record and marked using "M" or "F".
Address	Write the name of the village where the patient is from. This can be found under "Address" in the patient register.
Amount Charged for Consultation (Mt)	This amount will only be recorded once for each new referral found at each health facility. There should not be a fee for consult at the health centers or hospital for children under 5. However, you should still try to verify that this really was the case. It is suggested that you first ask whether there is a financial record of the fee charged for each patient. If not, then you will need to ask the health worker the amount charged for each consultancy of children under 5 and record the amount.
Amount Paid for Consultation (Mt)	This amount will only be recorded once for each new referral found at each health facility. Again, there should not be an amount paid by the caregiver for the consultation at the health centers or hospital for children under 5. However, you should still try to see if the patient paid a fee for consult. You should try to see whether there is any indication of payment for a consultancy fee by the patient from the financial records. You may simply find some indication that the patient paid the consult fee. In such a case, you can assume the amount paid is the same as the amount charged and record the same amount.
Receipt Given	This will only be recorded once for each new referral found at each health facility. If the caregiver was charged, write whether or not the caregiver was given a receipt for payment. Check for this indication in the financial record. Hopefully, you can find the patient you are looking for in the financial record. If such an indication can not be found there, you may need to ask the health worker if receipts are consistently given to all patients or not and record the response.
Exempt	This will only be recorded once for each new referral found at each health facility. Ask the health worker whether they allow any circumstances for exemption from payment. If yes, find out how you can determine whether a patient was exempt from payment. Oftentimes, a letter from an official authority figure is required for exemption. Such documentation should be attached to or included with a

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

	patient's health record or indicated in the financial record.
Date of Referral	Does the health register or referral note indicate the date that the patient was seen? Hopefully, the date was recorded under transfers in the patient register. Otherwise, you can use the date listed in the patient register.
Causes of Referral	It might be necessary to look at the individual patient register for notes on why the patient was referred. The "causes of referral" should be written exactly as they are described in the documentation. If you cannot find any such information or if you are unsure, ask the health worker to explain. For example, perhaps the child would normally be treated at the facility but the center was temporarily out of stock of a medication needed to treat the child for a particular illness. If this still does not help, you can check the patient register for the diagnosis. Illnesses such as pneumonia, malnutrition, measles, diarrhea, and malaria are often the main causes for referral. List the diagnosis as the cause of referral if it is reasonable that the diagnosis was serious enough to warrant a referral. If the diagnosis does not seem to warrant a reason for referral, then mark "unknown" by the number 1 space on the form.
Referral to HC/RH	This is perhaps one of the most important fields on the form. Information on where the child was sent is needed in order to follow up at the next level care facility to see if the child actually complied with the referral. If this cannot be found anywhere in the records, then ask the health worker which facility patients are usually referred to. If this varies for any number of reasons, then write the name of the nearest referral facility listed at the top of the first page of the form.
Referral Slip Given	Do the health records indicate whether the a referral note was given to the child's caregiver to take to the referral facility? Is there a copy in the records? If you cannot find this documented anywhere in the health records, ask the socorrista or nurse whether he/she remembers giving a written note of referral for each case, assuming that the total number of referrals is quite small, and therefore, easier to remember on a case by case basis. You can record yes, even if the referral note consisted of just a handwritten slip of paper. For health centers and the hospital, ask if the facility has referral slips and attached a copy of it to the form. This is the last box required to be completed for all newly identified referrals; stop here, and begin a new entry of another child under 5 who was indicated as being referred to another facility.
Complied Y/N and Date	This box begins the search for a referral by the coordinator at the next level facility where the child was indicated at the 1 st level facility as having been referred. Can you find the patient who was referred to this facility in their health records? If yes, record the date. You should look for the child via medical records at the referral facility for up to seven days after the referral was made. When looking for children at health centers with inpatient facilities (CS-Cidade, Alto- Changane, Malehice), or the hospital be sure to check both inpatient and outpatient registers.
Arrived with Referral Slip	Does the health register include or refer to whether the patient brought a referral slip to the referral facility given by the socorrista or nurse at the first level facility? Ask at the facility what would be the best way to check for a referral slip. This may be located either in the child's record, a referral file, or other location, depending on the facility.
Diagnosis	Does the health record at the referral facility identify the child's illness? You should be able to find this in the patient register.
Admitted to the HC/RH	This field is only applicable for health facilities with inpatient facilities (CS-Cidade, Alto-Changane, Malehice, and Hospital Rural). For those facilities with inpatient facilities, does the health register indicate whether the patient was admitted to the facility as an inpatient? To check admission status, look at the inpatient register or the patient register.
2nd Referral	This field will only be completed if the child was referred a second time to another facility (most likely, a hospital or health center with an inpatient facility). Was the patient referred further to a higher level care facility? Write Y for "Yes", N for "No."

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

Causes of 2nd Referral	It might be necessary to look at the individual patient register for notes on why the patient was referred. The “causes of referral” should be written exactly as they are described in the documentation. If you cannot find any such information or if you are unsure, ask the health worker to explain. For example, perhaps the child would normally be treated at the facility but the center was temporarily out of stock of a medication needed to treat the child for a particular illness. If this still does not help, you can check the patient register for the diagnosis. Illnesses such as pneumonia, malnutrition, measles, diarrhea, and malaria are often the main causes for referral. List the diagnosis as the cause of referral if it is reasonable that the diagnosis was serious enough to warrant a referral. If the diagnosis does not seem to warrant a reason for referral, then mark “unknown” by the number 1 space on the form.
Referred to (Facility Name)	Write the name of the health center or hospital were the child was referred to for a second time. If this cannot be found anywhere in the records, then ask the health worker which facility patients are usually referred to.
Referral Slip Given?	Do the health records indicate whether the a referral note was given to the child’s caregiver to take to the referral facility? Is there a copy in the records? This can just be a handwritten slip of paper. If you cannot find this documented anywhere in the health records, ask the nurse whether he/she remembers giving a written note of referral for each case, assuming that the total number of referrals is quite small, and therefore, easier to remember on a case by case basis. Ask if the facility has referral slips and attach a copy to the form. This is the last box required to be completed for all newly identified referrals; stop here, and begin a new entry of another child under 5 who was indicated as being referred to another facility.
Complied Y/N and Date Slip Y/N	Can you find the patient who was referred to this facility in their health records? This field will only be completed at the rural hospital if a patient was found to be referred a second time. You should look for the child via medical records at the referral facility for up to seven days after the referral was made. If the child was found, enter the date of compliance with second referral (from third facility). Write Y or N if they arrived or didn’t arrive, respectively, with a referral slip.
Notes	Can you find any documentation on the outcome of the sick child such as “died” or “full recovery”? Use this space to record this information. Also, when you are finished with recording all of the referrals of children under 5 during the last 6 months, please also use this space to explain how or why certain information could or could not be found. This will help us to determine whether documentation (or lack thereof) at the health facility made it easy or very difficult to obtain the information requested. If much of the information had to be indirectly inferred or obtained by the health worker, then please indicate that in the Notes section on the first page indicating which of the information was inferred or obtained by the health worker rather than taken directly from the medical records.

**Form 2 Health Facility Interview
User Fees and Community Health Insurance Schemes
Chibuto District, Gaza Province, Mozambique**

Reviewer: _____

Date: ____ / ____ / ____

Type of Facility: Health Post
 Health Center
 Hospital

Region: Chibuto North Chibuto South

Type of Health Worker Interviewed: Socorrista
 Auxiliary Nurse
 Professional Nurse Medical Assistant
 Other:

Name of facility: _____ Village/Community: _____

Are the fees for services clearly displayed somewhere at the health facility? Yes
 No

Interviewee's Name: _____ Age: _____

Sex: Male Female

Highest level of schooling completed:
 Primary 1-6 Secondary 7-9 Pre-University 10-12 University

Years of experience as a health provider:
 Less than 1 year 1-5 years 5-10 years More than 10 years

1. What was the most common diagnosis for the children you attended to?

Diarrhea Pneumonia
 Malaria

Measles Malnutrition
 Other Illness:

Form 2 Health Facility Interview
User Fees and Community Health Insurance Schemes
Chibuto District, Gaza Province, Mozambique

2.	<p>In your opinion, what prevents caregivers from taking their children to a health facility when they are ill?</p> <p><input type="checkbox"/> Cost of transportation _____ <input type="checkbox"/> Need</p> <p>permission from husband</p> <p><input type="checkbox"/> Price of transport _____ <input type="checkbox"/> Work or</p> <p>..... <input type="checkbox"/> Prefer other health care providers</p> <p><input type="checkbox"/> Price of consultation _____ <input type="checkbox"/> Other:</p> <p>household responsibilities</p> <p><input type="checkbox"/> Limited health facility hours <input type="checkbox"/> Need to care for other family members</p> <p><input type="checkbox"/> Long wait to receive care _____</p> <p><input type="checkbox"/> Bad weather</p>
3.	<p>Does this health facility charge women with children <5 years of age a fee to access health care services?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
4.	<p>Do patients have to make several payments for different services at this health facility?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes</p> <p><input type="checkbox"/> Don't know</p>
5.	<p>How many payments do patients make on average during one visit?</p> <p><input type="checkbox"/> None <input type="checkbox"/> One</p> <p><input type="checkbox"/> Two <input type="checkbox"/> Three</p> <p><input type="checkbox"/> Four <input type="checkbox"/> Five</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> Other: _____</p>
6.	<p>Do patients pay a separate amount for medication? <input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
7.	<p>Do patients pay a separate amount for tests? <input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No <input type="checkbox"/> Don't</p>

Form 2 Health Facility Interview
User Fees and Community Health Insurance Schemes
Chibuto District, Gaza Province, Mozambique

	know
8.	How much are patients charged for medications or tests when their child is sick? [[Please indicate the amount in meticals]] Medication: _____Tests: _____
9.	How much are patients required to pay for a consultation visit at the health facility? [[Please indicate the amount in meticals]] _____
10.	Do clients know how much they will be charged before going to the health facility? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
11.	How does the health facility inform the community members of the fees charged for health care? <input type="checkbox"/> Information posted at health facility <input type="checkbox"/> Receptionist verbally informs patients during visit <input type="checkbox"/> Health provider (socorrista or nurse) verbally informs patients <input type="checkbox"/> Health facility does not inform patients <input type="checkbox"/> Don't know <input type="checkbox"/> Other: _____
12.	Who collects payment at the health facility? <input type="checkbox"/> Socorrista <input type="checkbox"/> Nurse <input type="checkbox"/> Medical Assistant <input type="checkbox"/> Receptionist <input type="checkbox"/> Other: _____
13.	Does the health facility keep written documentation of the fee(s) paid by the client? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know →GO TO 15
14.	If yes, where is it recorded? <input type="checkbox"/> Financial record <input type="checkbox"/> Health record <input type="checkbox"/> Other: _____
15.	Are patients given a receipt for payment of the fee(s)?

Form 2 Health Facility Interview
User Fees and Community Health Insurance Schemes
Chibuto District, Gaza Province, Mozambique

	<input type="checkbox"/> Always <input type="checkbox"/> Occasionally <input type="checkbox"/> Don't know	<input type="checkbox"/> Usually <input type="checkbox"/> Never
16.	<p>How do you think the majority of patients pay for the cost of these fees?</p> <p> <input type="checkbox"/> Borrowed money <input type="checkbox"/> Community (health insurance) </p> <p> <input type="checkbox"/> Have money to pay assests (livestock, possesions) <input type="checkbox"/> Sold </p> <p><input type="checkbox"/> Don't know</p>	
17.	<p>How many people in the community are not able to pay the fees charged at the health facility?</p> <p> <input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> A few <input type="checkbox"/> Some <input type="checkbox"/> Don't know <input type="checkbox"/> None </p>	
18.	<p>Of the people who use these health services, how many are not able to pay?</p> <p> <input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> A few <input type="checkbox"/> Some <input type="checkbox"/> Don't know <input type="checkbox"/> None </p>	
19.	<p>What is your opinion of the fees charged at the health facility?</p> <p> <input type="checkbox"/> The cost of the fees are too high <input type="checkbox"/> The cost of the fees is fair <input type="checkbox"/> The cost of the fees is too low <input type="checkbox"/> No opinion </p>	
20.	<p>How do you think these fees impact community members?</p> <p> <input type="checkbox"/> Discourages poor people from accessing health services investments at health facility <input type="checkbox"/> Increases </p> <p> <input type="checkbox"/> Delays care seeking <input type="checkbox"/> Improves quality of health care </p> <p> <input type="checkbox"/> Increases use of informal care </p> <p> <input type="checkbox"/> Other: _____ </p>	

Form 2 Health Facility Interview
User Fees and Community Health Insurance Schemes
Chibuto District, Gaza Province, Mozambique

	<input type="checkbox"/> Increases treatment at home
21.	What fee do you think would cause patients <i>not</i> to take their child to a health facility? [[Please indicate ceiling amount]]: _____ Mt.
22.	Do you think these fees limit access to health care services for some community members? <input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 22 <input type="checkbox"/> Don't know
23.	If yes, which groups have limited access due to the cost of these fees? [[Please select all that apply.]] <input type="checkbox"/> Poor households <input type="checkbox"/> Children under five <input type="checkbox"/> Elderly <input type="checkbox"/> Pregnant women <input type="checkbox"/> HIV/AIDS patients <input type="checkbox"/> TB patients
24.	Does this health facility have an exemption policy (allowing some community members to pay less than the official amount for health care services)? <input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 29 <input type="checkbox"/> Don't know →GO TO 29
25.	If yes, who implemented this exemption policy? <input type="checkbox"/> Community leader <input type="checkbox"/> Village Health Committee <input type="checkbox"/> Health leader <input type="checkbox"/> Pastor <input type="checkbox"/> Socorrista <input type="checkbox"/> Nurse <input type="checkbox"/> MOH/government policy <input type="checkbox"/> Health facility management <input type="checkbox"/> Other: _____
26.	Do you know what the criteria for exemption from this fee are? <input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 29 <input type="checkbox"/> Don't know →GO TO 29
27.	If yes, what are the exemption criteria? [[Please select all that applies]]:

Form 2 Health Facility Interview
User Fees and Community Health Insurance Schemes
Chibuto District, Gaza Province, Mozambique

	<input type="checkbox"/> Income level <input type="checkbox"/> Chronic Illness	<input type="checkbox"/> Age <input type="checkbox"/> Other: _____	<input type="checkbox"/> Disability
28.	Please explain the exemption policy in more detail: _____ _____ _____		
29.	Would you recommend any changes? <div style="text-align: right;"> <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 29 </div> <div style="text-align: left;"> <input type="checkbox"/> Don't know → GO TO 29 </div> <div style="text-align: right;"> <input type="checkbox"/> Don't </div>		
30.	If yes, please describe the changes you would recommend: _____ _____ _____		
31.	Do community members served by this health facility pay an amount of money into a community shared account that is designated for paying for health expenses? <div style="text-align: center;"> <input type="checkbox"/> Yes </div> <div style="text-align: right;"> <input type="checkbox"/> No </div> <div style="text-align: center;"> <input type="checkbox"/> Don't know </div>		
32.	Do you think a community based fund for health insurance is/would be viable in this community? <div style="text-align: center;"> <input type="checkbox"/> Yes </div> <div style="text-align: right;"> <input type="checkbox"/> No </div> <div style="text-align: center;"> <input type="checkbox"/> No opinion </div>		
33.	Why or why not? Please explain: _____ _____ _____		

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

Surveyor Name: _____ Today's date: ___ / ___ / ___ DD MM YY Type of facility: <input type="checkbox"/> Hospital <input type="checkbox"/> Health Center Name of facility: _____ District: _____ Region: <input type="checkbox"/> Chibuto North <input type="checkbox"/> Chibuto South	
Child's name : _____ Age: (months/days) _____ Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female Caretaker's Name: _____ Caretaker's address: Village: _____ District: _____	
1.	Record the child's presenting complaint: [[Check all that apply.]] <input type="checkbox"/> Diarrhea/dehydration <input type="checkbox"/> Vomiting <input type="checkbox"/> Bloody stool <input type="checkbox"/> Vomiting everything <input type="checkbox"/> Fever/malaria <input type="checkbox"/> Anemia/malnutrition <input type="checkbox"/> Convulsions <input type="checkbox"/> Measles <input type="checkbox"/> Ear problem <input type="checkbox"/> Lethargy <input type="checkbox"/> Not eating/drinking anything specify: _____ <input type="checkbox"/> Other, <input type="checkbox"/> Fast/difficult breathing/cough/pneumonia
2.	"Is <<NAME OF CHILD>> hospitalized?" <input type="checkbox"/> Yes How many days? _____ <input type="checkbox"/> No
3.	"How far back did you first notice that <<CHILD>> was sick?" Days _____
4.	"Have you sought help for <<CHILD>> from somewhere else for the current problem?"

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<p align="center"><input type="checkbox"/> Yes</p> <p align="center"><input type="checkbox"/> No →GO TO 5</p>
4.1	<p>If “Yes,” ask: “Where was the child seen?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Hospital</p> <p><input type="checkbox"/> Community health worker</p> <p><input type="checkbox"/> Health Center–MOH <input type="checkbox"/> Drug vendor/pharmacy</p> <p><input type="checkbox"/> Private practitioner <input type="checkbox"/> Religious leader</p> <p><input type="checkbox"/> NGO facility <input type="checkbox"/> Traditional healer</p> <p><input type="checkbox"/> Community health nurse</p> <p><input type="checkbox"/> Other, specify: _____</p>
4.2	<p>“Did any provider tell you to bring the child here to this facility?”</p> <p><input type="checkbox"/> Yes→ Which provider? _____ <input type="checkbox"/> No →GO TO 5</p>
4.2.1	<p>“When did the health provider tell you to bring the child here?”</p> <p>[[Prompt the caretaker.]]</p> <p><input type="checkbox"/> Immediately or same day</p> <p><input type="checkbox"/> If the child gets sicker</p> <p><input type="checkbox"/> Didn’t specify</p> <p><input type="checkbox"/> Don’t remember</p> <p><input type="checkbox"/> Other _____</p>
4.3	<p>“Were you given a referral slip by the health provider?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 5 <input type="checkbox"/> Don’t know</p> <p>→GO TO 5</p>
4.3.1	<p>“Did you give the referral slip to the health worker?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No, “Why not?”</p> <p>_____</p>
5.	<p>“What transport did you use to get here?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Bus/minibus <input type="checkbox"/></p> <p>Walked</p>

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<input type="checkbox"/> Ambulance/facility vehicle <input type="checkbox"/> Animal/cart <input type="checkbox"/> Taxi <div style="text-align: right;"><input type="checkbox"/> Boat</div> <input type="checkbox"/> Private car <input type="checkbox"/> Bicycle <input type="checkbox"/> Motorbike <input type="checkbox"/> Other, specify: _____
6.	"How long did it take you to get here from your home?" Minutes _____
7.	"How much money will you have spent to come here and return to your home on: [[Prompt the caretaker.]] a. Transportation [[Metics]] _____ b. Lodging/food _____ c. Medical services (consultation, admission, drugs, etc.)?" _____ TOTAL: _____ [[Can leave blank or complete at close of interview.]]
7.1	"How were you able to gather this money?" [[Prompt the caretaker.]] <input type="checkbox"/> Very easily some difficulty <input type="checkbox"/> Easily <div style="text-align: right;"><input type="checkbox"/> With</div> <div style="text-align: center;"><input type="checkbox"/> With a lot of difficulty</div> <input type="checkbox"/> Somewhat easily
8.	"How much time did you spend waiting before being seen by the health worker?" _____ Minutes
9.	"Why did you choose to come to this facility (provider) at this time?" [[Check all that apply. PROBE: Is there another reason?]] <input type="checkbox"/> Convenience <div style="text-align: right;"><input type="checkbox"/> Doctors are here</div> <input type="checkbox"/> Trust <div style="text-align: center;"><input type="checkbox"/> Instructed to do so</div> <input type="checkbox"/> Cost <div style="text-align: center;"><input type="checkbox"/> Child did not improve</div>

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<input type="checkbox"/> Better care <input type="checkbox"/> Drugs are here <input type="checkbox"/> Always come here <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Closest facility
10.	"Are there other health providers/facilities that you could use that are closer to your home?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 11 <input type="checkbox"/> Don't know → GO TO 11
10.1	"What type of providers are closer to your community?" [[Check all that apply. PROBE: Is there anything else?]] <input type="checkbox"/> Hospital <input type="checkbox"/> Traditional healer <input type="checkbox"/> MOH Health center <input type="checkbox"/> Drug seller/pharmacy <input type="checkbox"/> NGO facility <input type="checkbox"/> Religious leader <input type="checkbox"/> Private practitioner <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Community health worker
10.2	"Of those providers, how much time does it take you to reach the closest provider?" Minutes _____
11.	"Has your child been referred to another facility today?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 12 <input type="checkbox"/> Already hospitalized → GO TO 12
11.1	"Where were you referred?" <input type="checkbox"/> Health center <input type="checkbox"/> Private clinic <input type="checkbox"/> District hospital <input type="checkbox"/> Teaching hospital <input type="checkbox"/> Regional hospital <input type="checkbox"/> Other, specify: _____
11.2	"Will going to the referral site be:" [[Prompt the caretaker.]] <input type="checkbox"/> Easy <input type="checkbox"/> Possible

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<input type="checkbox"/> Difficult <input type="checkbox"/> Impossible
11.3	<p>“Do you think referral is necessary for <<CHILD>>?”</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
11.4	<p>“Will you be able to take the child to the referral site today?”</p> <input type="checkbox"/> Yes → GO TO 13 <input type="checkbox"/> No <input type="checkbox"/> Don't know
11.4.1	<p>“What prevents you from taking the child to the hospital today?”</p> <input type="checkbox"/> Transport costs from husband <input type="checkbox"/> Distance <input type="checkbox"/> Bad experience there before <input type="checkbox"/> Lack of transport <input type="checkbox"/> Other children to take care of <input type="checkbox"/> No drugs at referral site <input type="checkbox"/> Other, specify: _____
12.	<p>“If you are told now to take your child to <<NAME OF NEAREST REFERRAL FACILITY>>, would you be able to do so?”</p> <input type="checkbox"/> Yes → GO TO 13 <input type="checkbox"/> No <input type="checkbox"/> Don't know
12.1	<p>“What would be the reasons for not taking your child to <<NAME OF NEAREST FACILITY >>?” [[Probe: Is there any other reason?]]</p> <input type="checkbox"/> Transport costs <input type="checkbox"/> Distance Need permission from husband <input type="checkbox"/> Lack of transport <input type="checkbox"/> Weather waiting times

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<input type="checkbox"/> Yes <div style="text-align: right;"><input type="checkbox"/> No →GO TO 18</div> <div style="text-align: right;"><input type="checkbox"/> Don't know</div> <p>→GO TO 18</p>
17.	<p>“How did you find out about the fee?”</p> <input type="checkbox"/> Friend/Neighbor <input type="checkbox"/> Socorrista verbally told you <input type="checkbox"/> Family Member <input type="checkbox"/> Information posted in health post <input type="checkbox"/> VHC community meeting . <input type="checkbox"/> Information posted in health post <input type="checkbox"/> Vurhonga volunteer <input type="checkbox"/> Other _____ <input type="checkbox"/> Information posted in health post
18.	<p>“What were you told was the initial fee in order to be seen at this facility?” _____Mt</p>
19.	<p>“Were you able to pay the fee?”</p> <div style="text-align: right;"><input type="checkbox"/> Yes</div> <div style="text-align: right;"><input type="checkbox"/> No→GO TO 21</div>
20.	<p>“How did you pay for the fee at the health facility?”</p> <input type="checkbox"/> Borrowed money <input type="checkbox"/> Sold land <input type="checkbox"/> Was able to pay cash <input type="checkbox"/> Sold other assets: _____ <input type="checkbox"/> Sold livestock <input type="checkbox"/> Community (health insurance) <input type="checkbox"/> Sold crops <input type="checkbox"/> Don't remember <input type="checkbox"/> Sold possessions (i.e. clothes, jewelry, household items) <div style="text-align: right;">GO TO 22</div>
21.	<p>“If you were unable to pay the fee did you:” [[Circle all that apply.]]</p> <input type="checkbox"/> Delay treatment for child <input type="checkbox"/> Seek treatment with traditional healer <input type="checkbox"/> Treat child at home <input type="checkbox"/> Did not seek treatment <input type="checkbox"/> Seek treatment with pastor <input type="checkbox"/> Other: _____
22.	<p>“Who collected the fee at the health facility?”</p> <input type="checkbox"/> Socorrista <input type="checkbox"/> Receptionist

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<input type="checkbox"/> Nurse <input type="checkbox"/> Other _____ <input type="checkbox"/> Auxiliary Nurse
23.	"Did you pay a separate fee for prescription medication?" <input type="checkbox"/> Yes → Amount: _____ Mt. <input type="checkbox"/> No Don't know <input type="checkbox"/>
24.	"Did you pay a separate fee for tests?" <input type="checkbox"/> Yes → Amount: _____ Mt. <input type="checkbox"/> No Don't know <input type="checkbox"/>
25.	"How did you pay for the cost of the medication or tests?" <input type="checkbox"/> Borrowed money <input type="checkbox"/> Sold land <input type="checkbox"/> Was able to pay cash <input type="checkbox"/> Sold other assets: _____ <input type="checkbox"/> Sold livestock <input type="checkbox"/> Community (health insurance) <input type="checkbox"/> Sold crops <input type="checkbox"/> Don't remember <input type="checkbox"/> Sold possessions (i.e. clothes, jewelry, household items)
26.	"So in total, how many different payments did you make during this visit?" <input type="checkbox"/> None <input type="checkbox"/> Two <input type="checkbox"/> Four <input type="checkbox"/> One <input type="checkbox"/> Don't know Three <input type="checkbox"/> <input type="checkbox"/> Five <input type="checkbox"/> Other _____
27.	"Did you receive a receipt from the health facility staff when you paid the fee?" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
28.	"What is your opinion of the fees charged at the health facility?" <input type="checkbox"/> The cost of the fee is too high <input type="checkbox"/> The cost of the fee is too low <input type="checkbox"/> The cost of the fee is fair

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<input type="checkbox"/> No opinion
29.	<p>“Did the community health post/ health center/ hospital allow you to pay less than the normal amount for health care?”</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No → GO TO 31</p> <p><input type="checkbox"/> Don't know → GO TO 31</p>
30.	<p>“If yes, how much less were you required to pay?”</p> <p>Please indicate amount of waiver: _____ Mt.</p>
31.	<p>“Do you know who determines whether you have to pay a fee or can be exempted?”</p> <p><input type="checkbox"/> Community leader</p> <p><input type="checkbox"/> Village Health Committee</p> <p><input type="checkbox"/> Pastor</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> Chefe de Saude</p> <p><input type="checkbox"/> Other _____</p>
32.	<p>“What fee cost would cause you to <i>not</i> take your child to a health facility?”</p> <p>Please indicate ceiling amount: _____ Mt.</p>
33.	<p>“Do you have a Village Health Committee (VHC) in your community?”</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
34.	<p>“Does your community or VHC have an account designated for paying for health expenses in the community?”</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No → GO TO 43</p> <p><input type="checkbox"/> Don't know → GO TO 43</p>
35.	<p>“Do you know what type of medical care this community-shared account pays for?”</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No → GO TO 38</p> <p><input type="checkbox"/> Don't know → GO TO 38</p>
36.	<p>“If yes, what does it pay for?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Cost of consultation visits</p> <p><input type="checkbox"/> Cost of emergency transport</p>

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	<input type="checkbox"/> Cost of hospitalization <input type="checkbox"/> Don't know <input type="checkbox"/> Cost of medication <input type="checkbox"/> Other _____ <input type="checkbox"/> Cost of tests
37.	"What types of services are included with payment of the fee?" [[Check all that apply.]] <input type="checkbox"/> Primary health care <input type="checkbox"/> Emergency Care <input type="checkbox"/> Health care for children 0-4 years <input type="checkbox"/> Family planning <input type="checkbox"/> Antenatal care <input type="checkbox"/> Other _____ <input type="checkbox"/> Delivery/Maternal Care
38.	"Did you or will you receive money from this account or community fund for the cost of this visit?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 40 <input type="checkbox"/> Don't know → GO TO 40
39.	"Are you required to pay back to the community the money you were given?" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
40.	"Do you pay an amount of money into the community-shared account that is designated for paying for health expenses?" <input type="checkbox"/> Yes → GO TO 42 <input type="checkbox"/> No <input type="checkbox"/> Don't know
41.	"Would you be interested in paying a pre-determined fee into a community fund to pay for health services?" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maybe, depends on the amount <input type="checkbox"/> Don't know

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

	GO TO 43
42.	<p>“How do you feel about the amount that you pay into the community-shared account?”</p> <p><input type="checkbox"/> The cost of the fee is too high</p> <p><input type="checkbox"/> The cost of the fee is too low</p> <p><input type="checkbox"/> The cost of the fee is fair</p> <p><input type="checkbox"/> No opinion</p>
43.	<p>“How do you feel about the care/treatment <<CHILD>> received today?”</p> <p>[[Prompt the caretaker.]]</p> <p><input type="checkbox"/> Very satisfied</p> <p><input type="checkbox"/> Somewhat satisfied</p> <p><input type="checkbox"/> Satisfied</p> <p><input type="checkbox"/> No opinion</p> <p><input type="checkbox"/> Not satisfied</p> <p>at all</p>
44.	<p>“If <<CHILD>> does not get better, what will you do?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Return to this facility</p> <p><input type="checkbox"/> Self-medicate</p> <p><input type="checkbox"/> Go to another facility/provider</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> Go to a private clinic/private practitioner</p> <p><input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Go to a traditional healer</p>

45. “What improvements would you like to see or what else can be done for <<CHILD>>?”

46. “If your child were referred to another facility, what could be done to make it easier for you to go?”

Thank you for your cooperation and for your time. Your participation will help the Mozambique Ministry of Health to improve care for children in your community.

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

Surveyor Name: _____ Today's date: ___ / ___ / ___ DD MM YY Type of facility: <input type="checkbox"/> Hospital <input type="checkbox"/> Health Center Name of facility: _____ District: _____ Region: <input type="checkbox"/> Chibuto North <input type="checkbox"/> Chibuto South	
Child's name : _____ Age: (months/days) _____ Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female Caretaker's Name: _____ Caretaker's address: Village: _____ District: _____	
1.	Record the child's presenting complaint: [[Check all that apply.]] <input type="checkbox"/> Diarrhea/dehydration <input type="checkbox"/> Vomiting <input type="checkbox"/> Bloody stool <input type="checkbox"/> Vomiting everything <input type="checkbox"/> Fever/malaria <input type="checkbox"/> Anemia/malnutrition <input type="checkbox"/> Convulsions <input type="checkbox"/> Measles <input type="checkbox"/> Ear problem <input type="checkbox"/> Lethargy <input type="checkbox"/> Not eating/drinking anything specify: _____ <input type="checkbox"/> Other, <input type="checkbox"/> Fast/difficult breathing/cough/pneumonia
2.	"How far back did you first notice that <<CHILD>> was sick?" Days _____
3.	"Have you sought help for <<CHILD>> from somewhere else for the current problem?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 5

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

3.1	<p>If “Yes,” ask: “Where was the child seen?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Hospital</p> <p style="padding-left: 40px;"><input type="checkbox"/> Community health worker</p> <p><input type="checkbox"/> Health Center–MOH <input type="checkbox"/> Drug vendor/pharmacy</p> <p><input type="checkbox"/> Private practitioner <input type="checkbox"/> Religious leader</p> <p><input type="checkbox"/> NGO facility <input type="checkbox"/> Traditional healer</p> <p><input type="checkbox"/> Community health nurse</p> <p style="padding-left: 40px;"><input type="checkbox"/> Other, specify: _____</p>
3.2	<p>“Did any provider tell you to bring the child here to this facility?”</p> <p><input type="checkbox"/> Yes→ Which provider?_____ <input type="checkbox"/> No →GO TO 4</p>
3.2.1	<p>“When did the health provider tell you to bring the child here?”</p> <p>[[Prompt the caretaker.]]</p> <p><input type="checkbox"/> Immediately or same day</p> <p><input type="checkbox"/> If the child gets sicker</p> <p><input type="checkbox"/> Didn’t specify</p> <p><input type="checkbox"/> Don’t remember</p> <p><input type="checkbox"/> Other _____</p>
3.3	<p>“Were you given a referral slip by the health provider?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 4 <input type="checkbox"/> Don’t know</p> <p>→GO TO 4</p>
3.3.1	<p>“Did you give the referral slip to the health worker?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No, “Why not?”</p> <p>_____</p>
4.	<p>“What transport did you use to get here?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Bus/minibus <input type="checkbox"/></p> <p>Walked</p> <p><input type="checkbox"/> Ambulance/facility vehicle <input type="checkbox"/> Animal/cart</p> <p><input type="checkbox"/> Taxi</p>

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

	<input type="checkbox"/> Boat <input type="checkbox"/> Private car <input type="checkbox"/> Bicycle <input type="checkbox"/> Motorbike <input type="checkbox"/> Other, specify: _____
5.	"How long did it take you to get here from your home?" Minutes _____
6.	"Why did you choose to come to this facility (provider) at this time?" [[Check all that apply. PROBE: Is there another reason?]] <input type="checkbox"/> Convenience <input type="checkbox"/> Doctors are here <input type="checkbox"/> Trust <input type="checkbox"/> Instructed to do so <input type="checkbox"/> Cost <input type="checkbox"/> Child did not improve <input type="checkbox"/> Better care <input type="checkbox"/> Drugs are here <input type="checkbox"/> Always come here <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Closest facility
7.	"Are there other health providers/facilities that you could use that are closer to your home?" <input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 8 <input type="checkbox"/> Don't know →GO TO 8
7.1	"What type of providers are closer to your community?" [[Check all that apply. PROBE: Is there anything else?]] <input type="checkbox"/> Hospital <input type="checkbox"/> Traditional healer <input type="checkbox"/> MOH Health center <input type="checkbox"/> Drug seller/pharmacy <input type="checkbox"/> NGO facility <input type="checkbox"/> Religious leader <input type="checkbox"/> Private practitioner <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Community health worker

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

	<input type="checkbox"/> Don't know
13.1	<p>"What would be the reasons for not taking your child to <<NAME OF NEAREST FACILITY >>?" [[Probe: Is there any other reason?]]</p> <p><input type="checkbox"/> Transport costs <input type="checkbox"/> Other children to take care of</p> <p><input type="checkbox"/> Distance <input type="checkbox"/></p> <p>Need permission from husband</p> <p><input type="checkbox"/> Lack of transport <input type="checkbox"/> Bad experience there before</p> <p><input type="checkbox"/> Weather <input type="checkbox"/> Long waiting times</p> <p><input type="checkbox"/> No drugs at referral site</p> <p><input type="checkbox"/> Other, specify: _____</p>
14	<p>"In the last six months have you had a child under five years of age referred to another facility (provider)?"</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No →GO TO 16 <input type="checkbox"/> Don't remember →GO TO 16</p>
14.1	<p>"At that time were you able to take your child to that facility (provider)?"</p> <p><input type="checkbox"/> Yes →GO TO 16 <input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't remember →GO TO 16</p>
14.2	<p>"Why were you not able to take the child to the facility (provider) at that time?"</p> <p>[[Check all that apply.]]</p> <p><input type="checkbox"/> Non-transport costs <input type="checkbox"/> Other children to take care of</p> <p><input type="checkbox"/> Transport costs <input type="checkbox"/> Need permission from husband</p> <p><input type="checkbox"/> Distance <input type="checkbox"/> Bad experience there before</p> <p><input type="checkbox"/> Lack of transport <input type="checkbox"/> Long waiting times</p> <p><input type="checkbox"/> Weather <input type="checkbox"/></p> <p>Other, specify: _____</p> <p><input type="checkbox"/> No drugs at referral site</p>
15.	<p>"When you arrive at a hospital with a referral slip, are you usually given priority when you</p>

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

	<p>arrive/are you seen sooner?"</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
16.	<p>"Do you know who determines whether you have to pay a fee or can be exempted?"</p> <p><input type="checkbox"/> Community leader</p> <p><input type="checkbox"/> Village Health Committee</p> <p><input type="checkbox"/> Pastor</p> <p><input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Chefe de Saude</p> <p><input type="checkbox"/> Don't know</p>
17.	<p>"What fee cost would cause you to <i>not</i> take your child to a health facility?"</p> <p>Please indicate ceiling amount: _____ Mt.</p>
18.	<p>"Do you have a Village Health Committee (VHC) in your community?"</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
19.	<p>"Does your community or VHC have an account designated for paying for health expenses in the community?"</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No → GO TO 26</p> <p><input type="checkbox"/> Don't know → GO TO 26</p>
20.	<p>"Do you know what type of medical care this community-shared account pays for?"</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No → GO TO 23</p> <p><input type="checkbox"/> Don't know → GO TO 23</p>
21.	<p>"If yes, what does it pay for?" [[Check all that apply.]]</p> <p><input type="checkbox"/> Cost of consultation visits</p> <p><input type="checkbox"/> Cost of hospitalization</p> <p><input type="checkbox"/> Cost of medication</p> <p><input type="checkbox"/> Cost of emergency transport</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> Other</p>

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

	<input type="checkbox"/> Cost of tests
22.	<p>“What types of services are included with payment of the fee?” [[Check all that apply.]]</p> <input type="checkbox"/> Primary health care <input type="checkbox"/> Emergency Care <input type="checkbox"/> Health care for children 0-4 years <input type="checkbox"/> Family planning <input type="checkbox"/> Antenatal care <input type="checkbox"/> Other _____ <input type="checkbox"/> Delivery/Maternal Care
23.	<p>“Did you or will you receive money from this account or community fund for the cost of this visit?”</p> <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 25 <input type="checkbox"/> Don't know → GO TO 25
24.	<p>“Are you required to pay back to the community the money you were given?”</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
25.	<p>“Do you pay an amount of money into the community-shared account that is designated for paying for health expenses?”</p> <input type="checkbox"/> Yes → GO TO 26 <input type="checkbox"/> No <input type="checkbox"/> Don't know
25.1	<p>“How do you feel about the amount that you pay into the community-shared account?”</p> <input type="checkbox"/> The cost of the fee is too high <input type="checkbox"/> The cost of the fee is too low <input type="checkbox"/> The cost of the fee is fair <input type="checkbox"/> No opinion
26.	<p>“Would you be interested in paying a pre-determined fee into a community fund to pay for health services?”</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maybe, depends on the amount <input type="checkbox"/> Don't know

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

Thank you for your cooperation and for your time. Your participation will help the Mozambique Ministry of Health to improve care for children in your community.

Form 5C: Exit Interview with Caregiver: Health Center or Hospital

Surveyor Name: _____ Today's date: ___ / ___ / ___ DD MM YY Type of facility: <input type="checkbox"/> Hospital <input type="checkbox"/> Health Center Name of facility: _____ District: _____ Region: <input type="checkbox"/> Chibuto North <input type="checkbox"/> Chibuto South	
Child's name : _____ Age: (months/days) _____ Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female Caretaker's Name: _____ Caretaker's address: Village: _____ District: _____	
1.	"How much money will you have spent to come here and return to your home on: [[Prompt the caretaker.]] a. Transportation [[Meticais]] _____ b. Lodging/food _____ c. Medical services (consultation, admission, drugs, etc.)? _____ TOTAL: _____ [[Can leave blank or complete at close of interview.]]
1.1	"How were you able to gather this money?" [[Prompt the caretaker.]] <input type="checkbox"/> Very easily <input type="checkbox"/> With some difficulty <input type="checkbox"/> Easily <input type="checkbox"/> With a lot of difficulty <input type="checkbox"/> Somewhat easily
2.	"How much time did you spend waiting before being seen by the health worker?" _____ Minutes
3.	"Today, did your child receive a referral slip to go to another facility?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 4 <input type="checkbox"/> Already hospitalized → GO TO 4
3.1	"Where were you referred?" <input type="checkbox"/> Health Center <input type="checkbox"/> Private clinic

Form 5C: Exit Interview with Caregiver: Health Center or Hospital

	<input type="checkbox"/> District Hospital <input type="checkbox"/> Regional Hospital _____ <input type="checkbox"/> Teaching Hospital <input type="checkbox"/> Other, specify: _____
3.2	"Going to the referral facility will be:" [[PROMPT CAREGIVER]] <input type="checkbox"/> Easy <input type="checkbox"/> Difficult <input type="checkbox"/> Impossible <input type="checkbox"/> Possible
3.3	"Do you think that referral for <<CHILD>> is necessary?" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
3.4	Will you be able to take your child to the referral facility today? <input type="checkbox"/> Yes → GO TO 4 <input type="checkbox"/> No <input type="checkbox"/> Don't know
3.4.1	"What would be the reasons for not taking your child to <<NAME OF NEAREST FACILITY >>?" [[Probe: Is there any other reason?]] <input type="checkbox"/> Transport costs <input type="checkbox"/> Distance Need permission from husband <input type="checkbox"/> Lack of transport <input type="checkbox"/> Weather waiting times <input type="checkbox"/> No drugs at referral site <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Other children to take care of <input type="checkbox"/> Bad experience there before <input type="checkbox"/> Long
4.	"Did you need to pay a fee at this health facility for this visit?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 17 <input type="checkbox"/> Don't know
5.	"Did you know the amount that you would be charged before coming to the health

Form 5C: Exit Interview with Caregiver: Health Center or Hospital

	facility?" <input type="checkbox"/> Yes <div style="text-align: right;"><input type="checkbox"/> No →GO TO 7</div> <input type="checkbox"/> Don't know →GO TO 7
6.	"How did you find out about the fee?" <input type="checkbox"/> Friend/Neighbor <input type="checkbox"/> Socorrista verbally told you <input type="checkbox"/> Family Member <input type="checkbox"/> Information posted in health post <input type="checkbox"/> VHC community meeting . <input type="checkbox"/> Information posted in health post <input type="checkbox"/> Vurhonga volunteer <input type="checkbox"/> Other _____ <input type="checkbox"/> Information posted in health post
7.	"What were you told was the initial fee in order to be seen at this facility?" _____Mt
8.	"Were you able to pay the fee?" <div style="text-align: right;"><input type="checkbox"/> Yes</div> <input type="checkbox"/> No →GO TO 10
9.	"How did you pay for the fee at the health facility?" <input type="checkbox"/> Borrowed money <input type="checkbox"/> Sold land <input type="checkbox"/> Was able to pay cash <input type="checkbox"/> Sold other assets: _____ <input type="checkbox"/> Sold livestock <input type="checkbox"/> Community (health insurance) <input type="checkbox"/> Sold crops <input type="checkbox"/> Don't remember <input type="checkbox"/> Sold possessions (i.e. clothes, jewelry, household items) <div style="text-align: right;">GO TO 11</div>
10.	"If you were unable to pay the fee did you:" [[Check all that apply.]] <input type="checkbox"/> Delay treatment for child <input type="checkbox"/> Seek treatment with traditional healer <input type="checkbox"/> Treat child at home <input type="checkbox"/> Did not seek treatment <input type="checkbox"/> Seek treatment with pastor <input type="checkbox"/> Other: _____
11.	"Who collected the fee at the health facility?" <input type="checkbox"/> Socorrista

Form 5C: Exit Interview with Caregiver: Health Center or Hospital

	<input type="checkbox"/> No → GO TO 20 <input type="checkbox"/> Don't know → GO TO 20
19.	<p>"If yes, how much less were you required to pay?"</p> <p>Please indicate amount of waiver: _____ Mt.</p>
20.	<p>"How do you feel about the care/treatment <<CHILD>> received today?"</p> <p>[[Prompt the caretaker.]]</p> <p> <input type="checkbox"/> Very satisfied <input type="checkbox"/> Somewhat satisfied <input type="checkbox"/> No opinion </p> <p> <input type="checkbox"/> Satisfied <input type="checkbox"/> Not satisfied </p> <p>at all</p>
21.	<p>"If <<CHILD>> does not get better, what will you do?" [[Check all that apply.]]</p> <p> <input type="checkbox"/> Return to this facility <input type="checkbox"/> Self-medicate </p> <p> <input type="checkbox"/> Go to another facility/provider <input type="checkbox"/> Don't know </p> <p> <input type="checkbox"/> Go to a private clinic/private practitioner <input type="checkbox"/> Other _____ </p> <p><input type="checkbox"/> Go to a traditional healer</p>

22. "What improvements would you like to see or what else can be done for <<CHILD>>?"

23. "If your child were referred to another facility, what could be done to make it easier for you to go?"

Thank you for your cooperation and for your time. Your participation will help the Mozambique Ministry of Health to improve care for children in your community.

Form 6: Village Health Committees Focus Group Guide
Chibuto District, Gaza Province, Mozambique

Village: _____

Date: ____/____/____

Region: Chibuto North

Chibuto South

Person Conducting Focus Group: _____

Person Taking Notes: _____

Number of Participants in Focus Group: _____
(Please attached attendance list)

TOPIC 1: Health Service Utilization

1. What health services are available in this village?
2. What do community members do when their child is ill?
3. What does the community **currently do** to encourage people to go to health facilities when their child is ill?
4. What **can** the community or VHC do to encourage people to go to health facilities when their child is ill?
5. Why do some community members choose not to go to the nearest health facility when their child is sick?

TOPIC 2: User Fees

1. What is the role of your VHC?
2. Does the VHC determine the fee to be paid to the socorrista at the nearest community health post?
 - a. How does the VHC determine or calculate this fee?
 - b. How often does the VHC review that fee for to ensure that families are able to pay?
3. Do you think that most community members can afford this fee?
 - a. Are some community members dissuaded from seeking care because they have to pay a user fee?
4. Do community members know the amount they will be charged before going to the health facility?
 - a. Who is responsible for informing community members of this fee?
 - b. Is this information communicated verbally or on paper?
5. What are the benefits of charging a fee for health services?
6. What are the disadvantages of charging a fee for health services?
7. What does this fee pay for or include at the community health post?

Form 6: Village Health Committees Focus Group Guide
Chibuto District, Gaza Province, Mozambique

- a. Salary of socorristas?
 - b. Equipment?
 - c. Medicine?
 - d. Other?
8. What exemptions exist for paying this fee?
- a. What groups of people are exempt from paying the fee?
9. For what reasons were these exemptions established?
10. Which exemptions are effective and which are not effective? Why or why not?
- a. Are these exemptions correctly and consistently applied?
 - b. Who is charged with applying the exemptions?
11. How do the fees charged by the VHC differ from the fees charged by the MOH at the health centers and hospitals?
12. Do community members have to pay additional costs for medicine – at the health post, at the health center or at the hospital?
- a. Laboratory tests (analysis)
 - b. Transportation
 - c. Unofficial fees
13. How do community members pay for these additional costs?
14. How can the user fee system be improved to ensure that community members have access to health care services at all levels?

TOPIC 3: Community Health Information System and Funds

1. Does the VHC investigate maternal and child deaths in the community?
 - a. If yes, describe the process? Is the process formal or informal?
2. Do you think establishing a maternal and child death sub-committee in your area would help in determining whether a person's death could have been preventable or could help prevent future deaths? Why or why not?
3. Do you think enough people, either in the VHC or the surrounding communities would be willing to serve and be active on such a committee?
4. Has the committee thought about instituting procedures or processes for providing emergency transport for extremely ill members of the community or in the case of serious complications for pregnant women who plan to give birth at home?
5. Does your village have a community health fund? A community health fund is a collection of money from families in the community to use for payment of a person's medical expenses.

[[If no, ask Q.6-7. If yes, ask Q.8-10.]]

Form 6: Village Health Committees Focus Group Guide
Chibuto District, Gaza Province, Mozambique

6. Do you think your community would benefit from a community health fund? Why or why not?
7. Do you think enough people in the community could/would contribute small amounts of money on a regular basis to this fund to cover needed expenses in emergencies?
8. If yes, can you describe this community health fund?
 - a. How does it work?
 - b. Who pays into it?
 - c. How much does each family contribute?
 - d. Who manages the fund?
 - e. How often is this payment collected?
 - f. What services does it cover (i.e. antenatal care, pediatric care, emergency transport, medicine, etc)?
 - g. What role does the local and/or district level government play in managing the fund?
9. What is your opinion of the community health fund?
 - a. Do you believe that community health fund meets the needs of the community members?
 - b. How many community members participate?
 - c. Describe the type of community members that participate in the community health fund?
 - d. Who is left out?
10. What are ways to improve the existing community health fund?

Annex B: Training Schedule

Operations Research Part 1- Community Level: Health Post Record Reviews, Interviews with Socorristas, and Focus Groups with Village Health Committees	
Day 1 Morning	Overview of Operations Research - Objectives - Indicators Overview of Data Collection Sequence/Activities
Day 1 Afternoon	Review of Form 1: Record Review
Day 2 Morning	Record Review Practice at 3 Health Posts near Chokwe Review and Discussion of Experience
Day 2 Afternoon	Review of Form 2: Interview with Health Worker on User Fees Review of Form 3: Interview with Socorrista on Referrals Review of Form 6: Focus Group Guide for Village Health Committee on User Fees, Referral System, and Community Health Funds
Day 3 Morning	Interview Practice (Forms 2 and 3) Review and Discussion of Experience
Day 3 Afternoon	Round 1 of Focus Group Practice (Form 6) Review and Discussion of Experience
Day 4 Morning	Round 2 of Focus Group Practice Review and Discussion
Day 4 Afternoon	Distribution and Review of Form Packets, Materials, and Work Assignments Final Comments
April 25- May 9	<i>Community Level Data Collection</i>
Operations Research Part 2- Health Center and Hospital Record Reviews, Interviews with Nurses and Caregivers	
Day 5 Morning	Review of Data Collected; Discussion of any Issues/Problems Review of Part 2 Data Collection Sequence (Handout)
Day 5 Mid Morning	Coordinators Leave for Form 1: Record Review Practice at Health Center in Chokwe Supervisors Review Forms 5A: Inpatient Interviews with Caregivers at the Health Centers and the Rural Hospital
Day 5 Afternoon	Supervisors Caregiver Interview Practice Form 5A
Day 5 Mid Afternoon	Coordinator Review and Discussion on Completion of Record Review Form at Health Center in Chokwe
Day 6 Morning	Supervisors Continue Interview Practice Form 5A Coordinator Review of Form 2: User Fees (Portuguese) and Form 4: Referral System
Day 6 Afternoon	Supervisors Review and Discuss Practice of Caregiver Interview Form 5A

	Coordinators Practice Interview with Nurse (Forms 2 and 4) Supervisors Review of Outpatient and Exit Interview with Caregivers (Forms 5B and 5C)
Day 7 Morning	Supervisors Practice Using Forms 5B and 5C Coordinator Review and Discussion of Forms Practice
Day 7 Afternoon	Supervisor Review and Discussion of Forms Practice Distribution of Materials and Review of Work Assignments Final Comments/Wrap Up
May 19- June 6	<i>Data Collection at Health Centers and Hospital</i>

Annex C: Research Indicators

Research Indicators	
Financial Record Reviews	<ul style="list-style-type: none"> • Average amount charged per visit for children U5: • Average amount paid per visit for children U5: • Number and percentage exempt from payment: • Number and percentage given receipt for payment:
Outpatient Interviews	<ul style="list-style-type: none"> • Distribution of presenting complaints and illnesses: Fever/malaria- 41%, cough 14%, diarrhea: 11%; vomiting-9%; body ache 7%, other 17% • Percent of caregivers at health facility who sought treatment first from somewhere else: 14% (24/170) • Distribution of initial care sought/treated: traditional healer-33%, CHW-21%, Health Center-13%, Drug vendor-13%, religious leader-8%, Other- 8%; Hospital- 4% • Number and percentage of pediatric outpatients that paid a fee for basic health services: 74/1700 (44%) • Percent of inpatients that paid a fee for service: None • Median amount paid per visit for children U5: 5 MT • Number and percentage of children U5 allowed to pay less than official fee: 31/170 (18%) • Number and percentage of children U5 given receipt for payment: 38/68 (56%) • Number and percentage of pediatric outpatients that knew fee required to pay for consultation in advance: 38% • Number and percentage of caregivers unable to pay for user fee: 9/75 (12%) • Median amount paid per consultation for children U5: 5 MT (pay one amt for both fee and meds) • Median amount paid for medication for children U5: 5 MT (pay one amt for both fee and meds) • Median amount paid for specialized treatment or tests for children U5: 10 MT (only 1/170 paid a fee for tests) • Median number of payments made per visit per patient: 1 • Opinion of user fees 86%- reasonable; 4%-too low; 3.5% too high; 6.5%-No idea • Caretaker's behavior if unable to pay user fee: Delay treatment for child • Number and percentage of caregivers that say there is a health fund in their community: 7/100 (7%) • Percentage of caregivers that contribute to the community health fund: 43% • Caregiver opinion of the amt. for each community member to pay into the fund: 2 said the amt. is too low and 1 said it is reasonable (n=3)
Health Facility Interviews	<ul style="list-style-type: none"> • Distribution of presenting complaints and illnesses: 46% Malaria, 22% Diarrhea, 16% Pneumonia, 4% Flu, 2% Malnutrition, 10% Other (n=135) • Caregiver constraints in taking child to health facility: 21% Lack of transport, 21% Price of transport, 21% Drought/bad weather, 14% Seek help from religious leader/traditional healer, 10%- No constraints, 5% Cost of consultation visit, 4% lack of funds, 4% no medicine at health post • Number and percentage of health facilities that charge a fee for basic health services: 31/39=79% H/HC-4/11=36%, HP-27/28=96% • Number and percentage of health facilities that advertise user fee: 2/38 (5%)

	<ul style="list-style-type: none"> • Median amount charged per consultation for children U5: 5MT • Median amount charged for medication for children U5: 5MT (HP charge one amt which covers both fee and meds; HC charge no fee for consultation but are charging for meds) • Median amount charged for specialized treatment or tests for children U5: 0 • Median number of payments made per visit per patient: 1 • Health providers' opinion of user fees: 58%-too low, 39%fee is fair, 3%-too high; 87% said only a few people in the community cannot afford the fees; 10% said only some of the people in the community can afford the fees; 3% said the majority of people in the community could not afford the fee • Number and percentage of health facilities with exemption policies: 5/11 HC(45%); 2/27 HP(7%) Total: 7/38 (18%) • Reasons for exemptions: Chronic Illness: 36%; HIV/TB: 22%; Disability: 14%, Age: 14%; Income level:14% Health Committee allows exemptions/documentation for exemption from a person's village; have no one to provide care
Village Health Committee Focus Groups	<ul style="list-style-type: none"> • Number of functioning Village Health Committees in Chibuto District: 67 • How user fee is determined: Varied. VHC; VHC held meeting w/community to determine the fee; according to % time soccorista can provide health services; according to the # of people in the community to cover the medicine transport costs. (Note: One VHC stated that they monitor community satisfaction with socorrista's service and care which sometimes helps them in reviewing the amount of the user fee). • What the user fee pays for: All said it covers the transport cost to bring medicine to the health post; some said there is enough money generated to buy basic supplies such as soap, broom, etc. • Additional costs associated with seeking care: medicines, specialized tests at higher level facilities • Caregivers' reasons for not going to the local health post: they go to farther facility where there is no payment or because they can take care of other business along the way; or when they don't find the socorrista at the health post or tire of the local facility/socorrista; when they want injections or want to hide their illness from the community; lack of knowledge of the socorrista in treating some diseases • Number of health committees who admitted that some people in the community could not afford to pay the fee? 1/6; One committee said that they solved this problem by allowing community members to pay the socorrista later when they had the money. • Number and percentage of VHCs with exemption policies: 0/6 • Number of communities with community health fund: 0/6 • Number of VHCs who investigate maternal and child deaths in the community? 6/6 • Number of VHCs who have a maternal and child mortality audit sub-committee? 1/6 • Number of VHCs who said they would start a maternal and child mortality audit sub-committee? 5/5 • VHC member comments on starting a community health fund: 3/6 of the committees have thought about instituting procedures or processes for providing emergency transport. One VHC cited that it was difficult to convince the community to collect money to put aside for emergency transport. One VHC stated that such a fund could allow them to hire a car during emergencies. Another said the money could be used to purchase a wagon for emergency transport.

Annex 18. Operations Research II: The Efficacy of the Referral and Counter-Referral System (especially as it affects Children Under Five Years and their Caretakers) in Chibuto district of Gaza province, Mozambique



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**World Relief Mozambique
Expanded Impact Child Survival Program**

OPERATIONS RESEARCH

*The Efficacy of the Referral and Counter-Referral System
(especially as it affects Children Under Five Years and their
Caretakers) in Chibuto district of Gaza province, Mozambique*

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Project Location: Chibuto District
Gaza Province, Mozambique

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Cooperative Agreement #: GHS-A-00-04-00011-00

Acronyms

ANC	Antenatal Care
APE	Agentes Polyvalente Elementar (Community Health Worker)
CG	Care Group
CBHIS	Community Based Health Insurance Scheme
CHF	Community Health Fund
CHIS	Community Health Information System
CSP	Child Survival Project
DDS	District Health Department
DPS	Provincial Health Department
EIP	Expanded Impact Project
FGD	Focus Group Discussion
GHS	Government Health Service
HC	Health Center
HF	Health Facility
HP	Health Post
M&E	Monitoring and Evaluation
MOH	Ministry of Health
OHH	Orphan Head of Household
PVO	Private Voluntary Organization
VHC	Village Health Committee
WR	World Relief

Table of Contents

EXECUTIVE SUMMARY	186
1 Introduction	187
2 Background	187
2.1 Review of Literature on Referral Systems in Sub-Saharan Africa and Other Countries	187
2.2 Mozambican Context	188
3 Objectives	189
4 Methodology	189
4.1 Instruments	189
4.2 Training of Surveyors and Field Work	189
4.3 Data Management	190
4.4 Analysis	190
5 Results and Discussion	190
5.1 Medical Record Review	191
6 Recommendations	194
7 Dissemination of Results	194
8 References	195
Annex A: Survey Instruments	197
Annex B: Training Schedule	236
Annex C: Research Indicators	238

EXECUTIVE SUMMARY

In Mozambique, the referral system between health posts, health centers, and area hospitals is not well-understood or well-documented, particularly with regard to reasons for referrals, compliance with referrals, and barriers to compliance. Several studies conducted on referral systems in other countries in Africa suggest that non-compliance with referrals can be attributed to a wide range of factors. Through the Vurhonga Expanded Impact Project (EIP), community health workers called “Socorristas” are identified and placed in communities with more than 100 families that are at least seven km from the nearest health center. The objective of this operations research was to quantify the rates of referrals and identify facilitating factors for compliance and barriers to compliance with referrals provided at the primary, secondary and tertiary levels of care. Specifically, this research investigates the efficacy of the referral and counter-referral system with a particular focus on mothers of children under five years of age.

The research was conducted in April-May 2008 in Chibuto district of Gaza province, Mozambique. A record review was conducted, as well as interviews with 270 caregivers of children under five, 27 Socorristas, and 11 nurses. Surveyors were able to identify 270 referrals through the record review which translated into a referral rate of less than 1%. If an approximate 10% referral rate is applied, health workers either missed or inappropriately recorded 2,974 referrals. Only 4.7% of the 270 referrals found in the record review made it to a higher level health facility. Over one-fourth of the 38 health providers interviewed reported receiving incorrect or inappropriate referrals and more than one third of nurses at the referral sites reported never receiving referrals. The following recommendations are made for action by various stakeholders at the local, district, provincial, and national levels: 1. Standardized referral slips should be instituted, provided, and used at all NGO and government health facilities. 2. Health personnel should be properly trained on the use of referral slips and appropriate counseling of patients. 3. The data also suggests that refresher training is needed in order for health workers to correctly identify those severe cases requiring referral. 4. Health workers should use referral slips for counter-referrals for proper follow-up of the patient. 5. In addition, improving both quality and quantity of health provider supervision and establishment of community health funds for emergency transport should help to improve compliance with referrals.

1 Introduction

Over the past ten years, the Mozambican health sector has made significant strides in reducing the under-five mortality rate. Between 1997 – 2004, the U5MR decreased by approximately 30 percent from 219 to 152 per 1,000 live births.⁴⁷ Despite this noteworthy improvement in child health, U5 child mortality is still high and preventable diseases, including diarrhea, malaria and acute respiratory infection, continue to be major causes of death in children under five. World Relief has collaborated with the Ministry of Health at the provincial and district levels to expand the health infrastructure in Gaza Province and increase access to health services to all households –achieving near universal coverage in the 5 target districts. Through the Vurhonga Expanded Impact Project, community health workers called “Socorristas” are identified and placed in communities with more than 100 families that are at least 7 km from the nearest health center. As a result of this joint effort, more than 90 percent of families living in these districts live within 5 km of a first level health facility. In order to build on the positive trends demonstrated by the project, it is critical to examine the cases and conditions which require emergency care and cannot be treated at the primary health care level. Increased understanding of the conditions selected for referral and rates of compliance will enable both World Relief and the MOH to identify areas for improving the referral system and dismantle existing barriers to accessing emergency care.

While evidence gathered from other countries is extensive, there are few recent studies on referral systems in Mozambique. This research was conducted in April-May 2008 in Chibuto district of Gaza province, Mozambique. It examines the functionality of the referral system in the public health sector in Chibuto District in Gaza Province, Mozambique. The study also explores how the referral system works from the community to the health post by the volunteers, from the health post to the health center by the Socorristas, and the health center to the hospital by health providers.

2 Background

2.1 Review of Literature on Referral Systems in Sub-Saharan Africa and Other Countries

Data on the rate and characteristics of referrals of children presenting with severe conditions that require urgent care is limited. Assuming IMCI guidelines are correctly applied, the WHO estimates that the average referral rates should range between 10 and 34 percent –though field studies show that the expected referral rate may be lower at 5-8 percent in African settings.⁴⁸ Even less information is available on the referral process in Mozambique. Yet, it is clear that delayed care-seeking and disease progression contribute to child mortality and morbidity, particularly when it is difficult to access adequate treatment in an emergency. In conjunction with preventive practices adopted at the household level and access to affordable primary health care for routine visits, a well-functioning referral system and compliance with referrals is critical to reducing and averting deaths in children U5.

Several studies conducted on referral systems in other countries in Africa suggest that non-compliance with referrals can be attributed to a wide range of factors – most notably, distance, lack of transportation, financial constraints,

⁴⁷ Childhood Poverty in Mozambique: A Situation and Trends Analysis. UNICEF 2006, p. 11

⁴⁸ Bossyns. et al. *Monitoring the referral system through benchmarking in rural Niger: an evaluation of the functional relation between health centres and the district hospital*. BMC Health Serv Res. 2006; 6: 51 published online 12 April 2006 p. 2 doi: 10.1186/1472-6963-6-51

Simoes, et al. *Management of severely ill children at first-level health facilities in sub-Saharan African when referrals are difficult*. Bull World Health Organ vol.71 no.7 Geneva 2003 doi: 10.1590/S0042-96862003000700011

weather conditions, competing responsibilities at home, cultural barriers, health provider counseling and perceived quality of care at the referral site. In Uganda, caretakers who failed to attend a higher level of care overwhelmingly cited poverty or lack of sufficient funds (90 percent) as the principal reason for non-compliance along with transport problems (26 percent) and conflicting responsibilities at home (17 percent).⁴⁹ A recent study in Niger found that patients generally accepted referrals, but compliance with was strikingly low at 55 percent, even in life-threatening situations.⁵⁰ This points to weaknesses inherent in the health system and external constraining factors which may hinder a patient's compliance with referrals. The same study in Niger revealed that of all childhood illnesses, malnutrition was the least likely to be referred because it does not present with acute symptoms, but rather is an underlying cause of poor health.

Research conducted with a slightly different focus and in other part of the world confirm that compliance with referrals poses challenges for many families and as a result care-seeking is often delayed mainly due to affordability. A study on the referral system in rural Honduras found that referral rates were higher when the health provider stressed urgency of referral and importance of seeking immediate care. Yet, the use of referral forms was low and counter-referral rates extremely low.⁵¹ Recent evidence from research in Uganda that examined compliance with referrals in the context of home-based management of malaria shows that the majority of children (87 percent) completed referral and were seen at a hospital or health center – of which 74% sought care in the public sector. Referral compliance was notably higher for urgent referrals, however adherence to one-third of urgent referral recommendations were delayed. Lack of money and improvement in the child's symptoms were the most common reasons for non-completion of referral and more than 70 percent of caregivers indicated that the money was difficult to obtain. The average cost of referrals was \$0.71 for MOH sponsored health centers and \$1.76 for private clinics.⁵²

The findings described by these studies suggest several options for ensuring that severely ill patients are referred to appropriate level of care and for improving adherence to referrals when they are made. These recommendations include upgrading the skills of community health workers to treat such conditions, developing more specific guidelines for referral, providing emergency transport, enhancing communications infrastructure between health facilities, regular use of referral slips, and designating a referral coordinator at each health facility to follow up on referred cases. The current literature highlights questions that require further examination, including: does the rate of referral differ at different levels of care?

2.2 Mozambican Context

The Mozambican health system is four-tiered – whereby health posts constitute the first level of care, and health centers comprise the secondary level of care, district or rural hospitals the tertiary level of care and provincial or central hospitals the last tier. In Chibuto District, there are a total of 27 health posts, 10 health centers (1 Type I in the city; 2 Type II health centers and 7 Type III) and one rural hospital. Type I and Type II health centers have 24 hour in-patient facilities, while Type III facilities do not. With support from the MOH, World Relief has coordinated the training of 117 Socorristas in Gaza province, 71 in the 5 current Child Survival (CS) EIP program, and 46 in 3 districts of previous child survival programs.

⁴⁹ Peterson, et al. Coping with paediatric referral—Ugandan parents' experience. *Lancet* 2004; 363: 1955–56

⁵⁰ Bossyns, et al. p. 2

⁵¹ Ohara, et al. Study of a patient referral system in the Republic of Honduras. *Health Policy and Planning*. 13(4):433–445.

⁵² Kallander, et al. Community referral in home management of malaria in western Uganda: A case series study. *BMC International Health and Human Rights* 2006; 6:2

Generally, community health workers called “Socorristas” staff the health posts and in some cases are supervised by nurses working in the same facility. The MOH supplies CHWs with kits that contain drugs and supplies to manage most common illnesses for children under 5. However, CHWs are instructed to refer patients to health centers and/or district hospitals if a child exhibits danger signs.

In Mozambique, the referral system between health posts, health centers, and area hospitals is not well-understood or well-documented, particularly with regard to reasons for referrals, compliance with referrals, and barriers to compliance.

3 Objectives

This operational research seeks to quantify the rates of referrals and identify facilitating factors for and barriers to compliance with referrals provided at the primary, secondary and tertiary levels of care. Specifically, this research investigates the efficacy of the referral and counter-referral system with a particular focus on mothers of children under 5 years of age. The main objectives are to:

1. Describe actual referral rates;
2. Assess the level of compliance of caretakers with referral;
3. Identify the main reasons for referral in children less than five years of age;
4. Understand factors that contribute to compliance, noncompliance, or delay in seeking referral care;
5. Examine existing options for strengthening the current referral system to improve rates of compliance.

4 Methodology

Of the six rural districts in the Vurhonga EIP area, only Chibuto contained enough health facilities of the various types (health posts, health centers, and hospital) to provide an adequate size study population to be considered for this study. The decision was made to conduct surveys in all Government and Vurhonga built health posts rather than randomly sample due to the overall low number of health facilities in the district. The following data collection methods were used in this analysis: 1) financial record reviews at the health facilities in order to document and track referrals; 2) informant interviews with two target groups: primary caregivers for children under 5 and health care providers at HF in Chibuto. Interviews were conducted with nurses at all government health centers in Chibuto, 10 in total, as well as the one hospital in the district. Vurhonga helped establish 27 health posts in Chibuto; interviews were conducted with the Socorristas at all 27 health posts. In total, record reviews and interviews were conducted at 38 HF in Chibuto district. Interviews were also conducted with 270 caregivers of children under five who were being seen at each of the ten health centers and the district hospital.

4.1 Instruments

Six instruments were used to conduct the record reviews and interviews. All six collect similar data from slightly different perspectives and allow for the same indicators to be calculated in alternate ways. The complete set of instruments can be found in Annex A.

4.2 Training of Surveyors and Field Work

The team of surveyors consisted of Vurhonga EIP field staff working in Chibuto district. This included two coordinators and nine supervisors. They were supervised by the program manager and community outreach coordinator. Both training and data collection were divided up in two stages for two reasons: 1) To ensure the quality of the data collected and 2) to coincide with the field and office based schedule of the EIP staff. The first

stage consisted of the community level data collection which consisted of record reviews at the health posts and interviews with Socorristas. The training took place over a four day period immediately followed by field based data collection April 25- May 9, 2008. Plenty of time was given for practice and role-playing during the training. The second stage consisted of interviews with nurses and caregivers of children under five present at health centers and the district hospital. The training took place over three days and included practice sessions and role-playing. The second stage of data collection took place immediately following the training from May 19-30, 2008. (See Annex B for the training schedule.) A typical day of training consisted of reviewing the instruments question-by-question, role-plays, and practical work in local health facilities not included in the study. In-depth discussions were held with the surveyors, and modifications were made to the instruments according to their suggestions. Rules were developed for questions and items that could be misinterpreted. At the end of the training, the surveyors understood all of the instruments and used them effectively. Each team was provided with a vehicle and a driver. Generally, the teams paired up so two surveyors visited each facility. Each pair of surveyors visited one facility per day. The coordinators and supervisors had letters of introduction from the District Health Department Government Health Service (DDS GHS), which facilitated the introduction of the survey team to the health facility staff. All teams were able to complete their assignments on time.

4.3 Data Management

The coordinators were responsible for each of their teams of surveyors and for ensuring that all procedures were properly followed in the facilities. At the end of each day, surveyors reviewed their instruments and ensured that data had been collected properly. Surveyors were instructed to contact the survey organizers if any problems were encountered. Once the data collection was completed in each district, survey organizers reviewed all of the instruments. The instruments were brought back to Maputo for review and audit prior to hand tabulation in Chokwe. Discrepancies were re-hand tabulated until the number of responses equaled what was expected. Once the data was considered clean, indicators were calculated. For a complete set of indicators, see Annex C.

4.4 Analysis

Univariate analysis was conducted using mean, standard deviation, and range for continuous variables, and percentage in each category for categorical variables. Qualitative data from the FGDs were analyzed manually.

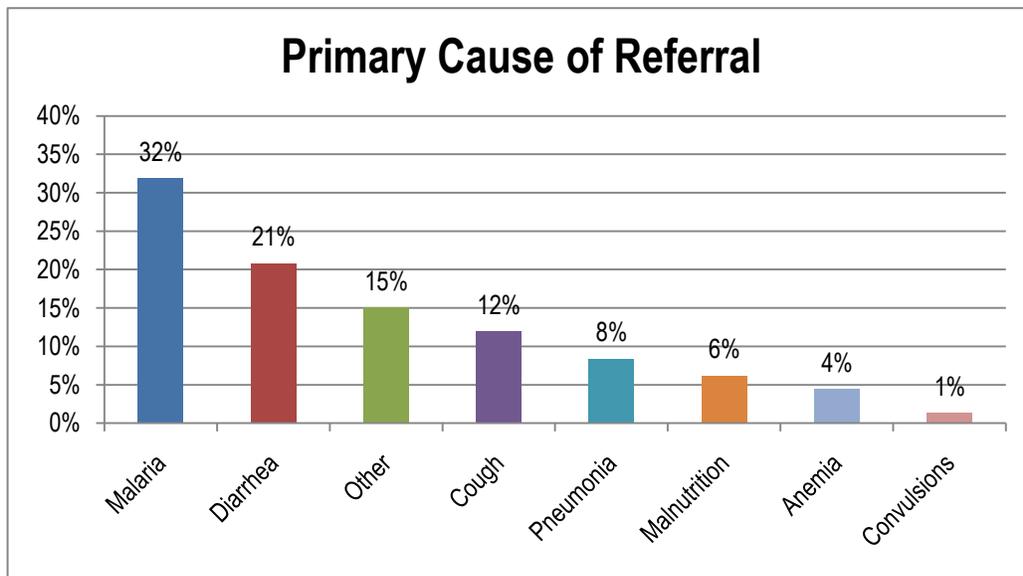
5 Results and Discussion

A total of 38 facilities were visited for this study, and 270 caregivers were interviewed by surveyors: 185 (31%) in outpatient facilities and 85 (69%) in inpatient facilities. Additionally, 38 health workers at health posts, health centers, and hospital were interviewed. The study tracked the outcome of 236 referred cases. As mentioned earlier, data for calculating the same indicators were collected in several different ways. Stated limitations in interpreting the data obtained from interviews with caregivers and health workers is that such data is inherently biased. Record keeping was also found to be poor, making it difficult to determine whether the low number of referrals and low compliance with referrals is simply contributed to poor record keeping, missed referrals, patient non-compliance, or a combination of these factors. Nonetheless, some information obtained from the medical record review as well as qualitative data provides some valuable insights into the existing referral system or lack thereof. In addition, the qualitative data collected provide some valuable insights on how to improve the referral system in Mozambique.

5.1 Medical Record Review

A total of 32,436 sick child visits were recorded during the 6 months prior to the survey in health posts, health centers and district hospitals. Surveyors were able to identify 270 referrals through the record review—which translates into a less than 1% referral rate. The fundamental, and most important, finding of this survey is that if an approximate 10% referral rate is applied, health workers either missed or inappropriately recorded 2,974 referrals, as approximately 3,244 referrals would be expected in the six-month time period, and according to the record review only 270 were made. Also troubling is the fact that only 4.7% of the 270 referrals found in the record review made it to a higher level health facility. The health center received the highest percentage of referrals and referred the most patients (7 and 9 percent of total health center patients, respectively); 79% of children were referred by the health post and 53% were referred to the rural hospital. Eighty percent of referred children were given a referral slip by the health care provider; 25% of health posts did not give a referral slip and less than three percent of referred children arrived with a referral slip. The diagnosis of the children referred to a higher level of care was missing in 95% of all cases (214/225). The median time elapsed between referral and compliance was 10 days with a median distance of 17 km to the nearest referral site. There was no statistical significance in the median distance to the nearest referral facility between those who complied and those who did not comply. There was a statistically significant difference in the compliance rate for male and female children. The compliance rate for male children was 8.5% compared with only 1.6% for females ($p < .001$). There was no statistically significant difference in the child's mean age for those who complied compared to those who did not comply with referral. None of the fourteen referrals of children less than two months of age complied with the referral recommendation. According to IMCI guidelines, if a 55% compliance rate is applied to the total number of referrals that should have been referred, a sobering picture emerges. Out of an expected 3,244 referrals, only 22 severe cases would have made it to a higher level of care, leaving 1,762 children not arriving at a referral facility. Further, if we extrapolate the finding from the referral study in Uganda, where the case fatality rate for severely ill children who did not make it to a referral site was 5%, we would find that 88 children would have died because referral care was not accessed. Because this data came from a record review, it was impossible to determine what actually happened to the cases that did not comply with referral. A population-based study would be necessary to obtain this kind of information. Of the cases that did arrive at the referral facility, 64% were ultimately admitted to the hospital. This speaks to the degree of appropriateness by the health worker in correctly determining those severe cases in need of referral i.e. health workers correctly diagnosing among those cases that were referred. This percentage could certainly be improved upon. Figure 5–1 shows the causes of referral for the 270 referred cases (225 diagnosed cases).

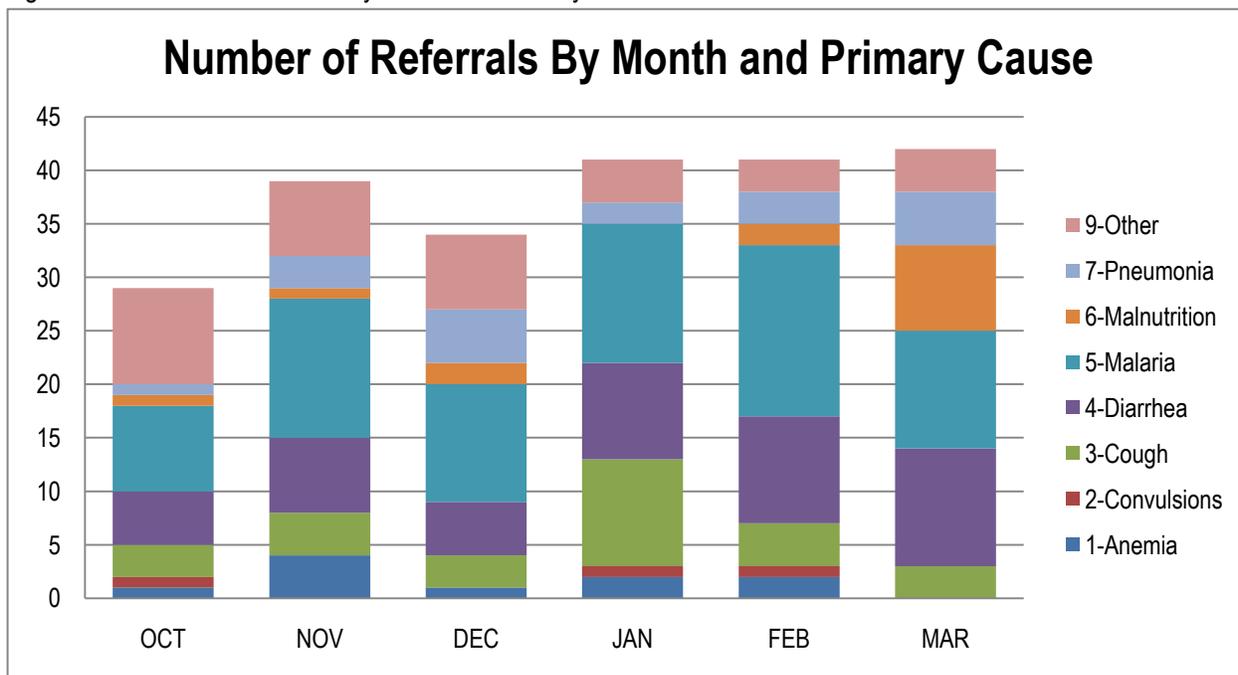
Figure 5-1. Primary Causes of Referral



Sixty-seven percent of the diagnosed cases involved the 5 most common childhood illnesses (pneumonia, malnutrition, measles, diarrhea, malaria). Seventy-three cases were referred for malaria followed by 43 cases referred for diarrhea. There were seventeen cases with pneumonia, fourteen with malnutrition, and ten with anemia. In 45 cases the cause for referral was not indicated on the patient register, and patient records were not available.

Fifty-five percent of all referrals were female and 45% were male (the difference is not statistically significant). Figure 5-2 shows the pattern of referrals over the six month period.

Figure 5-2. Number of Referrals by Month and Primary Cause



The summer months of January-March had a higher number of referrals. This time period coincides with the rainy season and thus higher incidence of diarrhea and higher malaria transmission. March also begins the start of the “hunger months” which is evidenced by the spike in referrals for malnutrition. Thus the data obtained from the medical records and displayed in Figure 5-2 corresponds with what would be expected in terms of disease outbreaks and seasonal variations suggesting a level of reliability and accuracy in the data collected by the field staff.

Caretaker Interviews

In addition to the record review, surveyors also interviewed a total of 270 caretakers consisting of 10 inpatients, 100 waiting to be seen (waiting room), and another 160 who had just received treatment (exit interview). Only three of 170 had been referred to another site (referral rate of 2%). One-quarter of caregivers (24/100) sought care from someone else before coming to the facility. Forty-two percent sought care from a traditional or religious healer while 21% sought care from a community health worker followed equally by health centers and drug vendor/pharmacy (each at 13%). Fifty-five percent cited “convenience” or “closest facility” as the reason for choosing the health facility while 20% cited “trust” or “always come here.” Caretakers were asked whether there were other facilities or providers that were closer to their homes where they could have sought help. More than three-quarters (76%) said that another provider was closer. These closer providers were primarily community health workers (52%) followed by other health centers (such as NGO health facility (39%)). Sixty-five percent said that they had a village health committee in their village or town but only 27% stated that their village or a village nearby had a Socorrista health post. More than two thirds did not know the fee charged at the closest health post and more than half (56%) said that they would not use the community health post. Ninety-six percent of caregivers were “satisfied” or “very satisfied” with the quality of care they received at the health center. When asked if their child was referred today, would they be able to comply with the referral, 87% (96/110) of caregivers said that they would. Of those who could not comply, 81% cited the cost of transport as the primary barrier. When asked what else could be done to make it easier to comply with referrals, 63% (101/160) stated that an ambulance would enable this. 8% stated that an emergency health fund or loan advancement would also enable them to better comply with referrals. Finally, when asked what else they think could be done for their child/health, availability of medicine (18%), a hospital (17%), tests (15%), and food (3%) were cited most.

Health Provider Interviews

Thirty-eight providers were interviewed in referring facilities, eleven of these can also be considered referral sites (four of these offer 24-hour inpatient care). Overall, the health providers interviewed consisted of 27 Socorristas and 11 nurses. Thirty-eight percent of health providers thought that the level of care at the referral facility was “excellent” while 58% categorized it as “good.” None said the care was inadequate. However, more than a quarter said that the referrals they receive are sometimes or often incorrectly referred and more than one third of the nurses at the referral sites reported never receiving any referrals. Just over half of the nurses reported using a counter referral slip for information and follow-up to the referring facility. Sixty-three percent of providers thought that accessing the referral site was “easy” or “possible,” however 55% said that caregivers have said that they could not go to the referral facility. When asked what they do, if anything, for caregivers who say they cannot take their child to the referral facility, 69% said that they simply encourage them to go while 23% advise them to look for ways to obtain the money required to comply with the referral. Only half explained the gravity of the child’s condition. Nearly half cited the cost of transport as the main barrier to compliance with referral. Despite this, 73% thought that all or nearly all of those they referred complied with the referral. Socorristas cited lack of trust in the Socorrista’s knowledge (39%) as the main reason for caregiver non-compliance with referral. When Socorristas were asked the actions of the caregivers

when they did not comply with the referral, 74% said that they sought care from a traditional healer, witchdoctor, or pastor. When asked for the primary reasons they could not treat patients at their facility, 45% of Socorristas cited lack of training on how to treat certain illnesses and 33% cited stock out of medicines. Almost half of nurses cited lack of caregiver confidence in Socorrista knowledge as the primary reason why some caregivers don't utilize the health post or the closest health facility. Other reasons cited include: lack of necessary equipment at the health posts (16%), lack of a community health post (16%), and user fee required while no-charge at HC (11%). Two-thirds of nurses felt that treating patients who could have been treated for a particular illness by the Socorrista impeded their ability to provide better patient care. Socorristas expressed that the responsibility for improving the referral system lies with educating members of the community (38%), community leaders (28%), and themselves (25%), saying that receiving more training would help them to improve the referral system. Nurses cited the use of referral slips (36%), adequate training (27%), and quarterly supervision (18%) as ways to improve referral by the Socorristas. Ways the nurses stated the referral system can be improved include: providing emergency transport (28%), improving communication and infrastructure between health posts, health centers, and hospitals (16%), providing more training to Socorristas (15%), improving counseling of patients (11%), increasing the use of referral forms (8%), increasing supervision of Socorristas (7%), and establishment of a referral coordinator in each health center and hospital (5%).

6 Recommendations

The following recommendations are made for action by various stakeholders at the local, district, provincial, and national levels. The current referral system in Mozambique is weak and should be strengthened by instituting the following improvements: 1) Standardized referral slips should be instituted, provided, and used at all NGO and government health facilities. 2) Health personnel should be properly trained on the use of referral slips and appropriate facility for referrals. 3) The data suggest that refresher training is needed in order for health workers to correctly identify those cases requiring referral. 4) Health workers should use referral slips for counter-referrals, i.e. to inform/communicate with the referring health worker for proper follow-up of the patient. Proper use of the referral slips should help to improve compliance by caregivers of children under five. 5) Health provider training should also include skills building for improving health provider counseling of patients for caregiver compliance with referral to include relaying the seriousness of the child's condition requiring treatment at the referral facility. 6) In addition, improving both quality and quantity of supervision and establishment of a community health fund for emergency transport should help to improve compliance with referrals.

7 Dissemination of Results

Results of this operations research were presented in early May 2009 to Vurhonga staff in conjunction with preparation for training the Village Health Committees. The main purpose of the Village Health Committee training was to prepare them for maintaining community health activities including reporting and liaising with the DHS after the Vurhonga program ends. However, training on establishing a community based health fund was also included due to the results of this research. The recommendations listed above were also included as part of the VHC trainings. In addition, the best responses from the FGD were provided to the staff for mentoring the VHCs on model VHC actions. Staff were asked to find key words or phrases that made these model responses; they also received handouts of the key responses as a training aid for the VHC trainings.

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Annex A: Survey Instruments

**Form 1 Record Review
Chibuto District, Gaza Province, Mozambique**

Reviewer: _____ Date: ____/____/____

Name of Facility: _____ Region: Chibuto North
 Chibuto South

Type of Facility: Health Post Health Center Hospital

Nearest referral facility: _____ Distance: _____ km

of < 5s seen in last 6 months: O ____ N ____ D ____ J ____ F ____ M ____
TOTAL: _____

of < 5s referred : O ____ N ____ D ____ J ____ F ____ M ____ TOTAL: _____

Information for each child <5 referred

#	Name of Patient	Record #	Age (Months)	Sex (M/F)	Address	Amount Charged (Mt.)	Amount Paid (Mt.)	Receipt Given? (Y/N)	Exempt? (Y/N)	Referral Date (DD-MM-YY)	Causes of Referral
											1. 2. 3.
	Referred To (Facility Name)	Referral Slip Given? (Y/N)	Complied? Y/N and Date	Arrived w/ Referral Slip? (Y/N)	Diagnosis	Admitted? (Y/N)	2 nd Referral? (S/N)	Causes of 2nd Referral	Referred to: (Facility Name)	Referral Slip Given? (Y/N)	Complied Y/N and Date Arrived with Referral Slip? (Y/N)
								1. 2. 3.			Complied: Date: Slip:
Notes:											

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

#	Name of Patient	Record #	Age (Months)	Sex (M/F)	Address	Amount Charged (Mt.)	Amount Paid (Mt.)	Receipt Given? (Y/N)	Exempt? (Y/N)	Referral Date (DD-MM-YY)	Causes of Referral
											1. 2. 3.
	Referred To (Facility Name)	Referral Slip Given? (Y/N)	Complie d? Y/N and Date	Arrived w/ Referral Slip? (Y/N)	Diagnosis	Admitted? (Y/N)	2 nd Referral? (S/N)	Causes of 2nd Referral	Referred to: (Facility Name)	Referral Slip Given? (Y/N)	Complied Y/N and Date Arrived with Referral Slip? (Y/N)
								1. 2. 3.			Complied: Date: Slip:
Notes:											

#	Name of Patient	Record #	Age (Months)	Sex (M/F)	Address	Amount Charged (Mt.)	Amount Paid (Mt.)	Receipt Given? (Y/N)	Exempt? (Y/N)	Referral Date (DD-MM-YY)	Causes of Referral
											1. 2. 3.
	Referred To (Facility Name)	Referral Slip Given? (Y/N)	Complie d? Y/N and Date	Arrived w/ Referral Slip? (Y/N)	Diagnosis	Admitted? (Y/N)	2 nd Referral? (S/N)	Causes of 2nd Referral	Referred to: (Facility Name)	Referral Slip Given? (Y/N)	Complied Y/N and Date Arrived with Referral Slip? (Y/N)
								1. 2. 3.			Complied: Date: Slip:
Notes:											

Instructions: Form 1 Record Review

General Instructions	REMEMBER: This is the most important instrument of all, so it should be filled out very carefully. This instrument is filled out in all facilities, including health posts, health centers and the district hospital. Each of the facilities you visit may have a different way of keeping the information of children that are seen there. You should ask the health workers in the facilities how they keep the records and ask their advice for the best way to obtain the necessary information.
Page Number	Each time you begin a new form, write the page number in the first blank space on the top right hand side of the form. Once all referrals for children under 5 in the last 6 months have been recorded, count the number of pages you used at this health facility and write the number in the second space at the top right hand side of the page.
Reviewer	The name of the person who completed the record review
Date	The date the review was completed
Name of Facility	Name of the facility where the record review was conducted

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

Region	Indicate whether the facility is located in Chibuto North or Chibuto South
Type of Facility	Type of facility where the record review was conducted
Name of closest referral facility	Before arriving at the facility, using available data, identify the nearest referral facility (whether it is inside the district or not). If the nearest referral facility is outside of the district, write the name of the facility followed by "OD" for "outside district" and circle the "OD" for emphasis.
Distance	Distance to the referral facility should be described in kilometers, only in .5 increments for example: 1 km, 1.5 km, 2 km, etc.
Number of <5s seen during the last 6 months	Record the number of children less than five years of age seen at this facility for each month beginning with October 2007. At the health centers and hospital, you should start with the monthly statement of outpatients for the total number of <5s seen each month. If this sheet is not available or if the information is confusing, you will need to count the number of <5s from the patient register. Important: Health facilities that have inpatient facilities (CS-Cidade, Alto-Changane, Malehice, and Hospital Rural) need to include both inpatient and outpatient data. Hopefully, these facilities have monthly summary data that either include both or list each separately (inpatient and outpatient). If listed separately, add the two totals for each month and record in the appropriate month.
Number of <5s referred	Record the number of children less than five years of age referred at this facility for each month beginning with October 2007. At the health centers and hospitals, the number of referrals of children <5 should be found in the monthly or quarterly summary reports (often listed as transfers). Then, the patient register or in the case of health centers and the hospital, the patient register needs to be checked to verify the information captured in the monthly summary report and to identify the individual children who were referred. If any information is missing, or if the entry looks doubtful, the individual patient record should be checked. If there is a discrepancy between the number of referrals in the monthly tally sheet and those in the register, use the number in the register. Important: Health facilities that have inpatient facilities (CS-Cidade, Alto-Changane, Malehice, and Hospital Rural) need to include both inpatient and outpatient referrals. Hopefully, these facilities have monthly summary data that either include both or list each separately (inpatient and outpatient). If listed separately, add the two totals for each month and record in the appropriate month.
Children <5 referred	Ask the health provider at the health facility for all the health records of children under 5 that were referred to another facility during the last six months: October 2007- March 2008. You may need to gather information from various sources in order to complete all the fields of the form such as referral notes, patient register, financial register, etc. Use these documents to complete each field of the form starting from left to right and continuing with the second row. In total, there are 24 possible fields to complete for each person referred. The shaded portion describes the information requested. Complete the response in the white space below. After completing the first referral, each subsequent page can record 2 patients each. Continue completing a new form until you have recorded all patients less than five years of age who were referred to a higher level facility during the last 6 months. At health posts, you need to identify all the children that were referred to another facility. The patient register should be the starting point for identifying children who were referred (indicated as transfers) to another facility. At health centers and the hospital, you need to look for the children who were found at the health post or health center that were referred to this facility as well as identify new children who were referred to another facility. To find the children who were indicated as having been referred to this facility, use the patient register to find the name you are looking for. If the patient register is in order by date, look for the date the child was referred up to and including 7 days after the date referred for the patient's name.
#	Number. Start with 1 and continue with each referral. You should end up with the same number of total referrals listed under "Number of <5s referred" at the top of page 1 of the form.

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

Child's Name	The name of the child/patient who was referred. This can be found in the patient register.
Patient Record #	Each patient should have been assigned a patient record number. This can be found in the patient register.
Age	Record the age of the child in months. If the child is less than one month old, write age in days and be sure to write the word "days" after the number. This should be found in the patient record.
Sex	Male or Female; this should be found in the patient record and marked using "M" or "F".
Address	Write the name of the village where the patient is from. This can be found under "Address" in the patient register.
Amount Charged for Consultation (Mt)	This amount will only be recorded once for each new referral found at each health facility. There should not be a fee for consult at the health centers or hospital for children under 5. However, you should still try to verify that this really was the case. It is suggested that you first ask whether there is a financial record of the fee charged for each patient. If not, then you will need to ask the health worker the amount charged for each consultancy of children under 5 and record the amount.
Amount Paid for Consultation (Mt)	This amount will only be recorded once for each new referral found at each health facility. Again, there should not be an amount paid by the caregiver for the consultation at the health centers or hospital for children under 5. However, you should still try to see if the patient paid a fee for consult. You should try to see whether there is any indication of payment for a consultancy fee by the patient from the financial records. You may simply find some indication that the patient paid the consult fee. In such a case, you can assume the amount paid is the same as the amount charged and record the same amount.
Receipt Given	This will only be recorded once for each new referral found at each health facility. If the caregiver was charged, write whether or not the caregiver was given a receipt for payment. Check for this indication in the financial record. Hopefully, you can find the patient you are looking for in the financial record. If such an indication can not be found there, you may need to ask the health worker if receipts are consistently given to all patients or not and record the response.
Exempt	This will only be recorded once for each new referral found at each health facility. Ask the health worker whether they allow any circumstances for exemption from payment. If yes, find out how you can determine whether a patient was exempt from payment. Oftentimes, a letter from an official authority figure is required for exemption. Such documentation should be attached to or included with a patient's health record or indicated in the financial record.
Date of Referral	Does the health register or referral note indicate the date that the patient was seen? Hopefully, the date was recorded under transfers in the patient register. Otherwise, you can use the date listed in the patient register.
Causes of Referral	It might be necessary to look at the individual patient register for notes on why the patient was referred. The "causes of referral" should be written exactly as they are described in the documentation. If you cannot find any such information or if you are unsure, ask the health worker to explain. For example, perhaps the child would normally be treated at the facility but the center was temporarily out of stock of a medication needed to treat the child for a particular illness. If this still does not help, you can check the patient register for the diagnosis. Illnesses such as pneumonia, malnutrition, measles, diarrhea, and malaria are often the main causes for referral. List the diagnosis as the cause of referral if it is reasonable that the diagnosis was serious enough to warrant a referral. If the diagnosis does not seem to warrant a reason for referral, then mark "unknown" by the number 1 space on the form.
Referral to HC/RH	This is perhaps one of the most important fields on the form. Information on where the child was sent is needed in order to follow up at the next level care facility to see if the child actually complied with the referral. If this cannot be found anywhere in the records, then ask the health worker which facility patients are usually referred to. If this varies for any number of reasons, then write the name of the nearest referral facility listed at the top of the first page of the form.

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

Referral Slip Given	Do the health records indicate whether a referral note was given to the child's caregiver to take to the referral facility? Is there a copy in the records? If you cannot find this documented anywhere in the health records, ask the Socorrista or nurse whether he/she remembers giving a written note of referral for each case, assuming that the total number of referrals is quite small, and therefore, easier to remember on a case by case basis. You can record yes, even if the referral note consisted of just a handwritten slip of paper. For health centers and the hospital, ask if the facility has referral slips and attached a copy of it to the form. This is the last box required to be completed for all newly identified referrals; stop here, and begin a new entry of another child under 5 who was indicated as being referred to another facility.
Complied Y/N and Date	This box begins the search for a referral by the coordinator at the next level facility where the child was indicated at the 1 st level facility as having been referred. Can you find the patient who was referred to this facility in their health records? If yes, record the date. You should look for the child via medical records at the referral facility for up to seven days after the referral was made. When looking for children at health centers with inpatient facilities (CS-Cidade, Alto- Changane, Malehice), or the hospital be sure to check both inpatient and outpatient registers.
Arrived with Referral Slip	Does the health register include or refer to whether the patient brought a referral slip to the referral facility given by the Socorrista or nurse at the first level facility? Ask at the facility what would be the best way to check for a referral slip. This may be located either in the child's record, a referral file, or other location, depending on the facility.
Diagnosis	Does the health record at the referral facility identify the child's illness? You should be able to find this in the patient register.
Admitted to the HC/RH	This field is only applicable for health facilities with inpatient facilities (CS-Cidade, Alto-Changane, Malehice, and Hospital Rural). For those facilities with inpatient facilities, does the health register indicate whether the patient was admitted to the facility as an inpatient? To check admission status, look at the inpatient register or the patient register.
2nd Referral	This field will only be completed if the child was referred a second time to another facility (most likely, a hospital or health center with an inpatient facility). Was the patient referred further to a higher level care facility? Write Y for "Yes", N for "No."
Causes of 2nd Referral	It might be necessary to look at the individual patient register for notes on why the patient was referred. The "causes of referral" should be written exactly as they are described in the documentation. If you cannot find any such information or if you are unsure, ask the health worker to explain. For example, perhaps the child would normally be treated at the facility but the center was temporarily out of stock of a medication needed to treat the child for a particular illness. If this still does not help, you can check the patient register for the diagnosis. Illnesses such as pneumonia, malnutrition, measles, diarrhea, and malaria are often the main causes for referral. List the diagnosis as the cause of referral if it is reasonable that the diagnosis was serious enough to warrant a referral. If the diagnosis does not seem to warrant a reason for referral, then mark "unknown" by the number 1 space on the form.
Referred to (Facility Name)	Write the name of the health center or hospital where the child was referred to for a second time. If this cannot be found anywhere in the records, then ask the health worker which facility patients are usually referred to.
Referral Slip Given?	Do the health records indicate whether a referral note was given to the child's caregiver to take to the referral facility? Is there a copy in the records? This can just be a handwritten slip of paper. If you cannot find this documented anywhere in the health records, ask the nurse whether he/she remembers giving a written note of referral for each case, assuming that the total number of referrals is quite small, and therefore, easier to remember on a case by case basis. Ask if the facility has referral slips and attach a copy to the form. This is the last box required to be completed for all newly identified referrals; stop here, and begin a new entry of another child under 5 who was indicated as being referred to another facility.

Form 1 Record Review
Chibuto District, Gaza Province, Mozambique

Complied Y/N and Date Slip Y/N	Can you find the patient who was referred to this facility in their health records? This field will only be completed at the rural hospital if a patient was found to be referred a second time. You should look for the child via medical records at the referral facility for up to seven days after the referral was made. If the child was found, enter the date of compliance with second referral (from third facility). Write Y or N if they arrived or didn't arrive, respectively, with a referral slip.
Notes	Can you find any documentation on the outcome of the sick child such as "died" or "full recovery"? Use this space to record this information. Also, when you are finished with recording all of the referrals of children under 5 during the last 6 months, please also use this space to explain how or why certain information could or could not be found. This will help us to determine whether documentation (or lack thereof) at the health facility made it easy or very difficult to obtain the information requested. If much of the information had to be indirectly inferred or obtained by the health worker, then please indicate that in the Notes section on the first page indicating which of the information was inferred or obtained by the health worker rather than taken directly from the medical records.

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____	Data: ____/____/____
Nome do Entrevistado: _____	
Nome do Centro: _____	Aldeia/ Comunidade: _____
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul	

1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____

Interviewer: _____	Date: ____/____/____
Name of Interviewee: _____	
Nome of facility: _____	Village/Community: _____
Title of Health Post Worker: <input type="checkbox"/> Socorrista <input type="checkbox"/> Auxiliary Nurse <input type="checkbox"/> Registered Nurse	
Region: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul	

1.	How many children under the age of five did you examine in the last month? [[Please specify the number]]: _____
2.	How many of these children were referred by a Vuronga volunteer? [[Please specify the number]]: _____

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____		Data: ____/____/____
Nome do Entrevistado: _____		
Nome do Centro: _____		Aldeia/ Comunidade: _____
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul		
1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____	
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____	
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____	
3.	How many of these children under the age of five did you refer to a higher level of care? [[Please specify the number]]: _____	
4.	Which facility do you normally refer patients to? [[Please specify the number]]: _____	
5.	How far is this referral facility from here? <input type="checkbox"/> 2-3 km or less <input type="checkbox"/> Between 3-5 km <input type="checkbox"/> Between 5-10 km <input type="checkbox"/> Between 0- 20 km <input type="checkbox"/> More than 20 km	
6.	In the past month, were there any conditions that were difficult for you to understand, treat or give appropriate instructions? <input type="checkbox"/> Yes <input type="checkbox"/> No→GO TO 8 <input type="checkbox"/> Don't know→GO TO 8	

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____	Data: ____/____/____
Nome do Entrevistado: _____	
Nome do Centro: _____ Aldeia/ Comunidade: _____	
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul	
1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____
7.	Which conditions were difficult for you to understand, treat or give appropriate instructions? Please describe: _____
8.	In the last month, what were the 3 most common illnesses that children you referred to the health center or hospital for treatment? <input type="checkbox"/> Diarreia <input type="checkbox"/> Pneumonia <input type="checkbox"/> Malaria <input type="checkbox"/> Sarampo <input type="checkbox"/> Malnutrição <input type="checkbox"/> Outras doenças _____
9.	Of the children that you referred, how many did you give a referral slip? [[Please specify the number]]: _____
10.	In your opinion, do you think referral slips are useful? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____		Data: ____/____/____
Nome do Entrevistado: _____		
Nome do Centro: _____		Aldeia/ Comunidade: _____
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul		
1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____	
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____	
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____	
11	How many mothers/caregivers brought their children back to see you with paperwork from the higher level of care facility? [[Please specify the number]]: _____	
12.	Were there cases where the mothers/caregivers told you that they could not go to the referral site? <input type="checkbox"/> Yes <input type="checkbox"/> No→GO TO 14 <input type="checkbox"/> Don't know→GO TO 14	
13.	What did you do in the cases when a caregiver/mother told you that she could not take her child to the referral site? [[Please describe.]]	
14.	How would you rate the level of care at the referral site? <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Reasonable <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor <input type="checkbox"/> No opinion	

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____	Data: ____/____/____
Nome do Entrevistado: _____	
Nome do Centro: _____ Aldeia/ Comunidade: _____	
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul	
1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____
15.	What types of transportation are available to take a child to the referral site? <input type="checkbox"/> Ambulance <input type="checkbox"/> Bus/minibus <input type="checkbox"/> Bicycle <input type="checkbox"/> Car <input type="checkbox"/> By foot <input type="checkbox"/> Motorbike <input type="checkbox"/> Other: _____
16.	In your opinion, is it easy to get to the referral facility from the community health post? <input type="checkbox"/> Easy <input type="checkbox"/> Possible <input type="checkbox"/> Difficult <input type="checkbox"/> Impossible <input type="checkbox"/> Depends on weather/road conditions
17.	What do you say to the mother/caregiver to encourage her to take the child to a higher level of care? <input type="checkbox"/> Name and location of health facility <input type="checkbox"/> Name of contact person at health facility <input type="checkbox"/> Explain the gravity of the child's condition <input type="checkbox"/> Other: _____

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____		Data: ____/____/____
Nome do Entrevistado: _____		
Nome do Centro: _____		Aldeia/ Comunidade: _____
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul		
1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____	
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____	
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____	
18.	In your opinion, why do you think that some mothers/caregivers do not take their child to the referral site? <input type="checkbox"/> Cost of transport <input type="checkbox"/> Problems with lack of transport <input type="checkbox"/> Price of treatment at the health center or hospital <input type="checkbox"/> Waiting time at the health center or hospital <input type="checkbox"/> Hours of operation <input type="checkbox"/> Poor quality of care at the health center or hospital <input type="checkbox"/> Lack of child care for other children <input type="checkbox"/> Bad weather/road conditions <input type="checkbox"/> Need permission from husband <input type="checkbox"/> Other: _____	
19.	Of the children that you refer, how many do you think actually go to the health center or hospital? <input type="checkbox"/> All <input type="checkbox"/> The majority <input type="checkbox"/> Some <input type="checkbox"/> Few <input type="checkbox"/> None <input type="checkbox"/> Don't know	

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____		Data: ____/____/____
Nome do Entrevistado: _____		
Nome do Centro: _____		Aldeia/ Comunidade: _____
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul		
1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____	
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____	
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____	
20.	In those cases where a mother/caregiver does not comply with a referral, what do you think she does to care for the child's illness? <input type="checkbox"/> Take the child to a traditional healer <input type="checkbox"/> Treat the child at home <input type="checkbox"/> Take the child to a witchdoctor <input type="checkbox"/> Outros: _____ <input type="checkbox"/> Take the child to a pastor	
21.	In your opinion, how can the referral system be improved? <input type="checkbox"/> Increase the use of referral forms <input type="checkbox"/> Provide more training to socorristas <input type="checkbox"/> Increase supervision of socorristas <input type="checkbox"/> Improve communication infrastructure between health posts, health centers and hospital <input type="checkbox"/> Provide emergency transport (ambulance) <input type="checkbox"/> Improve counseling of patients <input type="checkbox"/> Establish a referral coordinator in each health center and hospital <input type="checkbox"/> Other: _____	

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____	Data: ____/____/____
Nome do Entrevistado: _____	
Nome do Centro: _____ Aldeia/ Comunidade: _____	
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul	
1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____
22.	Are there some cases which cannot be treated at this facility that you think should be treated at this facility? <input type="checkbox"/> Yes <input type="checkbox"/> No→GO TO 24 <input type="checkbox"/> Don't know→GO TO 24
23.	Why have you not been able to treat patients at this facility? (check all that apply). <input type="checkbox"/> Stock out of medicines <input type="checkbox"/> Lack of beds or improper facilities <input type="checkbox"/> Lack of or broken equipment <input type="checkbox"/> Lack of training on how to treat certain illnesses <input type="checkbox"/> Other _____

22. Why did you think some mothers did not comply with your referral?

23. What would make it easier for mothers to comply with the referrals?

**Form 3 Evaluation of the Referral System- Health Post
Chibuto District, Gaza Province, Mozambique**

Entrevistador: _____	Data: ____/____/____
Nome do Entrevistado: _____	
Nome do Centro: _____	Aldeia/ Comunidade: _____
Região: <input type="checkbox"/> Chibuto Norte <input type="checkbox"/> Chibuto Sul	

1.	Quantas crianças com idade inferior a 5 anos foram examinadas por você no último mes? [[Por favor, indique o número]]: _____
2.	Quantas destas crianças foram referidas pelo voluntário de Vuronga? [[Por favor, indique o número]]: _____
3.	Quantas crianças com idade inferior a cinco anos você referiu que precisavam de mais cuidados? [[Por favor, indique o número]]: _____

24. What can be done to help you make referrals?

**Formulário 4: Avaliação do Sistema de Referência- Centro de Saúde ou Hospital
Distrito de Chibuto, Provincia de Gaza, Moçambique (Form 4: Evaluation of the Referral System--Health
Center or Hospital)**

Interviewer: _____ Date: ____/____/____	
Name of Interviewee: _____	
Health Care Worker: <input type="checkbox"/> Auxiliary Nurse <input type="checkbox"/> Professional Nurse	
<input type="checkbox"/> Medical Assistant <input type="checkbox"/> Other _____	
Name of Facility: _____ Community: _____	
Type of Facility: <input type="checkbox"/> Health Center <input type="checkbox"/> Rural Hospital	
Region: <input type="checkbox"/> Chibuto North <input type="checkbox"/> Chibuto South	
1.	How many children under the age of 5 did you see at your health facility in the last month? [[Please specify the number]]: _____
2.	How many of these children were referred by a Socorrista (MOH health post) or nurse at a health center? [[Please specify the number]]: _ Socorristas: _____ Centro de Saúde: _____
3.	In the past month, what were the most common illnesses that children were referred to the health center or hospital for treatment? <input type="checkbox"/> Diarrhea <input type="checkbox"/> Pneumonia <input type="checkbox"/> Malaria <input type="checkbox"/> Measles <input type="checkbox"/> Malnutrition <input type="checkbox"/> Other illness: _____
4.	In the last month, how many were admitted to the health center or hospital? [[Please specify the number]]: _ _____
5.	Which facility do you normally refer children under five to? [[Please indicate the name of the referral facility]]: _____
6.	How far is this referral facility from here? <input type="checkbox"/> Less than 2-3 km <input type="checkbox"/> Between 3-5 km <input type="checkbox"/> Between 5-10 km <input type="checkbox"/> Between 10- 20 km <input type="checkbox"/> More than 20 km

7.	<p>In your opinion, were the referrals that you received from the health post or health center:</p> <p><input type="checkbox"/> Correctly referred <input type="checkbox"/> Sometimes correctly referred</p> <p><input type="checkbox"/> Incorrectly referred <input type="checkbox"/> No opinion</p>
8.	<p>Of the children that were referred, how many brought a referral slip?</p> <p>[[Please specify the number]]: _____</p>
9.	<p>In your opinion, do you think referral slips are useful?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
10.	<p>In your opinion are referrals for children under 5 given priority at the health center or hospital?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
11	<p>Do you usually fill out a referral feedback form and give it to the mother to give back to the Socorrista or health post?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>

12	<p>In your opinion, why do you think that some mothers/caregivers do not take their child to the referral site?</p> <p><input type="checkbox"/> Cost of transport</p> <p><input type="checkbox"/> Problems with lack of transport</p> <p><input type="checkbox"/> Cost of treatment at health center or hospital</p> <p><input type="checkbox"/> Waiting time at health center or hospital</p> <p><input type="checkbox"/> Hours of operation</p> <p><input type="checkbox"/> Poor quality of care at health center or hospital</p> <p><input type="checkbox"/> Lack of child care for other children</p> <p><input type="checkbox"/> Poor weather/road conditions</p> <p><input type="checkbox"/> Need permission from husband</p> <p><input type="checkbox"/> Other: _____</p>
13	<p>Of the children that you refer, how many do you think actually go to the hospital?</p> <p><input type="checkbox"/> All <input type="checkbox"/> The majority <input type="checkbox"/> Some</p> <p><input type="checkbox"/> Few <input type="checkbox"/> None <input type="checkbox"/> Don't know</p>
14	<p>Nos casos onde uma mãe/responsável não obedece à indicação dada, o que é que pensa que ela faz para tratar da doença da criança?</p> <p><input type="checkbox"/> Leva a criança a um medico tradicional <input type="checkbox"/> Trata a criança em casa</p> <p><input type="checkbox"/> Leva a criança ao feitiçeiro <input type="checkbox"/> Outros: _____</p> <p><input type="checkbox"/> Leva a criança ao pastor</p>
15	<p>In your opinion, how can the referral system be improved?</p> <p><input type="checkbox"/> Increase the use of referral forms</p> <p><input type="checkbox"/> Provide more training to socorristas</p> <p><input type="checkbox"/> Increase supervision of socorristas</p> <p><input type="checkbox"/> Improve communication infrastructure between health centers and hospitals</p> <p><input type="checkbox"/> Provide emergency transport (ambulance)</p> <p><input type="checkbox"/> Improve counseling of patients</p> <p><input type="checkbox"/> Establish a referral coordinator in each health center and hospital</p> <p><input type="checkbox"/> Other: _____</p>

16	<p>Are there cases that cannot be treated at this facility (i.e. you have to refer to a higher level facility) that you think should be treated at this facility?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 20 <input type="checkbox"/> Don't know → GO TO 20</p>
17	<p>Why have you not been able to treat patients at this facility? (check all that apply).</p> <p><input type="checkbox"/> Stock out of medicines <input type="checkbox"/> Lack of beds or improper facilities</p> <p><input type="checkbox"/> Lack of or broken equipment <input type="checkbox"/> Lack of training on how to treat certain illnesses</p> <p><input type="checkbox"/> Other _____</p>
18	<p>Of the sick people who come to this facility from the villages, how many of these could have been easily treated by the Socorrista at the village health post? (if at Rural Hospital, add: "or at the health center")?</p> <p><input type="checkbox"/> All <input type="checkbox"/> The majority <input type="checkbox"/> Some</p> <p><input type="checkbox"/> Few <input type="checkbox"/> None → GO TO 22 <input type="checkbox"/> Don't know</p>
19	<p>What are some of the reasons why you think people from the villages come to this facility instead of using the village health post or health facilities closer to them?</p> <p><input type="checkbox"/> They don't have to pay a fee for consultation at this facility</p> <p><input type="checkbox"/> They don't trust the skills of the Socorrista</p> <p><input type="checkbox"/> The facility or Socorrista is not open or available when they need it</p> <p><input type="checkbox"/> Lack of proper facilities/equipment at the health posts</p> <p><input type="checkbox"/> Other: _____</p>
20	<p>I am going to read you a statement and you tell me which of the following responses you agree with the most. "The number of people who come to this facility with mild illness who could have sought help at a lower level care facility prohibits my ability to provide better care for those who really need it."</p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Somewhat agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>

21. In your opinion, what type of improvements can be made to ensure that socorristas make correct referrals?

22. In your opinion, what would make it easier for mothers to comply with referrals?

23. What can be done to help you make referrals?

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

Surveyor Name: _____ Today's date: / / DD MM YY Type of facility: <input type="checkbox"/> Health Center <input type="checkbox"/> Hospital Name of facility: _____ District: _____ Region: <input type="checkbox"/> Chibuto North <input type="checkbox"/> Chibuto South	
Child's name : _____ Age: (months/days) _____ Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female Caretaker's Name: _____ Caretaker's address: Village: _____ District: _____	
1.	Record the child's presenting complaint: [[Check all that apply.]] <input type="checkbox"/> Diarrhea/dehydration <input type="checkbox"/> Vomiting <input type="checkbox"/> Bloody stool <input type="checkbox"/> Vomiting everything <input type="checkbox"/> Fever/malaria <input type="checkbox"/> Anemia/malnutrition <input type="checkbox"/> Convulsions <input type="checkbox"/> Measles <input type="checkbox"/> Ear problem <input type="checkbox"/> Lethargy <input type="checkbox"/> Not eating/drinking anything <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Fast/difficult breathing/cough/pneumonia
2.	"Is <<NAME OF CHILD>> hospitalized?" <input type="checkbox"/> Yes How many days? _____ <input type="checkbox"/> No
3.	"How far back did you first notice that <<CHILD>> was sick?" Days _____
4.	"Have you sought help for <<CHILD>> from somewhere else for the current problem?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 5
4.1	If "Yes," ask: "Where was the child seen?" [[Check all that apply.]] <input type="checkbox"/> Hospital <input type="checkbox"/> Community health worker <input type="checkbox"/> Health Center–MOH <input type="checkbox"/> Drug vendor/pharmacy <input type="checkbox"/> Private practitioner <input type="checkbox"/> Religious leader <input type="checkbox"/> NGO facility <input type="checkbox"/> Traditional healer <input type="checkbox"/> Community health nurse <input type="checkbox"/> Other, specify: _____

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

4.2	<p>“Did any provider tell you to bring the child here to this facility?”</p> <p><input type="checkbox"/> Yes→ Which provider? _____ <input type="checkbox"/> No →GO TO 5</p>
4.2.1	<p>“When did the health provider tell you to bring the child here?”</p> <p>[[Prompt the caretaker.]]</p> <p><input type="checkbox"/> Immediately or same day</p> <p><input type="checkbox"/> If the child gets sicker</p> <p><input type="checkbox"/> Didn't specify</p> <p><input type="checkbox"/> Don't remember</p> <p><input type="checkbox"/> Other _____</p>
4.3	<p>“Were you given a referral slip by the health provider?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 5 <input type="checkbox"/> Don't know →GO TO 5</p>
4.3.1	<p>“Did you give the referral slip to the health worker?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No, “Why not?” _____</p>
5.	<p>“What transport did you use to get here?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Bus/minibus <input type="checkbox"/> Walked</p> <p><input type="checkbox"/> Ambulance/facility vehicle <input type="checkbox"/> Animal/cart</p> <p><input type="checkbox"/> Taxi <input type="checkbox"/> Boat</p> <p><input type="checkbox"/> Private car <input type="checkbox"/> Bicycle</p> <p><input type="checkbox"/> Motorbike <input type="checkbox"/> Other, specify: _____</p>
6.	<p>“How long did it take you to get here from your home?” Minutes _____</p>
7.	<p>“How much money will you have spent to come here and return to your home on:</p> <p>[[Prompt the caretaker.]]</p> <p>a. Transportation [[Metics]] _____</p> <p>b. Lodging/food _____</p> <p>c. Medical services (consultation, admission, drugs, etc.)?” _____</p> <p>TOTAL: _____ [[Can leave blank or complete at close of interview.]]</p>
7.1	<p>“How were you able to gather this money?” [[Prompt the caretaker.]]</p> <p><input type="checkbox"/> Very easily <input type="checkbox"/> With some difficulty</p> <p><input type="checkbox"/> Easily <input type="checkbox"/> With a lot of difficulty</p> <p><input type="checkbox"/> Somewhat easily</p>

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

11.3	<p>“Do you think referral is necessary for <<CHILD>>?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
11.4	<p>“Will you be able to take the child to the referral site today?”</p> <p><input type="checkbox"/> Yes →GO TO 13 <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
11.4.1	<p>“What prevents you from taking the child to the hospital today?”</p> <p><input type="checkbox"/> Transport costs <input type="checkbox"/> Need permission from husband</p> <p><input type="checkbox"/> Distance <input type="checkbox"/> Bad experience there before</p> <p><input type="checkbox"/> Lack of transport <input type="checkbox"/> Long waiting times</p> <p><input type="checkbox"/> Other children to take care of <input type="checkbox"/> Weather</p> <p><input type="checkbox"/> No drugs at referral site <input type="checkbox"/> Other, specify: _____</p>
12.	<p>“If you are told now to take your child to <<NAME OF NEAREST REFERRAL FACILITY>>, would you be able to do so?”</p> <p><input type="checkbox"/> Yes →GO TO 13 <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
12.1	<p>“What would be the reasons for not taking your child to <<NAME OF NEAREST FACILITY >>?” [[Probe: Is there any other reason?]]</p> <p><input type="checkbox"/> Transport costs <input type="checkbox"/> Other children to take care of</p> <p><input type="checkbox"/> Distance <input type="checkbox"/> Need permission from husband</p> <p><input type="checkbox"/> Lack of transport <input type="checkbox"/> Bad experience there before</p> <p><input type="checkbox"/> Weather <input type="checkbox"/> Long waiting times</p> <p><input type="checkbox"/> No drugs at referral site <input type="checkbox"/> Other, specify: _____</p>
13	<p>“In the last six months have you had a child under five years of age referred to another facility (provider)?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 14 <input type="checkbox"/> Don't remember →GO TO 14</p>
13.1	<p>“At that time were you able to take your child to that facility (provider)?”</p> <p><input type="checkbox"/> Yes →GO TO 14 <input type="checkbox"/> No <input type="checkbox"/> Don't remember →GO TO 14</p>

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

13.2	<p>“Why were you not able to take the child to the facility (provider) at that time?”</p> <p>[[Check all that apply.]]</p> <p><input type="checkbox"/> Non-transport costs <input type="checkbox"/> Other children to take care of</p> <p><input type="checkbox"/> Transport costs <input type="checkbox"/> Need permission from husband</p> <p><input type="checkbox"/> Distance <input type="checkbox"/> Bad experience there before</p> <p><input type="checkbox"/> Lack of transport <input type="checkbox"/> Long waiting times</p> <p><input type="checkbox"/> Weather <input type="checkbox"/> Other, specify: _____</p> <p><input type="checkbox"/> No drugs at referral site</p>
14.	<p>“When you arrive at a hospital with a referral slip, are you usually given priority when you arrive/are you seen sooner?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
15.	<p>“Did you/ will you need to pay a fee at this health facility for this visit?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 28 <input type="checkbox"/> Don't know</p>
16.	<p>“Did you know the amount that you would be charged before coming to the health facility?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 18 <input type="checkbox"/> Don't know → GO TO 18</p>
17.	<p>“How did you find out about the fee?”</p> <p><input type="checkbox"/> Friend/Neighbor <input type="checkbox"/> Socorrista verbally told you</p> <p><input type="checkbox"/> Family Member <input type="checkbox"/> Information posted in health post</p> <p><input type="checkbox"/> VHC community meeting . <input type="checkbox"/> Information posted in health post</p> <p><input type="checkbox"/> Vurhonga volunteer <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Information posted in health post</p>
18.	<p>“What were you told was the initial fee in order to be seen at this facility?” _____Mt</p>
19.	<p>“Were you able to pay the fee?” <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 21</p>
20.	<p>“How did you pay for the fee at the health facility?”</p> <p><input type="checkbox"/> Borrowed money <input type="checkbox"/> Sold land</p> <p><input type="checkbox"/> Was able to pay cash <input type="checkbox"/> Sold other assets: _____</p> <p><input type="checkbox"/> Sold livestock <input type="checkbox"/> Community (health insurance)</p> <p><input type="checkbox"/> Sold crops <input type="checkbox"/> Don't remember</p> <p><input type="checkbox"/> Sold possessions (i.e. clothes, jewelry, household items)</p> <p align="center">GO TO 22</p>

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

21.	<p>“If you were unable to pay the fee did you:” [[Circle all that apply.]]</p> <p><input type="checkbox"/> Delay treatment for child <input type="checkbox"/> Seek treatment with traditional healer</p> <p><input type="checkbox"/> Treat child at home <input type="checkbox"/> Did not seek treatment</p> <p><input type="checkbox"/> Seek treatment with pastor <input type="checkbox"/> Other: _____</p>
22.	<p>“Who collected the fee at the health facility?”</p> <p><input type="checkbox"/> Socorrista <input type="checkbox"/> Receptionist</p> <p><input type="checkbox"/> Nurse <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Auxiliary Nurse</p>
23.	<p>“Did you pay a separate fee for prescription medication?”</p> <p><input type="checkbox"/> Yes → Amount: _____ Mt. <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
24.	<p>“Did you pay a separate fee for tests?”</p> <p><input type="checkbox"/> Yes → Amount: _____ Mt. <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
25.	<p>“How did you pay for the cost of the medication or tests?”</p> <p><input type="checkbox"/> Borrowed money <input type="checkbox"/> Sold land</p> <p><input type="checkbox"/> Was able to pay cash <input type="checkbox"/> Sold other assets: _____</p> <p><input type="checkbox"/> Sold livestock <input type="checkbox"/> Community (health insurance)</p> <p><input type="checkbox"/> Sold crops <input type="checkbox"/> Don't remember</p> <p><input type="checkbox"/> Sold possessions (i.e. clothes, jewelry, household items)</p>
26.	<p>“So in total, how many different payments did you make during this visit?”</p> <p><input type="checkbox"/> None <input type="checkbox"/> Two <input type="checkbox"/> Four <input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> One <input type="checkbox"/> Three <input type="checkbox"/> Five <input type="checkbox"/> Other _____</p>
27.	<p>“Did you receive a receipt from the health facility staff when you paid the fee?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
28.	<p>“What is your opinion of the fees charged at the health facility?”</p> <p><input type="checkbox"/> The cost of the fee is too high <input type="checkbox"/> The cost of the fee is too low</p> <p><input type="checkbox"/> The cost of the fee is fair <input type="checkbox"/> No opinion</p>
29.	<p>“Did the community health post/ health center/ hospital allow you to pay less than the normal amount for health care?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 31 <input type="checkbox"/> Don't know → GO TO 31</p>

Form 5A: Inpatient Caregiver Interview ((Hospital/CSU/CSUII))

40.	<p>“Do you pay an amount of money into the community-shared account that is designated for paying for health expenses?”</p> <p><input type="checkbox"/> Yes →GO TO 42 <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
41.	<p>“Would you be interested in paying a pre-determined fee into a community fund to pay for health services?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maybe, depends on the amount <input type="checkbox"/> Don't know</p> <p align="center">GO TO 43</p>
42.	<p>“How do you feel about the amount that you pay into the community-shared account?”</p> <p><input type="checkbox"/> The cost of the fee is too high <input type="checkbox"/> The cost of the fee is too low</p> <p><input type="checkbox"/> The cost of the fee is fair <input type="checkbox"/> No opinion</p>
43.	<p>“How do you feel about the care/treatment <<CHILD>> received today?”</p> <p>[[Prompt the caretaker.]]</p> <p><input type="checkbox"/> Very satisfied <input type="checkbox"/> Somewhat satisfied <input type="checkbox"/> No opinion</p> <p><input type="checkbox"/> Satisfied <input type="checkbox"/> Not satisfied at all</p>
44.	<p>“If <<CHILD>> does not get better, what will you do?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Return to this facility <input type="checkbox"/> Self-medicate</p> <p><input type="checkbox"/> Go to another facility/provider <input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> Go to a private clinic/private practitioner <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Go to a traditional healer</p>

45. “What improvements would you like to see or what else can be done for <<CHILD>>?”

46. “If your child were referred to another facility, what could be done to make it easier for you to go?”

Thank you for your cooperation and for your time. Your participation will help the Mozambique Ministry of Health to improve care for children in your community.

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

Surveyor Name: _____ Today's date: / / DD MM YY	
Type of facility: <input type="checkbox"/> Health Center <input type="checkbox"/> Hospital	
Name of facility: _____ District: _____	
Region: <input type="checkbox"/> Chibuto North <input type="checkbox"/> Chibuto South	
Child's name : _____ Age: (months/days) _____	
Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female Caretaker's Name: _____	
Caretaker's address: Village: _____ District: _____	
1.	Record the child's presenting complaint: [[Check all that apply.]] <input type="checkbox"/> Diarrhea/dehydration <input type="checkbox"/> Vomiting <input type="checkbox"/> Bloody stool <input type="checkbox"/> Vomiting everything <input type="checkbox"/> Fever/malaria <input type="checkbox"/> Anemia/malnutrition <input type="checkbox"/> Convulsions <input type="checkbox"/> Measles <input type="checkbox"/> Ear problem <input type="checkbox"/> Lethargy <input type="checkbox"/> Not eating/drinking anything <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Fast/difficult breathing/cough/pneumonia
2.	"How far back did you first notice that <<CHILD>> was sick?" Days _____
3.	"Have you sought help for <<CHILD>> from somewhere else for the current problem?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 5
3.1	If "Yes," ask: "Where was the child seen?" [[Check all that apply.]] <input type="checkbox"/> Hospital <input type="checkbox"/> Community health worker <input type="checkbox"/> Health Center–MOH <input type="checkbox"/> Drug vendor/pharmacy <input type="checkbox"/> Private practitioner <input type="checkbox"/> Religious leader <input type="checkbox"/> NGO facility <input type="checkbox"/> Traditional healer <input type="checkbox"/> Community health nurse <input type="checkbox"/> Other, specify: _____

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

3.2	<p>“Did any provider tell you to bring the child here to this facility?”</p> <p><input type="checkbox"/> Yes→ Which provider?_____ <input type="checkbox"/> No →GO TO 4</p>
3.2.1	<p>“When did the health provider tell you to bring the child here?”</p> <p>[[Prompt the caretaker.]]</p> <p><input type="checkbox"/> Immediately or same day</p> <p><input type="checkbox"/> If the child gets sicker</p> <p><input type="checkbox"/> Didn't specify</p> <p><input type="checkbox"/> Don't remember</p> <p><input type="checkbox"/> Other _____</p>
3.3	<p>“Were you given a referral slip by the health provider?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 4 <input type="checkbox"/> Don't know →GO TO 4</p>
3.3.1	<p>“Did you give the referral slip to the health worker?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No, “Why not?” _____</p>
4.	<p>“What transport did you use to get here?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Bus/minibus <input type="checkbox"/> Walked</p> <p><input type="checkbox"/> Ambulance/facility vehicle <input type="checkbox"/> Animal/cart</p> <p><input type="checkbox"/> Taxi <input type="checkbox"/> Boat</p> <p><input type="checkbox"/> Private car <input type="checkbox"/> Bicycle</p> <p><input type="checkbox"/> Motorbike <input type="checkbox"/> Other, specify: _____</p>
5.	<p>“How long did it take you to get here from your home?” Minutes _____</p>
6.	<p>“Why did you choose to come to this facility (provider) at this time?”</p> <p>[[Check all that apply. PROBE: Is there another reason?]]</p> <p><input type="checkbox"/> Convenience <input type="checkbox"/> Doctors are here</p> <p><input type="checkbox"/> Trust <input type="checkbox"/> Instructed to do so</p> <p><input type="checkbox"/> Cost <input type="checkbox"/> Child did not improve</p> <p><input type="checkbox"/> Better care <input type="checkbox"/> Drugs are here</p> <p><input type="checkbox"/> Always come here <input type="checkbox"/> Other, specify: _____</p> <p><input type="checkbox"/> Closest facility</p>

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

7.	<p>“Are there other health providers/facilities that you could use that are closer to your home?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 8 <input type="checkbox"/> Don't know → GO TO 8</p>
7.1	<p>“What type of providers are closer to your community?”</p> <p>[[Check all that apply. PROBE: Is there anything else?]]</p> <p><input type="checkbox"/> Hospital <input type="checkbox"/> Traditional healer</p> <p><input type="checkbox"/> MOH Health center <input type="checkbox"/> Drug seller/pharmacy</p> <p><input type="checkbox"/> NGO facility <input type="checkbox"/> Religious leader</p> <p><input type="checkbox"/> Private practitioner <input type="checkbox"/> Other, specify: _____</p> <p><input type="checkbox"/> Community health worker</p>
7.2	<p>“Of those providers, how much time does it take you to reach the closest provider?”</p> <p>Minutes _____</p>
8.	<p>“Is there a community health post or Socorrista in your aldeia or an aldeia nearby?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
9.	<p>“Do you know the fee for service charged by the health post/Socorrista?”</p> <p><input type="checkbox"/> Yes → What is the amount? _____ <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
10.	<p>“Have you used or would you use the community health post/Socorrista?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 12 <input type="checkbox"/> Don't know → GO TO 13</p>
11.	<p>“What are your reasons for using the community health post/Socorrista?”</p> <p><input type="checkbox"/> Close to home <input type="checkbox"/> Socorrista is well trained/knowledgeable</p> <p><input type="checkbox"/> Fee is reasonable <input type="checkbox"/> Can see Socorrista at any time</p> <p><input type="checkbox"/> Medicine <input type="checkbox"/> Other, specify: _____</p> <p style="text-align: center;">GO TO 13</p>
12.	<p>“What are your reasons for not using the community health post/Socorrista?”</p> <p><input type="checkbox"/> Lack of proper facilities/equipment <input type="checkbox"/> Too far from home</p> <p><input type="checkbox"/> They don't have medication <input type="checkbox"/> Long waiting times</p> <p><input type="checkbox"/> Fee is too high/cannot pay <input type="checkbox"/> Socorrista is not skilled</p> <p><input type="checkbox"/> Health Post is often not open or socorrista is unreachable <input type="checkbox"/> Other, specify: _____</p>

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

13.	<p>“If you are told now to take your child to <<NAME OF NEAREST REFERRAL FACILITY>>, would you be able to do so?”</p> <p><input type="checkbox"/> Yes →GO TO 14 <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
13.1	<p>“What would be the reasons for not taking your child to <<NAME OF NEAREST FACILITY >>?” [[Probe: Is there any other reason?]]</p> <p><input type="checkbox"/> Transport costs <input type="checkbox"/> Other children to take care of <input type="checkbox"/> Distance <input type="checkbox"/> Need permission from husband <input type="checkbox"/> Lack of transport <input type="checkbox"/> Bad experience there before <input type="checkbox"/> Weather <input type="checkbox"/> Long waiting times <input type="checkbox"/> No drugs at referral site <input type="checkbox"/> Other, specify: _____</p>
14	<p>“In the last six months have you had a child under five years of age referred to another facility (provider)?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No →GO TO 16 <input type="checkbox"/> Don't remember →GO TO 16</p>
14.1	<p>“At that time were you able to take your child to that facility (provider)?”</p> <p><input type="checkbox"/> Yes →GO TO 16 <input type="checkbox"/> No <input type="checkbox"/> Don't remember →GO TO 16</p>
14.2	<p>“Why were you not able to take the child to the facility (provider) at that time?”</p> <p>[[Check all that apply.]]</p> <p><input type="checkbox"/> Non-transport costs <input type="checkbox"/> Other children to take care of <input type="checkbox"/> Transport costs <input type="checkbox"/> Need permission from husband <input type="checkbox"/> Distance <input type="checkbox"/> Bad experience there before <input type="checkbox"/> Lack of transport <input type="checkbox"/> Long waiting times <input type="checkbox"/> Weather <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> No drugs at referral site</p>
15.	<p>“When you arrive at a hospital with a referral slip, are you usually given priority when you arrive/are you seen sooner?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
16.	<p>“Do you know who determines whether you have to pay a fee or can be exempted?”</p> <p><input type="checkbox"/> Community leader <input type="checkbox"/> Chefe de Saude <input type="checkbox"/> Village Health Committee <input type="checkbox"/> Other _____ <input type="checkbox"/> Pastor <input type="checkbox"/> Don't know</p>
17.	<p>“What fee cost would cause you to <i>not</i> take your child to a health facility?”</p> <p>Please indicate ceiling amount: _____ Mt.</p>

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

18.	<p>“Do you have a Village Health Committee (VHC) in your community?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
19.	<p>“Does your community or VHC have an account designated for paying for health expenses in the community?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 26 <input type="checkbox"/> Don't know → GO TO 26</p>
20.	<p>“Do you know what type of medical care this community-shared account pays for?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 23 <input type="checkbox"/> Don't know → GO TO 23</p>
21.	<p>“If yes, what does it pay for?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Cost of consultation visits <input type="checkbox"/> Cost of emergency transport</p> <p><input type="checkbox"/> Cost of hospitalization <input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> Cost of medication <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Cost of tests</p>
22.	<p>“What types of services are included with payment of the fee?” [[Check all that apply.]]</p> <p><input type="checkbox"/> Primary health care <input type="checkbox"/> Emergency Care</p> <p><input type="checkbox"/> Health care for children 0-4 years <input type="checkbox"/> Family planning</p> <p><input type="checkbox"/> Antenatal care <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Delivery/Maternal Care</p>
23.	<p>“Did you or will you receive money from this account or community fund for the cost of this visit?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 25 <input type="checkbox"/> Don't know → GO TO 25</p>
24.	<p>“Are you required to pay back to the community the money you were given?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
25.	<p>“Do you pay an amount of money into the community-shared account that is designated for paying for health expenses?”</p> <p><input type="checkbox"/> Yes → GO TO 26 <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
25.1	<p>“How do you feel about the amount that you pay into the community-shared account?”</p> <p><input type="checkbox"/> The cost of the fee is too high <input type="checkbox"/> The cost of the fee is too low</p> <p><input type="checkbox"/> The cost of the fee is fair <input type="checkbox"/> No opinion</p>
26.	<p>“Would you be interested in paying a pre-determined fee into a community fund to pay for health services?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maybe, depends on the amount <input type="checkbox"/> Don't know</p>

Form 5B: Interview with Caregiver in Waiting Room of Level III Health Centers: Chaimite, Maivene, Chipadja, Chimundu, Nwavaquene, Muxaxane

Thank you for your cooperation and for your time. Your participation will help the Mozambique Ministry of Health to improve care for children in your community.

Form 5C: Exit Interview with Caregiver: Health Center or Hospital

3.3	"Do you think that referral for <<CHILD>> is necessary?" <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
3.4	Will you be able to take your child to the referral facility today? <input type="checkbox"/> Yes → GO TO 4 <input type="checkbox"/> No <input type="checkbox"/> Don't know
3.4.1	"What would be the reasons for not taking your child to <<NAME OF NEAREST FACILITY >>?" [[Probe: Is there any other reason?]] <input type="checkbox"/> Transport costs <input type="checkbox"/> Other children to take care of <input type="checkbox"/> Distance <input type="checkbox"/> Need permission from husband <input type="checkbox"/> Lack of transport <input type="checkbox"/> Bad experience there before <input type="checkbox"/> Weather <input type="checkbox"/> Long waiting times <input type="checkbox"/> No drugs at referral site <input type="checkbox"/> Other, specify: _____
4.	"Did you need to pay a fee at this health facility for this visit?" <input type="checkbox"/> Yes <input type="checkbox"/> No→ GO TO 17 <input type="checkbox"/> Don't know
5.	"Did you know the amount that you would be charged before coming to the health facility?" <input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 7 <input type="checkbox"/> Don't know → GO TO 7
6.	"How did you find out about the fee?" <input type="checkbox"/> Friend/Neighbor <input type="checkbox"/> Socorrista verbally told you <input type="checkbox"/> Family Member <input type="checkbox"/> Information posted in health post <input type="checkbox"/> VHC community meeting . <input type="checkbox"/> Information posted in health post <input type="checkbox"/> Vurhonga volunteer <input type="checkbox"/> Other _____ <input type="checkbox"/> Information posted in health post
7.	"What were you told was the initial fee in order to be seen at this facility?" _____Mt
8.	"Were you able to pay the fee?" <input type="checkbox"/> Yes <input type="checkbox"/> No→ GO TO 10
9.	"How did you pay for the fee at the health facility?" <input type="checkbox"/> Borrowed money <input type="checkbox"/> Sold land <input type="checkbox"/> Was able to pay cash <input type="checkbox"/> Sold other assets: _____ <input type="checkbox"/> Sold livestock <input type="checkbox"/> Community (health insurance) <input type="checkbox"/> Sold crops <input type="checkbox"/> Don't remember <input type="checkbox"/> Sold possessions (i.e. clothes, jewelry, household items) <p align="center">GO TO 11</p>

Form 5C: Exit Interview with Caregiver: Health Center or Hospital

10.	<p>“If you were unable to pay the fee did you:” [[Check all that apply.]]</p> <p><input type="checkbox"/> Delay treatment for child <input type="checkbox"/> Seek treatment with traditional healer</p> <p><input type="checkbox"/> Treat child at home <input type="checkbox"/> Did not seek treatment</p> <p><input type="checkbox"/> Seek treatment with pastor <input type="checkbox"/> Other: _____</p>
11.	<p>“Who collected the fee at the health facility?”</p> <p><input type="checkbox"/> Socorrista <input type="checkbox"/> Receptionist</p> <p><input type="checkbox"/> Nurse <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Auxiliary Nurse</p>
12.	<p>“Did you pay a separate fee for prescription medication?”</p> <p>(1) Yes → Amount: _____ Mt. (2) No (88) Don't know</p>
13.	<p>“Did you pay a separate fee for tests?”</p> <p>(1) Yes → Amount: _____ Mt. (2) No (88) Don't know</p>
14.	<p>“How did you pay for the cost of the medication or tests?” (88) Not Applicable</p> <p><input type="checkbox"/> Borrowed money <input type="checkbox"/> Sold land</p> <p><input type="checkbox"/> Was able to pay cash <input type="checkbox"/> Sold other assets: _____</p> <p><input type="checkbox"/> Sold livestock <input type="checkbox"/> Community (health insurance)</p> <p><input type="checkbox"/> Sold crops <input type="checkbox"/> Don't remember</p> <p><input type="checkbox"/> Sold possessions (i.e. clothes, jewelry, household items)</p>
15.	<p>“So in total, how many different payments did you make during this visit?”</p> <p><input type="checkbox"/> None <input type="checkbox"/> Two <input type="checkbox"/> Four <input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> One <input type="checkbox"/> Three <input type="checkbox"/> Five <input type="checkbox"/> Other _____</p>
16.	<p>“Did you receive a receipt from the health facility staff when you paid the fee?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>
17.	<p>“What is your opinion of the fees charged at the health facility?”</p> <p><input type="checkbox"/> The cost of the fee is too high <input type="checkbox"/> The cost of the fee is too low</p> <p><input type="checkbox"/> The cost of the fee is fair <input type="checkbox"/> No opinion</p>
18.	<p>“Did the community health post/ health center/ hospital allow you to pay less than the normal amount for health care?”</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No → GO TO 20 <input type="checkbox"/> Don't know → GO TO 20</p>

Form 5C: Exit Interview with Caregiver: Health Center or Hospital

19.	<p>“If yes, how much less were you required to pay?”</p> <p>Please indicate amount of waiver: _____ Mt.</p>
20.	<p>“How do you feel about the care/treatment <<CHILD>> received today?”</p> <p>[[Prompt the caretaker.]]</p> <p> <input type="checkbox"/> Very satisfied <input type="checkbox"/> Somewhat satisfied <input type="checkbox"/> No opinion <input type="checkbox"/> Satisfied <input type="checkbox"/> Not satisfied at all </p>
21.	<p>“If <<CHILD>> does not get better, what will you do?” [[Check all that apply.]]</p> <p> <input type="checkbox"/> Return to this facility <input type="checkbox"/> Self-medicate <input type="checkbox"/> Go to another facility/provider <input type="checkbox"/> Don't know <input type="checkbox"/> Go to a private clinic/private practitioner <input type="checkbox"/> Other _____ <input type="checkbox"/> Go to a traditional healer </p>

22. “What improvements would you like to see or what else can be done for <<CHILD>>?”

23. “If your child were referred to another facility, what could be done to make it easier for you to go?”

Thank you for your cooperation and for your time. Your participation will help the Mozambique Ministry of Health to improve care for children in your community.

Annex B: Training Schedule

Operations Research Part 1- Community Level: Health Post Record Reviews, Interviews with Socorristas, and Focus Groups with Village Health Committees	
Day 1 Morning	Overview of Operations Research - Objectives - Indicators Overview of Data Collection Sequence/Activities
Day 1 Afternoon	Review of Form 1: Record Review
Day 2 Morning	Record Review Practice at 3 Health Posts near Chokwe Review and Discussion of Experience
Day 2 Afternoon	Review of Form 2: Interview with Health Worker on User Fees Review of Form 3: Interview with Socorrista on Referrals Review of Form 6: Focus Group Guide for Village Health Committee on User Fees, Referral System, and Community Health Funds
Day 3 Morning	Interview Practice (Forms 2 and 3) Review and Discussion of Experience
Day 3 Afternoon	Round 1 of Focus Group Practice (Form 6) Review and Discussion of Experience
Day 4 Morning	Round 2 of Focus Group Practice Review and Discussion
Day 4 Afternoon	Distribution and Review of Form Packets, Materials, and Work Assignments Final Comments
April 25- May 9	<i>Community Level Data Collection</i>
Operations Research Part 2- Health Center and Hospital Record Reviews, Interviews with Nurses and Caregivers	
Day 5 Morning	Review of Data Collected; Discussion of any Issues/Problems Review of Part 2 Data Collection Sequence (Handout)
Day 5 Mid Morning	Coordinators Leave for Form 1: Record Review Practice at Health Center in Chokwe Supervisors Review Forms 5A: Inpatient Interviews with Caregivers at the Health Centers and the Rural Hospital
Day 5 Afternoon	Supervisors Caregiver Interview Practice Form 5A
Day 5 Mid Afternoon	Coordinator Review and Discussion on Completion of Record Review Form at Health Center in Chokwe
Day 6 Morning	Supervisors Continue Interview Practice Form 5A Coordinator Review of Form 2: User Fees (Portuguese) and Form 4: Referral System

Day 6 Afternoon	Supervisors Review and Discuss Practice of Caregiver Interview Form 5A Coordinators Practice Interview with Nurse (Forms 2 and 4) Supervisors Review of Outpatient and Exit Interview with Caregivers (Forms 5B and 5C)
Day 7 Morning	Supervisors Practice Using Forms 5B and 5C Coordinator Review and Discussion of Forms Practice
Day 7 Afternoon	Supervisor Review and Discussion of Forms Practice Distribution of Materials and Review of Work Assignments Final Comments/Wrap Up
May 19- June 6	<i>Data Collection at Health Centers and Hospital</i>

Annex C: Research Indicators

OPERATIONS RESEARCH: REFERRAL INDICATORS

1. Total number of children U5 sick visits
 - 32,436 (Includes all children including missing data and over age- it is not possible to separate out how many attended were U5s, nor to pull out the 45 from the “cases” section. By adding Oct-Mar)
2. Total number of children U5 referred
 - 270 (adding all referrals October-March)
 - 269 (adding the referrals total on each “referral” sheet)
 - 236 (total number of records in “cases”)
 - 225 (excludes 11 children without ages and two over 59m, assumes that all cases were referred there were 4 without referral dates)
 - Percentage of children U5 referred (Total number of referrals made)
 - 225/32,436; 0.69%
3. Percentage of children U5 referred who completed the referral process (stratified by referral facility type)
 - 11/225, 4.90%
 - % U5 Referred who complied when referred from the HP = 7/177; 4.0%
 - % U5 Referred who complied when referred from the HC = 4/46; 8.7%
 - % U5 Referred who complied when referred from the RH = 0/2; 0%
 - % U5 Referred who complied with referral to HP 0/2; 0%
 - % U5 Referred who complied with referral to HC 7/100; 7.0%
 - % U5 Referred who complied with referral to RH 4/119; 3.4%
 - % U5 Referred who complied with referral to outside 0/2; 0%
4. Percentage of children seen who were referred to a higher level of care by type of referral health facility
 - Missing = 2/225; 0.9%
 - Referred to HP = 2/225; 0.9%
 - Referred to HC = 100/225; 44.4%
 - Referred to RH = 119/225; 52.9%
 - Referred outside the district = 2/225; 0.9%
 - Referred by the HP = 177/225; 78.7%
 - Referred by the HC = 46/225; 20.4%
 - Referred by the Hospital = 2/225; 0.9%
5. Percentage of referred children who were given referral slip by the health care provider
 - 181/225; 80.4%
 - When referred by Health Post: 133/177; 75.1%
 - When referred by Health Center: 46/46; 100.0%
 - When referred by Hospital: 2/2; 100.0%
6. Percentage of referred children who arrived at the referral facility with a referral slip
 - 6/225; 2.7%
 - Referred by the HP: 1/177; 0.6%

- Referred by the HC: 5/46; 10.9%
- Referred by the Hospital: 0/2; 0%
- Referred to the HP: 0/2; 0%
- Referred to the HC 1/100; 1.0%
- Referred to the RH: 5/119; 4.2%
- Referred outside the district: 0/2; 0%

7. Number of children diagnosed with 5 childhood illnesses (Pneumonia, malnutrition, measles, diarrhea, malaria) – main causes for referral

- Pneumonia, malnutrition, measles, diarrhea, malaria (did not include convulsions or cough) = 151/225; 67.1%
 - Missing = 1/225; 0.4%
 - Anemia = 10/225; 4.4%
 - Convulsions = 3/225; 1.3%
 - Cough = 26/225; 11.6%
 - Diarrhea = 47/225; 20.9%
 - Malaria = 73/225; 32.4%
 - Malnutrition = 14/225; 6.2%
 - Pneumonia = 17/225; 7.6%
 - Other = 34/225; 15.1%

8. Diagnosis of referred children at higher level of care

- Missing information = 214/225; 95.1%
- Malaria = 9/225; 4.0%
- Pneumonia = 1/225; 0.4%
- Other = 1/225; 0.4%

9. Median time elapsed between referral and compliance

- 10 days
- Missing info = 221/225 98.2%
- 8 Days = 1
- 9 Days = 1
- 11 Days = 1
- 62 Days = 1

10. *Median distance to the nearest referral site:

- Median = 17
- 25% = 6.0; 75% = 25.0
- Observations = 37
- Mean = 28.9
- SD = 42.9

11. *Median distance to referral site comparing those who complied with those who did not comply

- Complied (11/225)
 - Observations = 11 (4km = 1; 5km = 3; 8km = 3; 25km = 4)
 - Median Distance = 8km; 25% = 5km; 75% = 25km

- Mean = 13km; standard deviation = 9.6
- Did not comply (213/225)
 - Observations = 213
 - Median = 10km; 25% = 7km; 75% = 25km
 - Mean = 23.6km; SD = 33.17

12. Percentage of children referred a second time

- 0/225; 0%

13. Distribution of referrals by age

- 0-5mo: 44/225; 19.6%
- 6-11m: 15/225; 6.7%
- 12-23m: 28/225; 12.4%
- 24-35m: 39/225; 17.3%
- 36-47m: 28/225; 12.4%
- 48-59m: 71/225; 31.6%

14. Distribution of referrals by sex

- Male = 101/225; 44.9%
- Female = 124/225; 55.1%

15. Median amount charged per visit for children U5:

1. Observations = 196 (0MT=6; 1MT=10; 2MT=6; 5MT=144; 6MT=30)
2. Median = 5MT (25% = 5MT; 75% = 5MT)
3. Mean = 4.7MT; SD = 1.4

16. Median amount paid per visit for children U5:

1. Observations = 182 (0MT=16; 1MT=10; 3MT=1; 5MT=125; 6MT=30)
2. Median = 5MT (25% = 5MT; 75% = 5MT)
3. Mean = 4.5MT; SD = 1.47

17. Percentage exempt from payment:

1. Exempt = 38/225; 16.9%
2. Missing = 9/225; 4.0%
3. No = 178/225; 79.1%

18. Percentage given receipt for payment:

- Receipt = 54/225; 24.0%
- Missing = 23/225; 10.2%
- No = 148/225; 65.8%

Annex 19. Project Data Form

Child Survival and Health Grants Program Project Summary

Dec-30-2009

World Relief Corporation (Mozambique)

General Project Information

Cooperative Agreement

Number:

GHS-A-00-04-00011

WRC Headquarters

Technical Backstop:

Melanie Morrow

WRC Headquarters

Technical Backstop

Backup:

Field Program Manager:

Pieter Ernst

Midterm Evaluator:

Muriel Elmer

Final Evaluator:

Henry Perry

Headquarter Financial

Contact:

Project Dates:

9/30/2004 - 9/29/2009 (FY04)

Project Type:

Expanded Impact

USAID Mission Contact:

Jeri Dible

Project Web Site:

Field Program Manager

Name: Pieter Ernst

Address: Mozambique

Phone:

Fax:

E-mail: pernst@wr.org

Skype Name:

Alternate Field Contact

Name: Pieter Ernst (Project Director)

Address: CP 40
Chokwe , Gaza Province Mozambique

Phone: 258-21-20154

Fax: 258-21-20729

E-mail: pernst@wr.org

Skype Name:

Grant Funding Information

USAID Funding: \$2,500,000 **PVO Match:** \$833,333

General Project Description

The goal of this expanded impact project is to scale up the Care Group (CG) model for child survival interventions.

The expanded impact program will strengthen the health system capacity

to improve quality and coverage of C-IMCI services through training, drug management, supervision and by establishing effective health information systems; develop sustainable community based mechanisms to improve prevention and careseeking practices for C-IMCI; and establish a Scale 2 learning center for C-IMCI training The major interventions are: control of diarrheal diseases, malaria prevention and case management, pneumonia case management, immunization, nutrition, exclusive breastfeeding, and HIV/AIDS.

Project Location

Latitude: -18.57 Longitude: 34.67

Project Location Types: (None Selected)

Levels of Intervention: (None Selected)

Province(s): --

District(s): Chibuto, Chicualacuala, Chigubo, Massangena, and Massingir.

Sub-District(s): --

Operations Research Information

OR Project Title: --

Cost of OR Activities: --

Research Partner(s): --

OR Project Description: --

Partners

Ministry of Health (Collaborating Partner) \$0

Strategies

Social and Behavioral Change Strategies: Group interventions
Interpersonal Communication

Tools/Methodologies: Rapid Health Facility Assessment
 LQAS
 Participatory Rapid/Rural Appraisal

Capacity Building

Local Partners: Traditional Healers
 Dist. Health System
 Health Facility Staff
 Other National Ministry
 Health CBOs
 Faith-Based Organizations (FBOs)

Interventions & Components

Immunizations (10%) IMCI Integration CHW Training
 HF Training

- Classic 6 Vaccines
- Vitamin A
- Surveillance
- Mobilization

Nutrition (20%) IMCI Integration CHW Training
 HF Training

- Complementary Feeding from 6 months
- Hearth
- Continuous BF up to 24 months
- Growth Monitoring

Pneumonia Case Management (10%) IMCI Integration CHW Training
 HF Training

- Recognition of Pneumonia Danger Signs

Control of Diarrheal Diseases (20%) IMCI Integration CHW Training
 HF Training

- Hand Washing
- ORS/Home Fluids
- Feeding/Breastfeeding
- Care Seeking
- Case Management/Counseling

Malaria (20%) IMCI Integration CHW Training
 HF Training

- Training in Malaria CM
- Access to providers and drugs

- ITN (Bednets)
- Care Seeking, Recog., Compliance

Breastfeeding (5%)

- Promote Exclusive BF to 6 Months

IMCI Integration

CHW Training
HF Training

HIV/AIDS (15%)

- Behavior Change Strategy
- Access/Use of Condoms
- ABC

CHW Training
HF Training

Operational Plan Indicators

Number of People Trained in Maternal/Newborn Health
There is no data for this project for this operational plan indicator.
Number of People Trained in Child Health & Nutrition
There is no data for this project for this operational plan indicator.
Number of People Trained in Malaria Treatment or Prevention
There is no data for this project for this operational plan indicator.

Locations & Sub-Areas

Total Population:

227,260

Target Beneficiaries

Mozambique - WRC - FY04

**Infants < 12
months**

0

**Children 0-59
months**

0

**Women 15-49
years**

63,122

Beneficiaries

63,122

Total*Rapid Catch Indicators: DIP Submission*

Sample Type: 30 Cluster				
Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	50	299	16.7%	6.3
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	0	0	0.0%	0.0
Percentage of children age 0-23 months whose births were attended by skilled health personnel	190	299	63.5%	10.6
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	75	223	33.6%	9.8
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	19	109	17.4%	10.6
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	35	69	50.7%	20.5
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	85	110	77.3%	18.2
Percentage of children age 12-23	105	110	95.5%	18.7

months who received a measles vaccine				
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	43	299	14.4%	5.9
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	71	299	23.7%	7.3
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	5	171	2.9%	3.6
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	27	262	10.3%	5.4
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	9	299	3.0%	2.8

Rapid Catch Indicators: Mid-term

Sample Type: LQAS				
Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	0	0	0.0%	0.0
Percentage of children age 0-23 months	0	0	0.0%	0.0

who were born at least 24 months after the previous surviving child				
Percentage of children age 0-23 months whose births were attended by skilled health personnel	0	0	0.0%	0.0
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	0	0	0.0%	0.0
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	0	0	0.0%	0.0
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	0	0	0.0%	0.0
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	0	0	0.0%	0.0
Percentage of children age 12-23 months who received a measles vaccine	0	0	0.0%	0.0
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	0	0	0.0%	0.0
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	0	0	0.0%	0.0
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness	0	0	0.0%	0.0

in the past two weeks				
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	0	0	0.0%	0.0
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	0	0	0.0%	0.0

Rapid Catch Indicators: Final Evaluation

Sample Type: 30 Cluster				
Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	31	298	10.4%	5.0
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	81	111	73.0%	17.9
Percentage of children age 0-23 months whose births were attended by skilled health personnel	204	300	68.0%	10.7
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	264	300	88.0%	11.2
Percentage of infants age 0-5 months who were exclusively breastfed in the	68	85	80.0%	20.8

last 24 hours				
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	61	72	84.7%	22.8
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	69	101	68.3%	18.5
Percentage of children age 12-23 months who received a measles vaccine	88	106	83.0%	18.8
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	60	300	20.0%	6.8
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	248	300	82.7%	11.1
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	40	110	36.4%	14.4
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	238	300	79.3%	11.1
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	20	300	6.7%	4.1

Rapid Catch Indicator Comments

Measles immunization is based on the number of children 12-23m who had a verified measles vaccination per immunization card divided by all children age 12-23m.

Annex 20. Grantee Plans to Address Final Evaluation Findings

World Relief sincerely appreciates the tireless efforts of Dr. Henry Perry as he led this evaluation. His suggestions and observations were communicated to the CSP staff and as applicable are being incorporated into World Relief's plans for the SCIP project in Nampula province funded by the USAID Mission. They also will factor into the upcoming DIP for the Vurhonga CB-DOTS Project.

Specific applications to current and future World Relief Mozambique programming include the recruitment of Animators after a more thorough vetting process, earlier creation and training of the Village Health Committees, and earlier emphasis on vital events registrations.

Annex 21. Photographs Taken During the Evaluation





The Project Final Evaluation Team



A Socorrista and Her Health Post















































