FOR DI PIKIN DEM WEL BODI
(THE HEALTH OF THE CHILD)

Community-based health initiatives implemented through social cohesion strategies in Koinadugu District, Sierra Leone

Annual Report

October 2006 to September 2007

Submitted to

USAID Child Survival and Health Grants Program

Date of Submission: October 31, 2007

Cooperative Agreement: GHS-A-003-00013-00

October 1, 2003-September 30, 2008

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List of abbreviations and acronyms

AED	Academy for education and development
AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infection
BCC	Behavior Change Communication
CARE-SL	CARE Sierra Leone Mission
CBGP	Community Based Growth Promotion
CBO	Community-Based Organization
CCF	Christian Children's Fund
CES	Christian Extension Services
CHC	Community Health Club
Chiefdom	Third level administrative unit in Sierra Leone, under the District.
C-IMCI	Community-Based Integrated Management of Childhood Illnesses
CO	Country Office (CARE Sierra Leone)
COPE	Client Oriented Provider Efficient
CRS	Catholic Relief Services
CS	Child Survival Project
CSTS	Child Survival Technical Services
DHMT	District Health Management Team
DIP	Detailed Implementation Plan
District	Second level administrative unit in SL, under the Region and above the Chiefdom
DMO	District Medical Officer, in charge of DHO
EPI	Expanded Programme in Immunization
GOSL	Government of Sierra Leone
HBLSS	Home-Based Life Saving Skills
HH	Household
HMIS	Health Management Information Systems
HIV	Human Immune Deficiency Virus
HLS	Household Livelihood Security
IEC	Information Education and Communication
IMCI	Integrated Management of Childhood Illnesses
ISA	Institutional Strengths Assessment
ITN	Insecticide Treated Mosquito Net
KPC	Knowledge, Practice and Coverage
LNGO	Local Non-Governmental Organization
LQAS	Lot Quality Assurance Sampling
MCH	Maternal and Child Health
M&E	Monitoring and Evaluation
MMR	Maternal Mortality Rate
MNC	Maternal and Newborn Care
MOHS	Ministry of Health and Sanitation, Government of Sierra Leone
NACSA	National Commission for Social Action
NID	National Immunization Day
NGO	Non-Governmental Organization

ORS	Oral Rehydration Solution
PHU	Peripheral Health Unit
PM	Program Manager
PRCA	Participatory Rural Communication Appraisal
PVO	Private Voluntary Organization
QA	Quality Assurance
QOC	Quality of Care
Region	The largest administrative unit at the sub-national level
Reproductive age	Refers to women aged 15-49 years
RH	Reproductive health
SFCG	Search For Common Ground
SCM	Standard Case Management
SL	Sierra Leone
TA	Technical Assistance
TBA	Traditional Birth Attendant
TD	Talking Drum Studios
TNA	Training Needs Assessment
TOT	Training of Trainers
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VA	Vitamin A
WRA	Women of Reproductive Age

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1. Introduction

The Ministry of Health and Sanitation and CARE Sierra Leone (CARE SL) have completed the fourth year of implementation of a USAID funded Child Survival XIX Project (*For De Pikin Dem Wel Bodi* – for the health of the child) in Koinadugu district in the Northern Region of Sierra Leone. This annual report covers the period from October 2006 to September 2007.

The project commenced October 1, 2003 and is scheduled to run until September 30, 2008. The project goal is to improve the health status of children under five and women of reproductive age (WRA) (15-49 years) in Koinadugu, the largest and one of the most remote districts in Sierra Leone. The project operates in fifty-four communities, in five of the eleven chiefdoms of the district, through community-based structures (e.g., Community Health Clubs (CHCs), Community Based Growth Promotion (CBGP) volunteers, and Village Development Committees (VDCs)). Project activities are implemented in close collaboration with the District Health Management Team (DHMT) including staff from the twenty-two (22) Peripheral Health Units (PHUs) in the five operational chiefdoms of Wara Wara Yagala, Sengbeh, Follosaba Dembelia, Dembelia Sinkunia and Neini.

The primary beneficiaries of the project are the community members of these five chiefdoms. The 2005 national population census data led to a revised estimation of the principle beneficiaries of the project. Currently there are estimated to be 19,198 children under five years and 27,101 women of reproductive age within a total population of 112,921 in five chiefdoms. This population is served by 22 PHUs.

Secondary beneficiaries of the project include the six remaining chiefdoms in a district with a total population of 121,409 (20,640 children under five, 29,139 women WRA). This population is served by 34 PHUs. The total beneficiary population is therefore estimated at 39,838 children under five and 56,240 WRA, as compared to initial project estimates based on 1985 census data of 48,630 children under five and 51,491 WRA.

The project is implemented through innovative strategies that build partnerships between communities and the government. The goal of the project will be achieved through the attainment of four principal objectives:

1. Strengthened family and household knowledge and decision-making skills related to the health of women and children, resulting in the practice of positive behaviors which prevent, recognize and manage common diseases;
2. Improved quality and accessibility of services provided by MOHS personnel and MOHS extension services;
3. Enhanced community capacity to form groups and institutions that sustain health initiatives, demonstrate social cohesion, and promote good governance mechanisms;
4. Ensured sustainability of project activities and achievements.

Project implementation focuses on the following four interventions through the Community Integrated Management of Childhood Illnesses (C-IMCI) strategy which includes:

The **Expanded Programme in Immunization (EPI) intervention (15%)** This intervention focuses on raising vaccination coverage of children and pregnant women. The project is working in close collaboration with communities and PHU staff to promote EPI outreach through the CHCs. The second prong of the EPI strategy is to encourage CHCs to use appropriate BCC strategies and mobilize mothers/caregivers to increase demand for and utilization of EPI services.

The **nutrition intervention (20%)** works through CHCs, community-based growth promoters (CBGP) and other community-based organizations (CBOs) to promote early initiation of breastfeeding, exclusive breastfeeding, complementary feeding and improved Vitamin A/iron intake for women and children. CARE implements integrated approach of multi-sectoral activities that support improved nutrition such as water and sanitation projects, farmer field schools and nutrition gardening in the district, through other projects such as Promoting Linkages for Livelihood Security and Economic Development (LINKS), the Northern Province Rehabilitation and Development Initiative (NPRDI) and the Livelihood Expansion and Asset Development (LEAD).

The **malaria intervention (35%)** confronts the high prevalence of malaria and the common practice of under treatment or self-treatment by training and facilitating supportive and quality supervision of PHU staff to recognize malaria and provide standard case management, educating community members on malaria and its treatment, promoting intermittent presumptive treatment (IPT) of malaria amongst pregnant women and distributing and promoting insecticide treated mosquito nets (ITNs).

The **Maternal and Newborn Care** (**MNC) intervention (30%)** aims to improve access to information and basic maternal health care by providing educational sessions on danger sign recognition and birth preparedness at the community and household level, by promoting Tetanus Toxoid (TT) vaccination and iron supplementation during pregnancy, the presence of skilled birth attendants during delivery, Vitamin A supplementation during the postpartum period, and by training PHU staff in IPT of malaria in pregnant women.

2. Overall Project Progress

This section highlights the progress on project activities carried out in the fourth year of implementation from October 2006 to September 2007. Overall, project activities are on target according to the detailed implementation plan (DIP) and the project is proceeding towards attaining its objectives.

The Mid Term Evaluation (MTE), conducted in March 2006, and the latest Lot Quality assurance Sampling (LQAS) survey, conducted in August 2007, both indicated major improvements in key project indicators that address knowledge and behaviour change. This progress stems from effective participation of project partners and community members in district and community levels project activities that resulted to a positive behavioral change in health practices.

As the project enters into the final year of implementation, enhanced community capacity with a stronger sense of ownership of the health and development initiatives by community structures and improved coordination among partners by the DHMT, are particularly encouraging. The community participants/trained volunteers, including the VDCs, local authorities, the PHU staff, and the DHMT, continued to participate and improve their capacity to assimilate project activities by their total involvement in the planning, implementation, supervision, monitoring and evaluation of activities in their villages. The community based growth promotion (CBGP) volunteers have taken over the monitoring and promotion of the growth patterns of children at community level. The project succeeded in building a very strong partnership between PHU staff and the trained community structure (CBGPs, CHCs and VDCs). Community volunteers were also trained in the last quarter of the fourth year in data surveillance (collection, collation and analysis) for prompt action on identified problems in collaboration with the PHU staff.

2.1 Projects main accomplishments by objectives

Some of the project's key areas of accomplishments are highlighted in the following tables which detail progress toward each of the project's four objectives.

Tables: Summary of key activities in Year 4 (per objective)

Objective 1: Strengthened family and household knowledge and decision-making skills related to health of women and children resulting in the practice of positive behaviors to prevent, recognize and manage common diseases		
Key Activities (as outlined in the DIP)	**Status of Activities**	**Comments**
1) Implementation of health promotion/education campaign through CHCs targeting HH knowledge, beliefs and practices	1) **Completed:** CHC refresher sessions: Upon the completion of the CHC new toolkit, refresher sessions on selected topics were conducted for 1,129 members of all 54 CHCs trained in Year 1. CHC rollout: CHCs used the knowledge gained to roll out the trainings to new communities. A total of 34 rollout peer sessions were conducted for 1,824 new CHC members. In 2006, other CARE projects also conducted CHC sessions for 2,423 people in non-project operational communities. CHC action plan: CHC members continue to plan and implement community health education and counseling and conduct health talks at clinic and at outreach points.	10 partner NGOs in and out of Koinadugu district, Local Council, MOHS and 6 CARE sister projects were also trained on the new toolkit to acquire participatory facilitation methods. .
2) Promote dialogue between communities and DHO/PHUs	2) **On target:** Monthly coordination meetings are held between PHU staff, CHCs, VDCs, and CBGP volunteers to discuss issues related to community participation in the administration of the PHUs, clinic attendance by pregnant women and mothers of under fives, delivery service cost, skilled attendance at birth, community support for volunteers to be provided. Partnership meetings involving representatives from operational communities, PHU and CARE staff, and chiefdom authorities were also held in 3 chiefdoms (Sengbeh, Wara Wara Yagala and Dembelia Sinkunia) to review the projects progress and implementation plans.	Supportive supervision on CBGP activities was carried out by PHU and VDCs.
3) Training of PHU staff and CHC members to implement BCC strategy to HH members of communities resulting in a decrease in harmful practices, an increase in beneficial, preventive practices, improved recognition of danger signs, and an increase in appropriate care seeking behavior.	3) **On target:** Refresher training was conducted for PHU staff in December 2007 and for 324 CBGP volunteers during February - March 2007. 367 CBGP sessions were conducted by the trained volunteers and 8,443 attendances were recorded during Year 4. Trainings were conducted for CHC members on the use of the radio in BCC and health messages including songs produced in the major dialects by community members, recorded and aired over the local FM radio. Trainings were conducted by the National Health Education department of the MOHS for **6** PHU, **5** DHMT, **4** Local Council, **3** health NGOs and **15** CARE staff on IEC material development for poorly literate community members in June 2007. Posters and flip charts with key health messages on the projects interventions were produced during the training sessions.	

Objective 2: Improved quality and accessibility of services provided by MOHS personnel and MOHS extension services		
Key Activities (as outlined in the DIP)	**Status of Activities**	**Comments**
1) Work with DHO to identify and prioritize problems in the district health services (including HMIS) and design and implement solutions that are based on qualitative and quantitative data	1) **On target:** Joint monthly PHU supervision conducted. Findings and recommendations discussed at PHU and district levels. Community data surveillance system with database at DHMT set up. Training was conducted for all stakeholders. Project M&E officer provided ongoing technical support and coaching for the DHMT M&E Officers on program quality and data utilization for health programming.	
2) Conduct quarterly quality assurance (QA) workshops for PHU staff	2) **On target:** Recommendations from the COPE assessment conducted in 2005 are routinely discussed at district level monthly coordination meetings. The discussions resulted in recruitment of five trained and qualified Community Health Officers who were posted in four of the five projects operational chiefdoms as Zonal PHU supervisors.	COPE recommendations address QA (e.g.., development of the PHU supervisory checklist and formation of the health coordination mechanisms, etc.) while progress is monitored through routine supervision exercises.
3) Conduct training needs assessments (TNA) for community based organizations, local partner organizations and MOHS staff.	3) **On target**: The following trainings were conducted with project support based on ongoing TNA through the monthly PHU supervision: Refresher trainings for 324 CBGP volunteers, training for 146 Village Savings & Loan (VS&L) executives on the VS&L scheme, training for 52 community data surveillance volunteers and training for 102 VDC members on their roles and responsibilities with emphasis on good governance.	Training to empower community volunteers to take over the project activities is part of the project's exit strategy.
4) Work with partners (UNICEF, MOHS) to develop strategy/plan for ensuring supply of essential drugs in PHUs to support IMCI	4) **On target:** UNICEF continued to provide drug and other PHU equipments to all the PHUs in the district. The drug utilization and standard case management compliance are assessed during the joint supervision exercises with the DHMTs.	The district referral hospital is currently under rehabilitation with World Bank support. New PHUs have been constructed by other health NGOs.
5) Conduct training on Malaria treatment protocol for PHU staff with post test assessment of skills (added after MTE)	5) **On target:** The project contributed funds for the DHMT-organized refresher training on standard case management of malaria for 21 PHU staff. Pre and post tests were carried out before and after the trainings and the results were utilized to reinforce supervision.	The Global Fund-Malaria recipients (CRS and CCF) also provided funds for this refresher training.
6) Consult IRC on techniques and tools they used for Standard Case Management assessment of PHU malaria treatment skills (added after MTE)	6) **Not yet on target:** IRC response was received only in the last quarter of the reporting period. Discussions are currently underway to complete the new assessment form /toll for use in Year 5.	
7) Conduct ongoing monitoring of CS Project results in collaboration with DHO/PHU and feed result back into project including the use of LQAS	7) **On target:** Findings of Mid Term Evaluation, conducted in 2006, were shared with community members and district partners. LQAS conducted, with partners in June 2007, dissemination of the findings scheduled in October 2007.	
8) T.A for Complimentary feeding (added after MTE)	8) **Not yet on target:** Consultant identified for training to be conducted in the first quarter of Year 5.	

Objective 3: Enhance the community capacity to form groups and institutions that sustain health initiatives, demonstrate social cohesion and promote good governance mechanisms.2		
Key Activities (as outlined in the DIP)	**Status of Activities**	**Comments**
1) Assist well run CHCs to identify needs of their organization and provide TA to build their capacity	1) **On target**: The project provided ongoing support for all 54 CHCs in their development and implementation of the action plans. Refresher training using the new toolkit was also provided to facilitate their initiative to roll-out CHC activities into other communities.	
2) Collaborate with communities in participative evaluation of their own efforts	2) **On target:** Roles and responsibilities of VDCs redefined to include supervision of the activities of community heath volunteers (CHCs, CBGP, etc.). The process of ITN distribution and ongoing monitoring of the ITN use involves active participation of VDCs. Introduction of community-based health surveillance system is another attempt to involve communities in monitoring and evaluation of their own efforts to improve health status in their communities.	
3) Assist communities and CHCs to access multi-sectoral development opportunities to improve their communities	3) **On target:** VDCs facilitated the construction of 19 birth waiting homes with self-help from communities. 2 community schools and 3 public markets were constructed during the reporting period through the effective institutional linkages created with other developmental agencies by the VDCs. As part of their monthly action plans, CHC members implemented community development activities such as road maintenance, and construction of meeting places, etc.	

Objective 4: Sustainability of the Child Survival Project		
Key Activities (as outlined in the DIP)	**Status of Activities**	**Comments**
1) Facilitate cross visits for DHO/community leaders from Koinadugu, Kono and Kailahun districts	1) **Completed:** Cross visit to IRC Kono was organized for 2 DHMT, 10 VDCs, 2 project staff and 1 council representative. A reciprocal visit of the Kono team was hosted by the project to share implementation strategies and experiences, including the cost recovery and HMIS systems and level of partner collaboration.	A debriefing meeting was organized for all NGOs, DHMT, Local Council and community representatives. An action plan was developed on the lessons learnt.
2) Community, district and national level monthly, quarterly and annual collaboration on issues pertaining to CS, Malaria, Nutrition, Maternal and Newborn Care (MNC) and EPI.	2) **On Target:** 10 monthly health coordination meetings were attended to discuss coordination issues and to identify possible areas for joint interventions. Also MNC meetings were attended to develop strategies that address maternal issues in the district (Formation of PWSG, establishment of birth waiting homes, VS&L and use of birth planning cards). The project was represented at the national level by the Health Sector Coordinator and national-level policy updates shared with field based project.	
3) Provide TA for organizational development and capacity building	3) **On target:** Provided TA for PHU staff and partners on IEC material development, VS&L, CBGP, and community data surveillance system. Funds were also provided for PHU staff training on emergency obstetric and standard case management of malaria.	
4) Create opportunities for partner organizations to develop inter-organizational links, access to information, assistance and accountability	4) **On target: The** visit to IRC, Kono, and Hellen Keller project site in Guinea provided a unique opportunity for partners to share information on strategies, successes, challenges, fund raising and management, etc.	
5) Advocate for opportunities for partners to achieve or work towards financial viability	5) **On target:** Provided support to VDCs on internal fund raising and management through the Village Savings and Loan (VS&L) scheme; provided support to VDCs and PHU staff on PHU level cost recovery system and general administration. Training of VDCs conducted in Year 4 also included the financial aspects of good governance.	
6) Support the planning process for the re-establishment of the District Medical stores	6) **Not yet on target:** Activity is targeted upon the completion of the rehabilitation of the district hospital. Rehabilitation process was delayed and completion is now expected in December 2007.	

A description of some of the key accomplishments of the project can be found below.

2.1.1 Enhanced community capacity: Community structures as essential partners of the project

The project has been empowering community members by helping them to understand the extent that their health status is under their control. Community capacity has been enhanced tremendously since the inception of the project, and a number of groups and institutions have been formed / revitalized (*project objective 3*) to take active part in a variety of health initiatives that contribute to positive behavior change (*project objective 1*) and to improved quality and

accessibility of health services (*project objective 2*). Their strong ownership of the community-based health initiatives also enhances the sustainability of project outcomes (*project objective 4*).

Above all, the progress of Community Health Club (CHCs), Community-based growth monitoring and promotion (CBGP) volunteer, Village Development Committee (VDCs), and Community surveillance and monitoring volunteer activities is highlighted below. The newly established pregnant women's support group (PWSG) and theVillage Savings and Loan group (VS&L) activities will be described later, as part of the project's broader MNC strategy intervention specific progress.

(1) Community Health Club (CHC) activities

Community Health Clubs (CHCs) are entry points utilized by the project for community mobilization and implementation of behavior change strategies at the community level. CHCs also play a vital role in strengthening the interface between the communities and service providers at PHU.

Fifty-four CHCs were formed and 1,882 members underwent training on 25 health and rights related topics, facilitated by the project during the first year of project implementation. In light of the sustained demand for interactive health sessions, the project continued to train additional 457 interested community members in Years 2 and 3; which resulted in an increase of trained CHC members to 2,339 across the project operational locations. Women's membership at the CHCs (64.6%) and their active involvement in CHC activities was encouraging during the reporting period.

In March - April 2007, the project partnered with the Capstone project of George Washington University – USA to formally assess and document the impact of CHC approach. Some of the key findings are indicated later in the results highlight section and the full report is attached in the annex.

CHC refresher training

The project, in collaboration with partners, conducted the refresher trainings for the CHC members. Upon the completion of the revised CHC tool kit – *Communicating Health and Communicating Rights* − in Year 3 of the project, the project conducted the first refresher ToT for 19 CARE staff and 7 staff from partner organizations in April 2006. The toolkit is designed to facilitate participatory and interactive methodology that allows illiterate and marginalized members of the communities to be fully engaged, while covering all of the basic information about health and rights issues in a structured manner. Because this method is popular, the project conducted a series of ToTs for staff from CARE sister projects and partners, including several health NGOs and DHMTs. The participants outside CARE included: DHMT Koinadugu, DHMT Bombali, DHMT Tonkolili, Oxfam, World Vision, UNICEF, Africare, CHASL, Concern, and CRS. During the reporting period, another ToT was conducted for IRC, Health Unlimited, CAUSE Canada and newly employed CARE staff (June 2007).

To further the ToT, the project, in collaboration with partners, conducted refresher trainings for 1,824 CHC members on 12 selected topics using the new toolkit. Included were: Immunization, Worm infestation, ARI, Complementary feeding, Food groups and nutrition, Nutrition disorders, Pregnancy including danger signs, Birth preparedness and childbirth, Exclusive breastfeeding, STIs, HIV/AIDS, and Malaria.

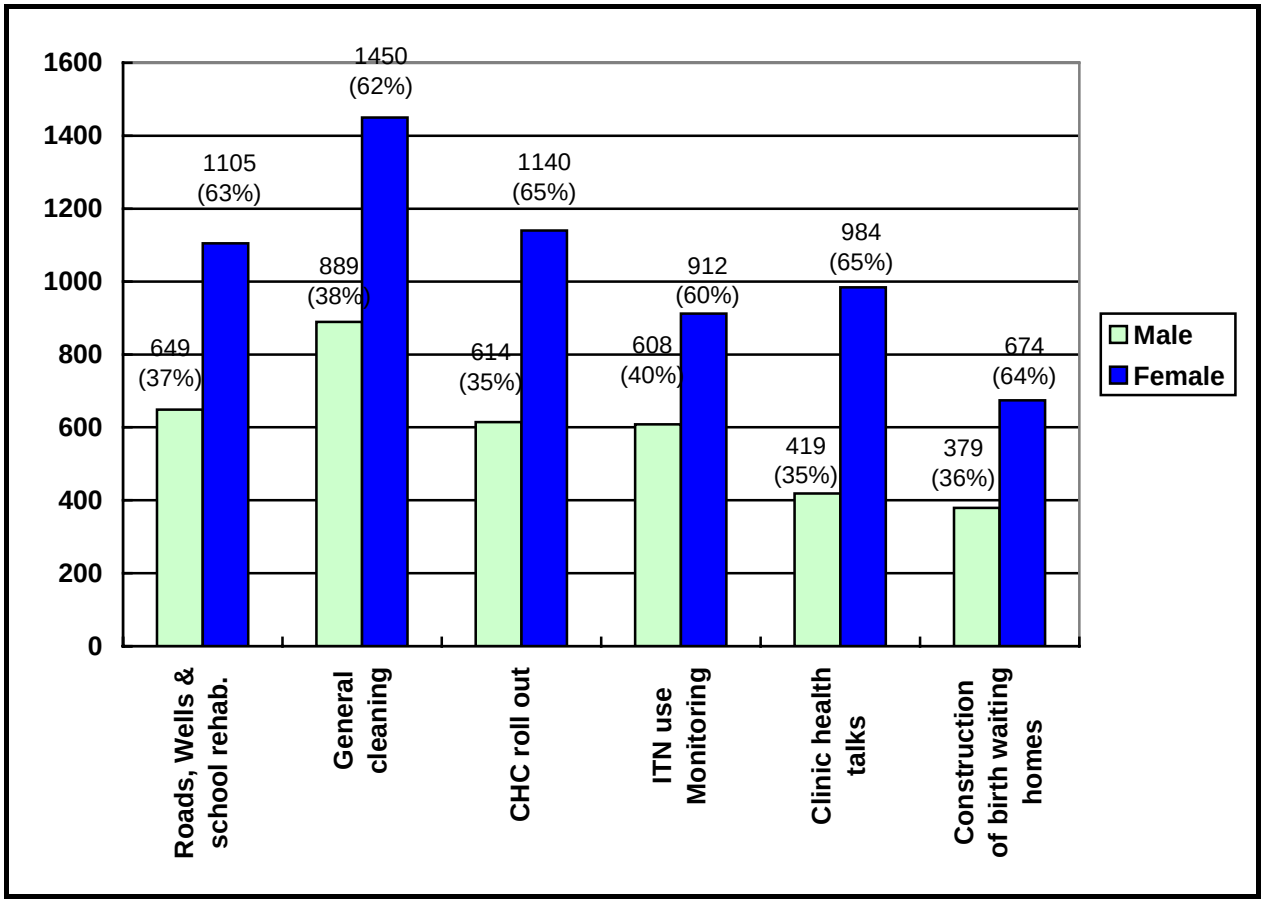
CHC monthly action plans

In an effort to sustain community health interventions, the project and its partners worked with the CHC members to design a means of engaging CHC members in the creation of monthly community development activities for the wider community. CHC members met every month to develop action plans and to report on accomplishments from the previous month. Field staff continued to provide technical backstopping to CHC members in the accomplishment of planned activities.

The monthly activity plans developed and implemented by CHC members during the reporting period included: rehabilitation of roads/community schools; community mobilization for general cleaning; rehabilitation of fences around community wells; rehabilitation of weighing and meeting huts; construction of birth waiting homes, plate racks, and compost fences; home visits to monitor the ITN use and to encourage clinic attendance; provision of health education and counseling at PHU and outreach points for pregnant women and mothers of under 5 children; implementation of outreach sessions to non-CHC communities to share health messages and to help them establish their own health clubs (CHC roll-out); home visits etc.

The chart below shows major activities accomplished by CHCs during the reporting period- October 2006 to September 2007 and the percentage male and female participation:

Graph 1. Major activities accomplished in CHC action plan



CHC roll-out by peer facilitators

During a partnership meeting to design community based strategies for project implementation, a decision was reached on how to engage the trained CHC members in conducting health sessions for communities where the project is not directly implementing activities. The objective of this strategy was to build the already trained CHC members' capacity to lead the planning and implementation of the CHC approach after the project exit; thus, sustaining and scaling up the project outcomes. The project staff and CHC members jointly identified a total of 57 communities for the roll out of the CHC methodology. During the period under review, 268 males and 432 females benefited from educational sessions facilitated by their peers on topics such as diarrhea, worms, malaria, exclusive breastfeeding, nutrition, danger signs during pregnancy, and immunization. Where the methodology has been introduced, there is evidence of improved sanitation and adoption of positive health behaviors. PHU records also indicate increased use of health facilities by pregnant women and mothers of under 5 children in the peer educated communities.

Established effective coordination between CHCs, community and PHU staff

CHCs continued to plan and implement health activities in close collaboration with the PHUs. CHCs delivered health talks in the PHUs during clinic days and facilitated outreach sessions targeting pregnant and lactating mothers, husbands and the wider community. The PHU staff also continued to rely on the services of CHC members to trace and follow up with persons that defaulted on scheduled immunizations and/or other services. In addition to the routine collaboration between CHCs and PHUs, CHC members actively participated in all MOHS organized district level campaigns (e.g., the measles and malaria campaign in November 2006, the mass tetanus toxiod drive in June 2007, the deworming of under five children and the distribution of micronutrients during the commemoration of the day of the African Child in June 2007.) CHC members were also involved in community based distribution of Ivermectin tablets and were educated on the prevention and control of onchocerciasis. Amongst all, community mobilization carried out by CHC members before and during campaigns in remote settlements in the project operational locations was the notable contribution made to the success of these campaigns.

The trained CHC members are now increasingly seen as an invaluable community resource because they are knowledgeable on health and rights issues and are committed to community development. During the reporting period, Medicos Del Mundo (an international health NGO working in the district) and the Koinadugu Local Council consulted with PHU staff to select 6 CHC members, across the project operational areas, to be trained as vaccinators. The selection of these community volunteers presented a unique opportunity for dissemination of health messages during routine immunization campaigns at clinics and outreach points. This also continues to strengthen the supervision and coordination links between the CHC and PHU staff.

The establishment of these links has fostered confidence and has helped to increase participation in, and subsequent ownership of, health activities by the community members. This is also evidenced by the increased utilization of the available health services.

(2) Community based growth monitoring and promotion (CBGP) activities

In order to detect early malnutrition in children and to find practical and sustainable solutions to malnutrition at the community level, the project in collaboration with the DHMT has been implementing CBGP activities since April 2006. This strategy is designed to promote the active

participation of parents / caretakers of children and other community members in monitoring the healthy growth and development of children in their communities. The CBGP activities involve community based volunteers (CBGP volunteers), community members, and PHU and CARE staff. CBGP volunteers conduct monthly weighing sessions where they counsel mothers/caregivers on child feeding practices and childcare and refer detected cases of malnutrition and / or other illnesses to the PHUs. They also make home visits to detect defaulters and to follow up on recommended activities. Prior to the commencement of CBGP activities, a training of trainers (TOT) was conducted for PHU staff and onwards rollout training for the volunteers.

During the period under review, refresher trainings were conducted to improve the volunteers' ability to perform monthly weighing, counseling and referrals. A refresher TOT for 21 PHU and project staff took place in December 2006. This training was followed by roll out refresher trainings, facilitated by PHU and project staff, for 324 volunteers in 54 communities from February to March 2007. The refresher trainings provided an opportunity for all stakeholders, including the volunteers, to review implementation strategies from past years and to redesign/ adopt practical, applicable and context specific methods. Cross learning and experience sharing among volunteers at the trainings also proved vital and helpful for their future activities. Additionally, roles and responsibilities were redefined during the trainings to include the joint supervision of the volunteers by VDCs and PHU staff.

The trained CBGP volunteers continued to conduct monthly CBGP sessions. They also worked together with PHU staff in health education sessions at clinic and outreach points and disseminated nutrition behavior change messages in their communities. The project and DHMT members made significant efforts to provide support during the routine supervision exercises of these volunteers. Growth promotion activities were also used with other integrated health services by PHU staff and this contributed to improvements in the immunization and nutritional status of the projects targets. In addition, community support for CBGP activities was evident. VDCs supervised the CBGP activities to ensure compliance with the weighing schedules and they participated in the mobilization of mothers / care takers for increasing weighing session attendance. Community members also agreed to provide in-kind or cash contribution (based on the community decisions) to motivate the CBGP volunteers.

(3) Village Development Committees (VDCs)

Village Development Committees (VDCs) continued to play a pivotal role in the implementation of planned project activities. They have been empowered to create stronger institutional linkages with other organizations within their chiefdom and the district in general. During the reporting period, the project and partners, including VDC members, conducted quarterly meetings to plan activities and to review accomplishments and constraints identified during the previous quarter. In an attempt to strengthen the interface between the communities and the service providers at the PHU, periodic community meetings were also organized to discuss issues relating to the improvement of community level health systems. In this context, discussions were held between VDCs and PHU staff about effective utilization of the available health services (e.g., clinic attendance by pregnant women and mothers of children under five, a structured cost recovery system, reinforcement of health message dissemination strategies, support required for the CBGP volunteers and pregnant women's support groups, use of birth preparedness cards by pregnant women, and the role of VDCs in supervising community health initiatives, etc.) The involvement of VDCs in these planning and coordination meetings helped boost the confidence of the VDCs and also built their capacities to manage health interventions in their communities. As a result, the role of the VDCs was redefined to include active and supportive supervision of community

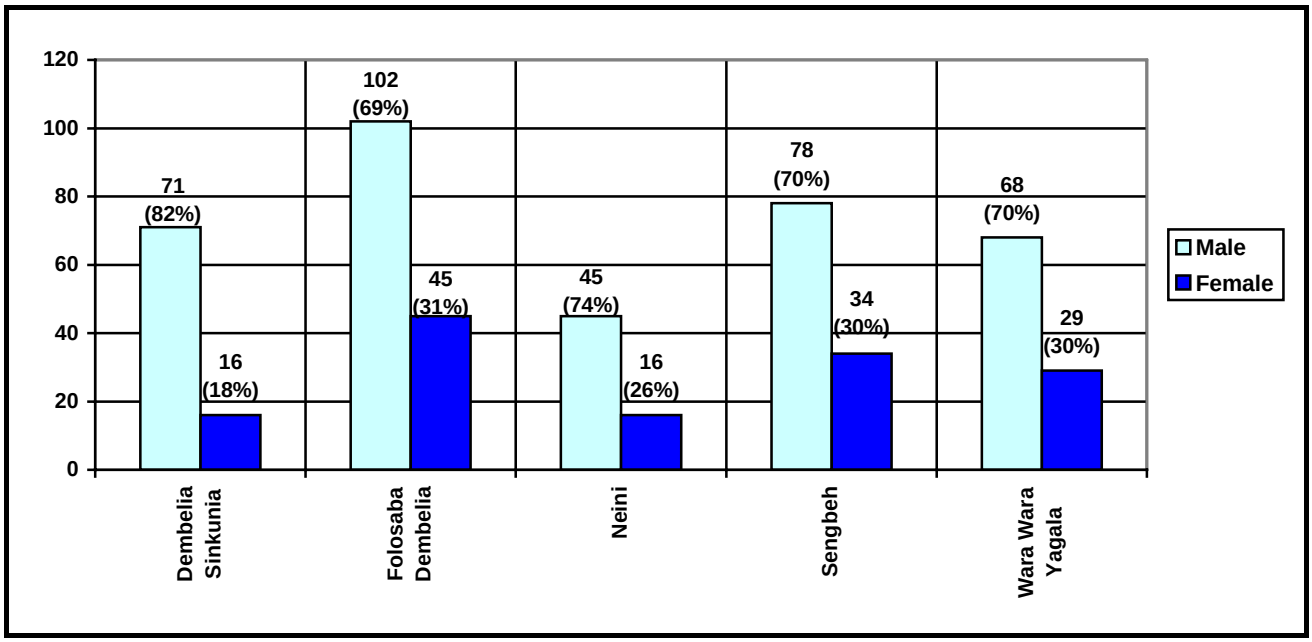
volunteers, mobilization of the pregnant women birth planning initiatives and routine antenatal clinic (ANC) visit, participation in CBGP activities, establishment of community-based referral systems, etc. Above all, the transfer of CHC and CBGP community volunteer supervision to the VDCs, in close collaboration with the PHU staff, created a strong sense of project ownership and has increased VDC responsibilities and participation in project activities. Some of the activities carried out by VDCs to date include: community volunteer identification for participation in health related activities; ITN distribution and participation in mini-surveys on their use; restructuring of the VDCs; and participation in health orientations. In some cases, VDCs instituted bylaws on health issues (e.g., maintenance of clean water while using the wells, etc.) and worked with CHCs to enforce these community bylaws. Furthermore, a number of positive changes were observed as indirect effects from the establishment of a stronger linkage between VDCs and CHCs; among these changes were: increased female participation in public discussions, increased girls' school attendance, and a community initiative to collect funds for emergency transportation (including proceeds from community and backyard gardens). An increasing number of community schools have also been constructed and VDCs have hired their own teachers.

In order to prepare the VDCs to assume these additional field and project responsibilities, a capacity building training was conducted for representatives of all VDCs (2 members per each VDC) in the project operational communities. 102 out of 108 VDC members participated in the trainings. The VDC training module emphasizes good governance, community mobilization and facilitation skills, and basic book keeping practices. Project and PHU staff were orientated on the training module and roll out trainings were subsequently conducted at the community level.

VDCs also had the opportunity to learn about their counterparts in the IRC Child Survival project communities through exchange visits with the Kono District, Eastern Province in February 2007. The purpose of the cross visits was for the VDCs to replicate lessons learnt from Kono district. A reciprocal visit was also made by the VDCs and DHMT members from Kono to the CARE operational locations in June 2007, with the same objective to experience sharing and cross fertilization of ideas. This process proved to be empowering for the VDC members as they realized that they had a lot to share with others.

Membership to the VDC continues to be conferred through selection or election by a wider committee during an open community meeting. Among the selection criteria are willingness to volunteer services to the community, a proven record of honesty, active participation in health and developmental programmes, and the ability to mobilize and provide support to community members. Female committee membership was encouraged by the project to ensure equal representation and interest. This selection/election process has increased transparency and accountability of the committee members and improved communication at all levels in the communities. The project staff continues to ensure involvement from the entire community in the selection/election of VDC members and works with all community stakeholders to ensure the involvement of women in the functioning of the committees. The chart below shows the current VDC representation by sex in the project operational communities in 5 chiefdoms:

Graph 2. VDC representation by sex (as of September 2007)



(4) Community surveillance and monitoring system

In a bid to improve the health information management at the community and PHU level, the project and partners designed and established a community surveillance and monitoring system in the last quarter of Year 4. Through the partnership between CARE and Emory Rollins School of Public Health, the project secured the service of a MPH student, with a strong epidemiological background, to assist the project and partners set up the system. This system will run parallel to the overall health management information system, for which the CDC will provide country wide support. The objective of this community surveillance exercise is to encourage data-based decision making by stakeholders at district and community levels and to involve community members in monitoring vital health statistics within their localities. The involvement of the community in monitoring and surveillance may also lead to the creation of practical community based solutions to address the identified problems.

For this purpose, thorough discussions were held with the DHMT and the Local Council about the system, including the selection of indicators for data collection and the design of the database. As a result, the indicators for the data capturing tool were carefully selected to reflect the project's indicators, as outlined in the DIP, and the indicators specified by the CDC checklist. The overall system design that was agreed upon by the team specified that: The monthly data collection using the surveillance tool and quarterly data collection using the LQAS tool will be done by the community volunteers under the supervision of PHU staff. After the initial community level analysis, the data will be sent to the DHMT monitoring and evaluation (M&E) officers for further analysis and for critical review by the health coordination team at the district level meetings. Findings and recommendations from the analyses will guide DHMT and the project for ongoing and future programming. Feedback on findings on key indicators will also be given to community members through CHC meetings for their appropriate action.

Fifty-two community volunteers were selected to participate in the training for data surveillance at community level. A two-day TOT for PHU and project staff was designed with inputs from the project and partners and was facilitated by the Emory MPH student. The purpose of the training was to familiarize staff with the surveillance tools and the operations of the database. The staff

was accordingly trained on data collection, collation, and analysis, as well as the importance of data to health programme implementation. The community training on simple and practical community data surveillance, facilitated by the trained PHU and project staff, was cascaded for 52 volunteers from the twenty-five selected CSP operational communities.

A database was created and operated by the DHMT M&E team to input and analyze the information from the communities; thereby, providing district level analyses for action by the DHMT, Local Council and other health NGOs operating in the district. The M&E team members of the DHMT were intensively trained to operate the database by the project intern (MPH student from Emory University) and a M&E officer who is providing ongoing support. Currently, the DHMT team is analyzing the first set of data with support from the project M&E officer.

2.1.2 Behavior Change Communication (BCC)

As the foundation of the project BCC strategy is mostly based in the CHCs in each of the project communities, many have been said already in the previous section. Other community structures, such as VDCs and CBGPs, were also noted as having played an increasingly important role in promoting health and nutrition behavior change in close collaboration with PHU staff. This section highlights the use of local radio as another effective BCC channel, as well as the development of additional Information, Education and Communication (IEC) materials.

(1) IEC development

In order to intensify BCC efforts in some specific intervention areas, such as MNC, whose strategy was finalized only toward the end of Year 3, and the feeding practice of the sick child, in which more positive behavior change is required, the project contracted the Health Education Unit of the MOHS to facilitate a participatory IEC development workshop with 15 project staff, 5 DHMT members, 6 PHU staff, 4 health committee staff of the Local Council, and 3 health NGO staff in June 2007. The materials developed included the following posters and flipcharts on the project's intervention areas and incorporated comments and suggestions from community members:

- Posters on 6 different topics: (1) CBGP; (2) pregnant women support group; (3) immediate and exclusive breastfeeding; (4) birth waiting homes; (5) oedema of the feet as danger signs during pregnancy; (6) anemia prevention during pregnancy
- One set of flip chart covering the following topics: Deworming with vermox; anemia prevention using Fefol; IPT; TT vaccination in pregnancy; pregnant women support group; birth waiting homes; Vitamin A after delivery; immediate breastfeeding after delivery; weighing at birth; BCG at birth; clinic attendance by caregivers of children under 5 years old; and growth promotion.

The materials have been ordered for printing and will be in use in the fifth year of the project.

During the reporting period, jingles were also developed on the project interventions in the local language as outlined below.

(2) Radio Programming

Research (Participatory Rural Communication Appraisal 2005, Radio Listener Survey 2006) conducted by the project indicated radio and community drama as appropriate communication channels, with jingles, panel discussions and meetings as appropriate communication methods for dissemination of health messages. According to the radio listener survey, 93.4% of the

respondents answered that they have radios, and 52.6% said that they listened to health programmes aired over the local FM radio station, Radio Bintumani.

The project continued to use Radio Bintumani. During the reporting period, the following were aired:

- Panel discussions on 7 different topics: 1) Cause of maternal death in Koinadugu district; 2) HIV/AIDS prevention; 3) importance of and the role of VDCs and PHU staff in CBGP; 4) importance of pregnant women support groups; 5) role of TBAs and PHU staff in the establishment and commencement of pregnant women support group activities; 6) rationale behind the establishment of birth waiting homes; and 7) malaria prevention in pregnant women and children under 5 years old.
- Jingles on 9 different topics: 1) Importance of TT to pregnant women; 2) danger signs during pregnancy; 3) danger signs during labour; 4) neonatal danger signs; 5) exclusive breastfeeding; 6) malaria prevention in pregnant women and children under 5 years old; 7) importance of pregnant women support groups; 8) importance of birth waiting homes and skilled birth attendance; and 9) HIV/AIDS prevention.
- Community songs on 3 topics in local languages (Yalunka, Fullah and Limba): 1) Importance of immunization to children under 5 years old; 2) exclusive breastfeeding; and 3) danger signs during pregnancy.

The project, in collaboration with Radio Bintumani, conducted trainings for CHC members on how to design simple health messages in the local dialects of the Koinadugu district that can be used in songs and drama. Key messages on the project intervention areas (Malaria, Nutrition, Immunization and MNC) were developed, recorded, and continue to be aired over the Radio Bintumani. The airing of the recorded songs in the local dialects helped to enhance the understanding of health messages by the wider community and motivated community members, in all project operational areas, to actively participate in the project's BCC activities.

2.1.3 Efforts for continuous quality improvement of health services: Capacity building of DHMT / PHU

The project and partners made continuous efforts to improve the health care delivery system in the district through constant review of recommendations made by the client oriented provider efficient (COPE) assessment performed in 2005. The actions taken on the recommendations resulted in the Project, DHMT and Local Council to proactively secure the services of four trained and qualified district Community Health Officers (CHOs). The four CHOs were posted to four of the five project operational chiefdoms, where they acted as zonal supervisors.

Capacity building of DHMT and PHU staff through trainings and knowledge sharing, increased through outreach activities, monthly and joint supervision of PHUs by project and DHMT members, were the continuous efforts made to improve the health service delivery during the period under review, as outlined below.

Significant achievements made toward active involvement of community structures in health service delivery, which also contributed to improving accessibility and quality of services, were mentioned earlier and will not be repeated in this section.

(1) Capacity building of DHMT / PHU

During the reporting period, a variety of trainings were designed and conducted to increase the knowledge and skills of DHMT and PHU staff. Some of the key trainings organized and facilitated by the project include: refresher TOT on CBGP for 22 PHU staff (December 2006);

training on community surveillance and monitoring system for 52 volunteers (July 2007); training on LQAS survey for DHMT and 5 district councilors (June 2007); refresher training on CHC methodology using tool kit - *Communicating Health, Communicating Rights* for 22 PHU staff and 4 DHMT members (May 2006); training on community mobilization and sensitization for 22 PHU staff; training on defaulter tracing mechanisms using the Tickler system for all 56 PHU staff across the district (May 2007); training on IEC development for low illiterate communities for 5 DHMT members and 6 PHU staff (June 2007).

The project also supported the following trainings, organized by DHMT, through financial and technical contributions: training on comprehensive emergency obstetric care (EmOC) and the use of delivery equipments including pathographs for 22 PHU staff and DHMT zonal supervisors; training on standard case management of malaria using the new treatment protocol for 22 PHU staff and DHMT zonal supervisors; and vaccinator training for 80 vaccinators.

DHMT and selected PHU staff also had the opportunity to participate in an exchange learning visits arranged and sponsored by the project with the Kono DHMT counterparts, from whom they learned about the Tickler defaulter tracing system, PHU financial administration and cost recovery system, and community-based treatment amongst others.

In addition to the trainings and cross learning visits, senior project staff regularly shared technical information, such as technical reference materials printed from the CSTS and other related child survival websites, with DHMT. Publications received from the Atlanta Child Health team and experiences gained from workshops attended by the project staff were also shared during technical update meetings and district level health coordination.

(2) Support to PHU outreach initiatives

During one of the quarterly reviews of the project implementation with the DHMT partners, a decision was reached as to how to expand on our outreach efforts to access hard to reach communities with problematic road networks. In consultations with community authorities, new outreach points were identified and integrated into the routine chiefdom health activities. Project staff closely worked with CHC and VDC members to mobilize communities for outreach attendance. The project facilitated the movement of PHU staff as well as other outreach logistics including the pre-positioning of vaccines to and from the outreach points. For sustainability purposes, however, discussions were held with the DHMT and Council members as to how they would assume responsibility and plan for all outreach related expenditure in the future.

(3) Participatory and joint supervision of PHUs

The newly deployed CHOs in the four operational chiefdoms reported on progress and constraints in the health delivery services in the chiefdoms and continued to provide technical backstopping to the Maternal and Child Health (MCH) Aides. This has resulted in reducing the number of referrals made to the district hospital of minor ailments. The project, together with the CHOs (zonal supervisors) jointly conducted monthly supervision visits, using the PHU supervision checklist that was developed in the third year of the project. During the visits, the PHU supervision checklists were utilized, which created on-the-spot dialogues with the in charges of the PHUs on identified gaps and proposed solutions. Findings/recommendations from the supportive visits were discussed during the district coordination meetings with all NGO and DHMT members. The feedback was also shared with VDCs in the respective communities to discuss the potential community solutions to fill the identified gaps. Participation of different

stakeholders, such as VDCs, DHMT, and NGO partners, in these feedback sessions facilitated joint problem-solving for quick action.

2.1.4 Reflective practice for continuous improvement and sustainability

The project constantly sought innovative approaches that could improve the program quality and promote a culture of knowledge sharing through facilitation of learning visits and contribution to the coordination meetings, amongst others.

(1) Learning visits

Cross fertilization within the district

The project organized a series of inter-chiefdom level exchange visits for the PHU/DHMT and VDC participants. These exchange visits provided an opportunity for community participants and VDCs members to share ideas, gain new experiences and adopt best practices in the implementation of community based health activities.

Cross learning visits between CARE and IRC Child Survival Projects

CARE and International Rescue Committee (IRC) are implementing USAID funded child survival projects in different parts of the country (Koinadugu and Kono districts, respectively). Over the past years, both projects established the strong collaborative linkage by sharing achievements, challenges, lessons learned and activity plans. In order to further facilitate cross fertilization between two project sites, CARE project staff visited an IRC project site in August 2005, which was followed by the return visit from IRC to Koinadugu in September 2005. During these visits, a recommendation was made to arrange exchange visits for the VDCs, the Local Council and DHMT members between the two districts.

Thus, during the period under review, a delegation of 10 VDCs, 2 DHMT members, 1 representative from the Local Council and 2 project staff visited the IRC Child Survival Project in Kono in February 2007. The return visit of IRC team, also comprised of VDCs, Local Council, local chiefs, and DHMT, was conducted in May 2007. The visits provided an ideal environment for sharing and exchange of technical information. Also community members discussed their roles in the implementation of project activities in their respective districts. The exchange visits created enthusiasm in the VDCs to engage other community members in the planning and implementation of community based health and developmental initiatives, with little or no support from the project. For example, the construction of new community schools in 7 villages and the construction of birth waiting homes in 18 out of the 22 PHU communities were independently suggested by the community participants.

The Koinadugu District team held a debriefing session with the DHMT, Council members, VDC representatives from the communities, other health NGOs and project staff to deliberate on the experiences gained and recommendations from the visit. The presentation focused on the following areas: community referral mechanisms for emergency obstetric cases to PHUs and the District hospital; VDC roles and responsibilities, including VDC support for the referral system, the cost recovery system and financial management of PHU proceedings; health management information system of the DHMT; the cost recovery system for drugs and supplies; set-up of the district medical stores with inventory system; and TBA roles and relationships with PHU staff.

The project and partners had since conducted trainings on the Tickler defaulter tracings, with the project providing the related equipment. Discussions were also initiated at community levels to involve the VDCs in the PHU financial administration and cost recovery system.

Study visit to HKI supported pregnant women support group program in Guinea

In October 2006, a representative for the project and partners participated in a study tour to the Helen Keller International (HKI) supported FARNG (Foyer d'Apprentissage des Femmes en Grossesses) project in Guinea to learn from the pilot phase of a pregnant women support group program. This program aims to reduce the incidence of anemia in pregnancy by regular consumption of a balanced diet using locally available foods. The FARNG (pregnant women support groups) group meets once a month at the identified site where the meal is prepared in a prescribed manner and eaten by all pregnant women. The women are then asked to replicate this method of food preparation in their homes on daily basis. During FARNG days, the pregnant women go through routine antenatal checks, receive TT vaccines, IPT, Iron and folate supplements and treatment for minor aliments, where required.

The team found this program to be effective for monitoring pregnant women's health and for fostering unity and peer support among the participating pregnant women. The team also noted that some recommendations made the program more sustainable. With these findings in mind, the project and partners designed a modified version of the pregnant women support group to be adopted in the project operational areas. At the time of writing this report, 603 pregnant women were registered with program groups, with an average of 3 group sessions conducted since inception. A more detailed description of pregnant women support group activities will be provided later under intervention specific progress.

(2) District health coordination meetings

Monthly health coordination meetings, with DHMT and all health NGOs operating in the district, were initiated by the project and regularly instituted by the present DMO during the reporting period. The monthly meetings were a venue for participants to discuss coordination and collaboration issues and are chaired by the DHMT, with minutes compiled and circulated by NGOs on a rotational basis. During the meetings some critical decisions affecting the health care delivery system were made, such as the introduction of birth waiting homes as part of MNC strategy in the district.

The project also proactively formed district malaria and MNC working groups, which actively participate in all working group meetings.

2.2 Intervention specific progress

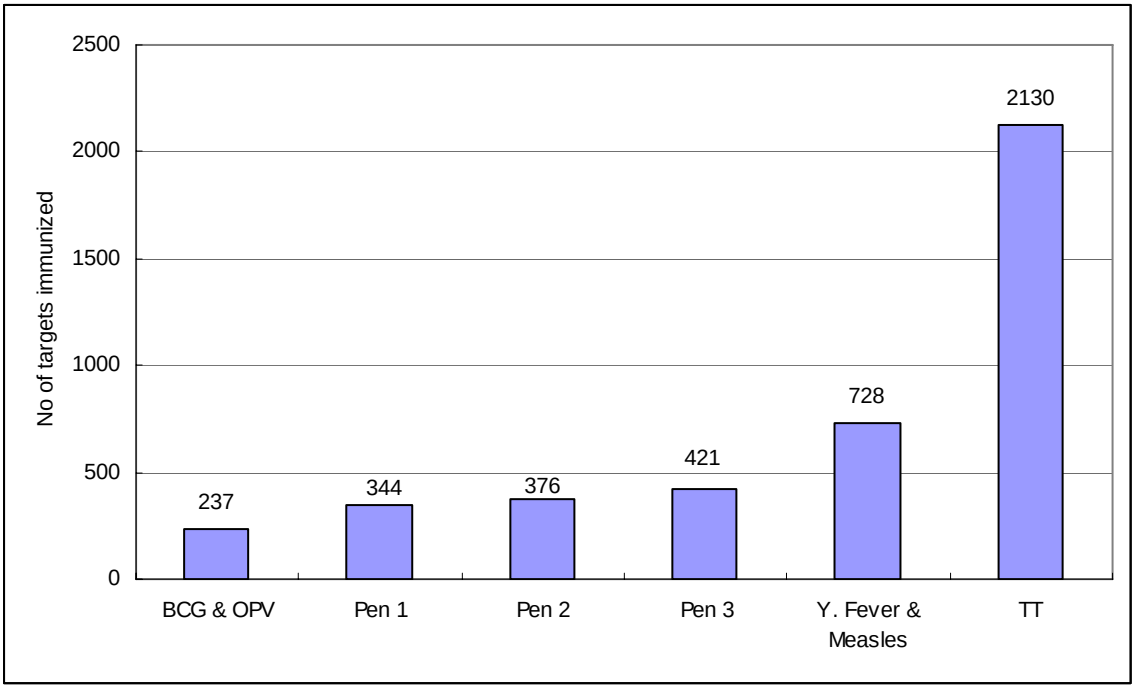
2.2.1 Immunization (15%)

The project's immunization intervention focuses on raising the vaccination coverage for children and pregnant women. The strategies adopted by the project to boost immunization coverage include: BCC through radio broadcasts and CHCs; mass mobilization for immunization campaigns by CHC and VDC members; outreach support (including increasing outreach points); promotion of services integration; and health system strengthening to better trace immunization defaulters for appropriate follow-up actions.

The CHCs' contribution to PHU outreach activities, through active mobilization and sensitization of community members, was particularly notable during the period under review. CHC members participated in all district level MOHS organized immunization campaigns including the measles and malaria campaign (November 2006) and the mass Tetanus Toxoid (TT) campaign for pregnant women and women of reproductive age (June 2007).

An integrated programming approach promoted integration of immunization into other community based activities, such as CBGP and pregnant women support group sessions. This strategy also provided an opportunity for defaulters to receive missed immunizations. Furthermore, the addition of 48 remote outreach points benefited a total of 4,236 children and pregnant women throughout the fourth year. The project continued to support outreach activities by facilitating the movement of PHU staff to outreach points, including those recently added, and the pre-positioning of vaccines and other equipment. The following graph shows the breakdown of beneficiaries project supported outreach.

Graph 3. Immunization statistics during outreach support – October 2006 to September 2007



In addition, the project introduced the Tickler system for defaulter tracing in the district. During the cross visit to IRC project sites, this system was identified by the project and partners as one of the best practices used in Kono. The project provided funding for the design and provision of 53 tickler boxes for use at all functioning PHUs within the district.

The 2007 LQAS results, regarding progress on immunization indicators, are summarized in the table below.

Indicators	Baseline April 2004	LQAS May 2005	**LQAS June 2007**	Project Target
% of mothers with children aged 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child less than 24 months of age.	47.2%	29.5%	**86.3%**	65%

Indicators	Baseline April 2004	LQAS May 2005	**LQAS June 2007**	Project Target
% of children aged 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before first birthday.	45.7%	46.2%	**90.3%**	60%
% of children aged 12–23 months who received a measles vaccine.	69.5%	69.7%	**90.3%**	80%

More detailed information on activities carried out in Year 4 in the area of EPI is provided below.

Key activities for EPI (as outlined in the DIP)	**Status of activities**	**Comments**
BCC 1) Raise awareness about the importance of vaccination and dates/times/places where vaccination services are available to increase community demand for EPI services	1) **On target:** 48 additional outreach points were identified in close collaboration with the chiefdom authorities, PHU staff, CHC and VDC members. These benefited 4,236 pregnant women and under fives. CHC members conducted mobilization and sensitization activities on immunization schedule and outreach points. CHC members were revised on the topic of immunization using the new CHC toolkit.	
2) Facilitate the promotion of immunization in communities	2) **On target:** CHC members conducted advocacy for the importance of immunization for mothers and children and encouraged mothers to attend outreach and clinic sessions for immunization. 51 CHC sessions were conducted on immunization in all 54 operational communities. 7 sessions were rolled out by CHC members to non-CHC communities on immunization.	
3) CHC Participation in MOHS activities	3) **On target:** Project staff and CHCs participated (by propositioning vaccines and sensitizing and mobilizing communities) in measles and malaria campaigns in November 2006; participated in a measles campaign during an out break in Dogoloya community, in which 22 children aged 6-11 months and 47 children 12-59 months were immunized for measles (March 2007).	
Quality and Access to services 1) Support the identification and training of community volunteers (vaccinators)	1) **Completed:** During monthly health coordination meetings, the project and partners discussed the selection and operations of vaccinators and project staff worked with local authorities for the selection of trains CHC members for the vaccination trainings. 80 vaccinators were trained with funds provided by the District Council. Project staff facilitated vaccinator trainings.	The training was done in collaboration with DHMT
2) Facilitate PHU staff expansion and improvement of consistency of EPI outreach services.	2) **On target**: 48 additional outreach points were identified by the 22 PHUs in the project's operational communities. Immunization activities were also carried out during the pregnant women support group sessions and as a result, 1,666 Pregnant women were immunized during the PWSG sessions in the period under review.	
3) Ensure accurate record keeping by PHU staff to track EPI coverage	3) **Not yet on target:** Reliable immunization statistics in terms of coverage rates are still not available due to problems with quantification of the catchment population. With the ongoing support from the CDC in establishing the solid health management information system country-wide, the problem should be addressed shortly.	

Key activities for EPI (as outlined in the DIP)	Status of activities	Comments
	Community surveillance: The project secured TA from a qualified student intern at Emory University to set up the community surveillance and monitoring system. Indicators include those for EPI. PHU staff and volunteers were trained on the system including data collection, analysis, and data-based decision making for health programming. Tickler system: A new immunization defaulter tracing system (Tickler system) was also introduced in the district. 58 tickler boxes were procured and distributed to PHUs and training on the use of the boxes was conducted for 44 PHU staff	
4) Train District Health Staff to manage EPI data electronically	4) **On target**: As part of the introduction of community surveillance and monitoring system, a follow up training was conducted after the initial training in year 1 during the last quarter of the reporting period on electronic data management using a data base; frequent technical backstopping was provided by the project's M&E Officer.	
5) Facilitate the provision by PHU staff of quality primary care services at PHUs. Modification of PHU supervision checklists to assess cold chain, supply and correct administration.	5) **On target:** PHU staff was trained on supervision techniques on different occasions and in workshops to equip them with skills as necessary for the supervision of community volunteers. Ongoing monthly supervision exercises were conducted by CARE, Local Council and DHMT, using the checklist developed in Year 3.	
Cross-cutting activities 1) Facilitate community dialogue regarding health volunteers and their roles and responsibilities both to community and PHUs	1) **On target:** Coordination meetings at community and PHU level focused on the clarification of the roles and responsibilities of the PHU and community volunteers. All CSP operational communities made decisions to provide incentives to volunteers after the coordination meetings in each of the communities.	
2) Facilitate the monitoring of immunization status of children by CBGP volunteers.	2) **On target**: Monitoring of immunization status was done during CBGP sessions and children who are due for vaccination were referred and/or vaccinated on spot, where service was integrated.	

2.2.2 Nutrition (20%)

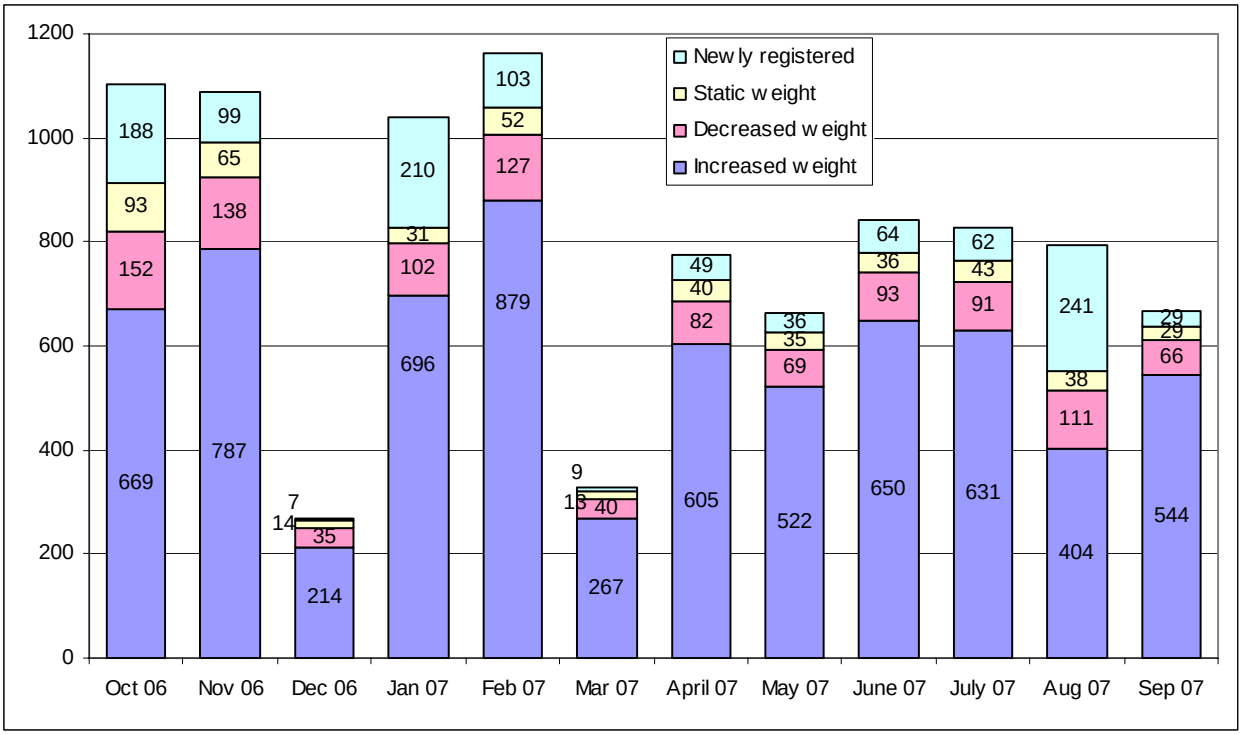
The project works with CBGP volunteers, CHC and VDC members to promote the early initiation of breastfeeding, exclusive breastfeeding (EBF), complimentary feeding, improved Vitamin A, iron, and folate intake for women and children, as well as the deworming of children and pregnant women.

Nutrition intervention's main approach to reach out to communities includes: BCC through community structures (CBGP volunteers, CHCs and VDCs) and radio; community mobilization by community structures for MOHS-organized campaigns such as mass distribution of Vitamin A and deworming tablets; community monitoring of children's growth and development (i.e., monthly CBGP sessions); and Positive Deviance (PD) Hearth.

Community Based Growth Monitoring and Promotion (CBGP)

As indicated earlier, growth monitoring and promotion and counseling of care takers of children under five was conducted monthly by CBGP volunteers and backed up by supportive supervision by VDC members and PHU staff. Refresher training conducted in early 2007 increased the volunteers' knowledge, skills and confidence levels. CBGP sessions provided a unique opportunity for mothers not only to learn new child care practices from the volunteers, but also to share experiences with their peers attending the sessions. As full participation by mothers and fathers and support from the community is essential for the success of this program, a high level of community participation was encouraging during the reporting period. For example, to address the problem of fluctuation in session attendance (see below graph), due to farming, societal functions, market days, and other traditional activities, discussions were held at the community level. Decisions that were made there to maintain attendance include: setting up weighing dates acceptable to the community, announcing the session dates on the eve, encouraging CBGP volunteers to be punctual for the sessions, and sensitizing mothers and care takers through local authorities and volunteers.

Graph 4. Monthly attendance at CBGP sessions



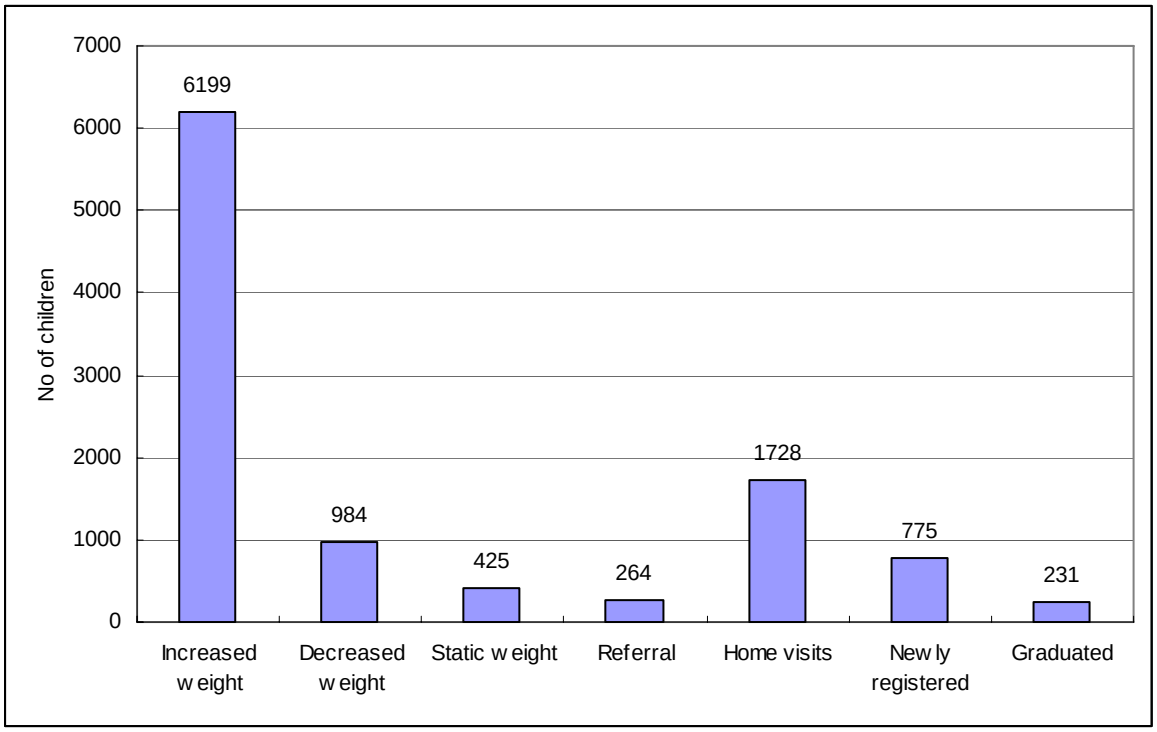
PD Hearth

Although the project DIP planned to introduce PD Hearth in Year 3 using CBGP data for selecting eligible communities, CARE has been carefully assessing the feasibility of the program before its start, given the labor intensive nature of the PD Hearth methodology. As the Mid Term Evaluation (MTE) consultant rightly pointed out, "without careful preparation, what is promoted to be the PD Hearth Approach reverts to cooking demonstrations, nutrition discussions and little more." In order to gain some insights and to use lessons learned, the project, in year 4, consulted with Catholic Relief Services (CRS), who has piloted PD Hearth in the Kailahun district over the past years with much success. Discussion with CRS revealed the following: CRS limited the implementation of PD Hearth within Kailahun district because their operational communities in the Koinadugu district had insufficient availability of food and beacause they found that malnutrition in these areas was directly correlated to wealth. Nevertheless, CRS intends to reassess the situation and start PD Hearth in their new project in the Koinadugu district during late 2007. Based on this information and the discussion among

the project staff, DHMT partners, CARE SL Health Sector Coordinator and CARE Head Quarters (HQ) Child Survival Project technical backstop, the project has decided to pilot PD Hearth in 5 operational communities (one from each of the 5 chiefdoms) in close collaboration with CRS.

Accordingly, the project developed the implementation process and time line for the PD/Hearth activities with support from the CARE HQ technical back stop and the CARE SL Health Sector Coordinator. Initial discussions were also held with CHCs and VDCs, CBGP volunteers, and PHU staff in all 54 project operational communities in April 2007. Five communities with suspected high rate of malnutrition (based on PHU records and CBGP session report) were then identified as pilot sites. Comprehensive list of available food by chiefdom was also compiled in preparation for the actual start-up of the pilot PD Hearth program in Year 5. Technical assistance both from an international consultant, as well as from CRS and HKI offices in Sierra Leone were arranged; trainings for the project staff and partners will be conducted in the first quarter of Year 5.

Graph 5. Weighing status for Year 4 (as of end September 2007)



Progress on the selected nutrition indicators according to the 2007 LQAS results is summarized in the below table.

Indicators	Baseline April 2004	LQAS May 2005	**LQAS June 2007**	Project Target
Percent of children aged 0-23 months who were breastfed within the first hour after birth.	19.5%	55.3%	**67.4%**	35%
% of children aged 0–5 months who were exclusively breastfed during the last 24 hours	8.3%	32.4%	**97.9%**	15%
% of children aged 6-9 months who received breast milk and complementary food during the last 24 hours	69.8%	83.3%	**51.0%**	-

More detailed information on activities carried out in Year 4 in the area of nutrition is provided below.

Key activities for Nutrition (as outlined in the DIP)	Status of activities	Comments
BCC 1) Develop IEC materials on nutrition 2) Promote and support exclusive breastfeeding and complimentary feeding, Vitamin A supplementation, iron and folate intake for pregnant women among CHCs and on radios.	1) **Completed:** The project contracted the services of the Health Education Unit of the MOHS to develop IEC material on the project intervention areas including nutrition. Jingles were also developed and aired over the radio Bintumani 2) **On target**: Community level sensitization was conducted by the CHC members and jingles were developed and aired on the radio Bintumani. The project participated in the world breastfeeding week celebrations at district level and organized sensitization activities in all operational communities. Radio: 2 panel discussions on Exclusive Breastfeeding and the importance of community based growth promotion were produced in collaboration with MOHS; 2 songs were produced by community members on early initiation of breast milk and exclusive breast feeding were aired over the local radio. CHC: 16 sessions were conducted by project staff and CHC members on Nutrition, 8 sessions on Nutritional disorders, 30 sessions on Exclusive breastfeeding and 8 sessions on Nutrition and food groups.	Counseling was carried out on child feeding and care during CBGP sessions. Home visits were also made by CBGP volunteers.
Quality and Access to services 1) Build nutritional counseling and services for pregnant women into outreach services provided by PHUs and CHCs (supervised by PHUs) 2) Oversee implementation and supervision of CBGP activities in the participating communities. 3) Facilitate the implementation and supervision of Positive Deviance (PD) Hearth activities. 4) Facilitate community access to Vitamin A supplementation.	1) **On target:** PHU staff gave pregnant women ANC packages, including Iron and Vitamin A supplements, they counseled them on how to obtain a balanced diet, and they encouraged them to join and participate in the pregnant women support groups. Health education sessions were conducted at 48 out reach points on maintenance of exclusive breastfeeding, complementary feeding, iron supplementation, the use of iodized salt and feeding of the sick child. 2) **On target:** 367 growth promotion sessions were conducted in 54 project operational communities. A total of 8,383 children less than two years of age were weighed, 6,199 were reported to have gained weight, 984 decreased in weight, and 425 had static weight; 775 newly registered and 264 children were referred for various conditions. 3) **On target:** Discussions were initiated with the DHMT, Local Council, Helen Keller International (HKI), CRS and other NGOs on PD/Hearth implementation plans during health coordination meetings and on a one on one basis. Plans were discussed in 54 project operational communities, focusing on the targets and support required from the communities, as well as the strategies for implementing and enabling PD/Hearth projects. 5 communities were identified Sinkunia, Hamdalai, Yiffin, Yataya and Kalkoya (one per chiefdom) with suspected high rates of malnutrition. A comprehensive list of available food was compiled for the 5 project operational chiefdoms. 4) **On target:** CHC members participated as mobilizers in a DHMT organized Vitamin A distribution on the day of the African Child and mobilized mothers for post partum and	

Key activities for Nutrition (as outlined in the DIP)	Status of activities	Comments
	routine Vitamin A intake. The project initiated discussions with HKI for the training of community based distributors in the first quarter of Year 5.	
5) Facilitate de-worming of project beneficiaries.	5) **On target:** CHC monthly action plans included the mobilization of project beneficiaries to receive deworming medication and provided logistic support for the distribution of tablets and other PHU equipment received from UNICEF.	
Cross-cutting issues 1) Facilitate child-registration and participation in CBGP sessions.	1) **On target**: The project provided vehicle support to the DHMT for the transportation of birth and death registers to all the 22 PHUs in the project operational location and worked with CHC members to provide community education on the importance of birth and death registration. Birth and death indicators were also included in the community data surveillance system developed by the project and the DHMT. The CBGP volunteers ensured that newly born children were registered in the CBGP sessions.	

2.2.3 Malaria (35%)

The project and partners continued to implement interventions to address the high prevalence of malaria and the problem of self treatment by training PHU staff to recognize malaria and to perform standard case management. They also educated community members about malaria and its treatment, thereby promoting intermittent presumptive treatment (IPT) of malaria amongst pregnant women and the distribution and use of ITNs for pregnant women and children due for DPT 3 and a second dose of Vitamin A.

Major activities carried out during the reporting period include: BCC through radio, CHCs and VDCs (VDC and CHC active participation included providing health talks to other community members on malaria prevention and control measures such as prompt health care seeking practices); participatory distribution of free ITNs for target groups by PHU staff and VDC members; community monitoring of the use of the distributed ITNs; and training of PHU staff on standard case management of malaria (jointly organized by DHMT and UNICEF), malaria prevention and treatment including ITN participatory distribution and monitoring (jointly organized by DHMT and CARE).

Throughout the fourth year, the project facilitated the distribution of 10,555 ITNs (received from UNICEF) in its operational locations through the VDCs and PHU staff. The strategy of ITN participatory distribution involved registration, mobilization and verification of beneficiaries by the VDCs and distribution by PHU staff to the intended beneficiaries. At the end of the distribution, the completed distribution forms were signed by the VDC chairperson or representative, PHU staff and project staff. These completed forms are kept at the PHU and communities. VDC and CHC members subsequently monitored the use of the distributed ITNs by the intended beneficiaries. VDCs' involvement in ITN distribution and periodic community monitoring of the ITN use has enhanced transparency and accountability surrounding ITN services.

Quarter	Quantity of ITNs distributed per target group			Total per quarter
	Pentavalent 3	Vitamin A2	Pregnant women	
Oct to Dec 06	1,973	2,378	1,721	6,072
Jan to March 07	563	454	138	1,155
April to June 07	183	130	744	1,057
July to September 07	959	513	799	2,271
Total	**3,678**	**3,475**	**3,402**	**10,555**

Progress on malaria indicators, according to the 2007 LQAS results, is summarized in the below table.

Indicators	Baseline April 2004	LQAS May 2005	**LQAS June 2007**	Project Target
% of children aged 0–23 months who slept under an ITN the previous night.	0.57%	18.8%	**84.8%**	15%
% of children aged 0-23 months with a febrile episode that ended during the last two weeks who were treated with an effective anti-malarial drug within 48 hours after the fever began.	27.4%	0%*	**72.2%**	40%
% of mothers who took anti-malarial medicine to prevent malaria during pregnancy.	31.0%	58.1%	**90.9%**	50%

*In May 2005, the new treatment protocol using ACT had been approved by MOHS but was not yet being implemented in the district.

More detailed information on activities carried out in Year 4 in the area of malaria is provided below.

Key activities for Malaria (as outlined in the DIP)	Status of activities	Comments
BCC 1) Develop IEC on Malaria. 2) Facilitate health promotion on malaria management, prevention and control.	1) **On target:** IEC materials, including posters and jingles, were developed on malaria prevention with technical support from the health education unit of the MOHS. 2) **On target**: CHCs participated in health talks delivered during their home visits, outreaches and PHU sessions on malaria control and prevention. VDCs and CHCs conducted regular verification of the presence and use of the distributed ITNs. Radio: DHMT and project staff produced and aired 2 panel discussions on malaria prevention for pregnant women and under fives and the role of VDCs and CHCs in malaria prevention. CHC health sessions: Project staff conducted 12 refresher sessions with all 54 CHCs (with attendance of 1,754 members) using the new toolkit and participatory methods.	
Quality and Access 1) Increase availability of ITNs to the target population.	1) **On target:** A total of 10,555 ITNs have been distributed to beneficiaries (DPT 3, Vit A 2 and pregnant women at first contact). The LQAS conducted in 2007 confirmed 94.3 % use of the 10,555 distributed ITNs by the intended beneficiaries.	

Key activities for Malaria (as outlined in the DIP)	Status of activities	Comments
2) Facilitate the increased availability of anti malaria medications. 3) Facilitate training in supervision, training of trainers and quality assurance for DHMT/PHU staff. 4) Facilitate the collection and analysis of data on Malaria from PHUs. 5) Collaborate with partners in health delivery (UNICEF, MOHS) to provide PHUs with basic medical equipment to support IMCI.	2) **On target:** Provided feedback on the stock level of anti malarial drugs during routine supervision and worked with the DHMT to restock UNICEF supplied drugs. 3) **On target**: Provided funds for the refresher training of 22 PHU staff in the project operational locations on malaria standard case management protocol. Compliance with the protocol and skills of PHU staff were ascertained regularly during the joint monthly supervision of PHUs. 4) **On target**: The project ensured that the PHU staff collected, analyzed and displayed vital information including malaria statistics to capture the number of reported cases per month. A community surveillance and monitoring system, which includes monitoring of malaria indicators, was also set up in the reporting period. 5) **On target**: UNICEF provided drugs, including ACT and IPT, and basic medical equipment for the smooth operation of all the PHUs in the district, including the newly constructed Maternity Centre. The World Bank and Medicos Del Mundo provided funds for the construction and equipping of 2 PHUs in the projects operational locations.	
Cross-cutting Issues 1) Advocate with GoSL at the national level to develop policies/processes that support responsibly managed, community level initiatives in remote areas where GoSL does not provide adequate services (e.g. the sale of GoSL provided ITNs or essential drugs).	1) **On target:** The CARE MOSI (Malaria Outreach and Safety Initiative) project and CRS have targeted remote areas for the malaria intervention including the social marketing and free distribution of the ITNs to target beneficiaries. The project also identified remote and hard to access communities as outreach points for PHU activities including the distribution of ITNs. At national level, the better coordination and information management to ensure equitable distribution of the services and supplies (ACT and ITN, in particular) was advocated with National Malaria Control Programme (NMCP). Illegal sales of free ITNs and ACTs practiced by some PHU staff were also brought to the attention of the NMCP manager.	

2.2.4 Maternal and Newborn Care (MNC) (30%)

The project's MNC intervention aims to improve access to information and basic maternal health care by providing educational sessions on danger signs recognition and birth preparedness, at the community and household level. Additionally, promotion of Tetanus Toxoid (TT) vaccination and iron supplementation for pregnant women, vitamin A (VA) supplementation for postpartum women, and training of PHU staff in intermittent presumptive treatment of malaria in pregnant women is also part of the MNC intervention plan.

The intervention was introduced in Year 3; however, only after the project developed the detailed plans to strengthen the MNC component with technical assistance from the CARE HQ Health Unit advisor in August 2006 of Year 4, did full-scale implementation start.

With assistance from the advisor, the project identified the key elements of MNC that were yet to be integrated into the overall implementation activities as briefly outlined below:

Strategy	Major activities	Measure of success (example)
BCC, with special focus on promotion of birth preparedness and complication readiness	• Health education – promote messages that were previously neglected (such as post natal care, clean delivery, essential newborn care) while reinforcing key messages on ANC and knowledge of danger signs • Birth preparedness – promote birth planning within the community, involving all key stakeholders	• Women, their families and community members have increased knowledge and recognition of danger signs of pregnancy and childbirth • Community members have increased knowledge and provide support for birth planning • Increased use of birth planning and preparation to deal with obstetric emergencies • Increased use of safe and clean birth practices (as measured by the use of the six cleans)
Enhancing the capacity of health institutions and partners to increase access and quality of basic maternal health services	• Promote linkages between community and the PHU • Support capacity building and staff development at the PHU • Support quality improvement efforts • Provide support for MNC working group • Cross learning and sharing of experiences	• PHU providers have increased knowledge and skills to provide safe and clean deliveries • Increased collaboration between community members and PHUs e.g. Cost recovery systems in place that are effective and responsive to community needs • Availability of a communications system in at least two communities, linking the PHUs with main referral hospital • Increased numbers of women using the health facility- e.g. proportion of all births conducted at facility • Improved capacity (equipment, supplies, etc.) of the facilities to provide basic obstetric care services • Improved supervision and other support systems to local PHU staff • Improved coordination on MNC activities within Koinadugu district
Community Support Structures for Maternal and Newborn Health	• CHC – promote community ownership and empowerment for CHC process • Creation of women's groups that increase women's voice and empowerment	• Community support plans in place for maternal and newborn health • Community members have increased knowledge of danger signs for pregnant women and newborns, as well as elements of birth planning • Existence of women's support groups that have action plans for women with obstetric and newborn emergencies • Decrease in harmful maternal and newborn health practices

One of the key recommendations from the Mid Term Evaluation was the need for the project to work with the district officials and other partner agencies in Koinadugu to coordinate activities and responsibilities related to MNC. The project staff organized and convened the first meeting of the MNC working group members, comprising representatives from District Council, the DHMT, and partner agencies, that have MNC interventions in the district. As part of the technical assistance provided, the advisor co-facilitated a two-day meeting with the MNC working group. During the meeting, the roles of the MNC working group members in promoting MNC were clearly defined and the advisor provided technical updates on the following topics for the members: Redefining the roles of Traditional Birth Attendants (TBAs) in maternal health; Birth preparedness; Elements of effective ANC; and Essential Newborn Care.

Using this technical assistance as a stepping stone, the project, in close collaboration with the DHMT, designed the following specific and sustainable framework for short- to mid-term community-based solutions to reduce the high maternal mortality in the district:

- **Establishment of birth waiting homes** to eliminate the first delay (i.e., decision to seeking health care)
- **Redefining the roles and responsibilities of TBAs**
- **Establishment of Village Savings and Loans (VS&L) scheme** to provide safety net to cover the unpredicted cost relating to MNC (e.g., Emergency Obstetric Care (EmOC))
- **Upgrading the skills of Maternal and Child Health (MCH) Aids**
- **Formation of pregnant women support groups** for health education, ANC services, and peer support
- **Use of birth planning cards** to promote birth preparedness
- **Continued health education for BCC through radio and community structures such as CHCs and VDCs**

It should be noted, that with project's coordination efforts and the current District Medical Officer (DMO)'s strong commitment and leadership in maternal mortality reduction, the above framework was adopted not only in the project operational areas but as a district-wide strategy. (The focus of the DMO's Maternal Health Plan for Koinadugu is to increase the number of women that deliver with skilled birth attendant (SBA).)

As such, the major MNC activities of the project during the reporting period included: community mobilization for the establishment and use of birth waiting homes; establishment of VS&L schemes in the operational communities; support for pregnant women support group activities; support for skills building of PHU staff in EmOC and malaria standard case management, including IPT for pregnant women; strengthened health education for BCC through radio and community structures on the key MNC messages such as danger signs during pregnancy and delivery, birth preparedness using birth planning cards, the importance of iron supplementation and TT vaccination for pregnant women and Vitamin A supplementation for post partum women; and support for the district coordination mechanism through active participation in monthly MNC working group meetings.

At national level, two policies relating to MNC were finalized during the reporting period: the Reproductive Health Policy; and the Child Health Policy. Based on these policies, the Reproductive and Child Health Strategic Plan – Sierra Leone (2008-2015) is currently under development. CARE SL Health Sector Coordinator actively provided inputs in the process of policy finalization and strategy development.

More specific description of the three key interventions introduced by the project in Year 4 (i.e., birth waiting homes, pregnant women support groups, and the VS&L scheme) are provided below:

<u>Birth waiting homes</u>

The project in collaboration with the DHMT and other partners designed the establishment of birth waiting homes in all PHU communities with the aim of increasing skilled attendance at birth especially for communities in very far and remote areas of the PHU catchment. Since distance is a barrier in utilization of maternal care, birth waiting homes are to provide a setting where pregnant women could be accommodated during the last trimester of their pregnancy near a PHU with support from the family members and other relatives. Birth waiting home strategy also increases the chances of administration of Vitamin A, BCG and polio vaccines

immediately after delivery. TBAs are assigned to the birth waiting homes to assist the MCH Aide as well as to provide health education and good child care messages. PHU staff will also provide routine ANC services for women in the birth waiting homes until delivery. As the effectiveness of the strategy depends on the ability of PHU MCH Aides to recognize and refer women at risk to the district hospital, the availability of efficient EmOC services, and support from the community and government, a holistic approach that includes capacity building of PHU staff and DHMT members, as well as intensified health education and community mobilization, is presently being taken.

To date, birth waiting homes are in place in 19 project operational communities. The project worked with Local Councilors, CHC and VDC members to mobilize communities and solicit support for the concept of birth waiting homes, which resulted in either the construction of new structures or the donation of the existing structures by community members to be used as birth waiting homes. The project provided some essential supplies to make these waiting homes operational.

Pregnant women support groups (PWSG)

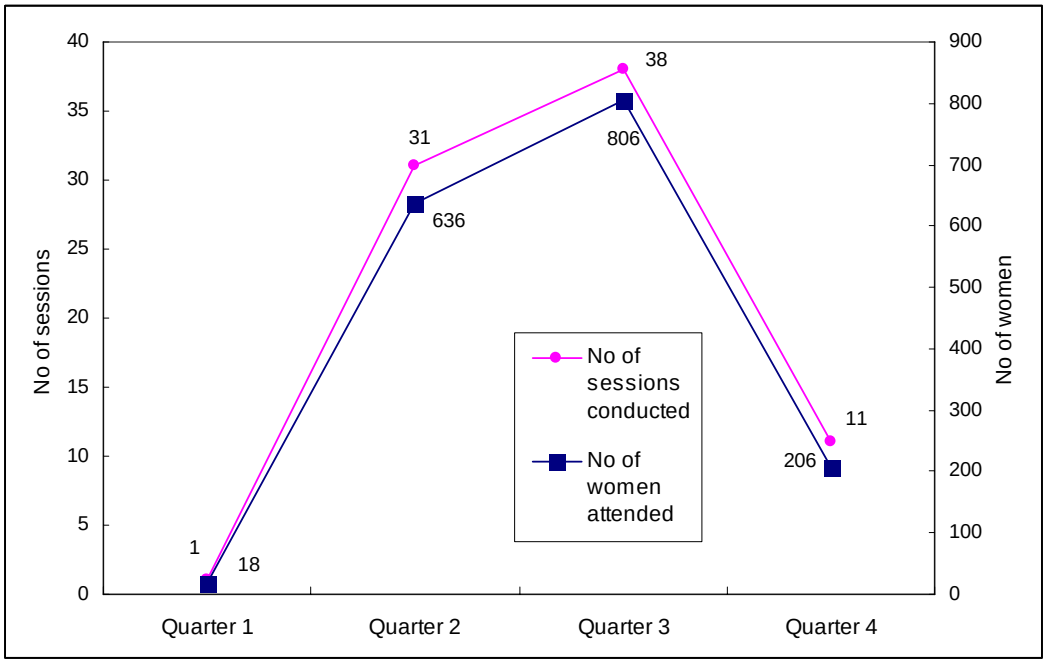
The project and partners were invited by the Helen Keller International (HKI) in October 2006 to visit their nutrition project implementation sites in Conakry, Guinea. This program is based on a positive-deviant model, whereby a woman who has successfully given birth to healthy children is used as a trainer for women who are currently pregnant. The program also involves district level health officials, community leaders, traditional birth attendants, community health committees and community health volunteers in implementation. The objectives of the program are to reduce maternal and infant mortality, and to decrease infant and maternal malnutrition. The implementation strategy involves promoting and facilitating the implementation of an integrated package of prenatal care, which includes regular health monitoring, malaria prevention and control, deworming, iron and folic acid supplementation, tetanus vaccination, and nutritional advice, at least three times over the course of a pregnancy. The strategy facilitates increased contact and communication between health center staff, traditional birth attendants, and pregnant women, which will lead to increased identification and referral of potentially high risk pregnancies, and an increase in the number of births which are attended by the skilled staff. A recommendation was made by the team that visited to adopt the strategy in the project's operational locations. After consultations with stakeholders at the district level, a decision was made to design a simplified version of the HKI module.

As such, pregnant women support groups have been formed in 28 project operational communities since December 2006. The primary objective of the Koinadugu version of the pregnant women support group is to create a strong and consistent interface between the pregnant women and the PHU staff and to increase skilled attendance during deliveries. Membership is open and voluntary to all pregnant women and registration and participation is free. Husbands and other community members are also encouraged to support the process. It was also agreed that the TBAs should play an integral role during sessions by ensuring the attendance of all pregnant women in their respective communities. This strategy is a way of promoting social cohesion for women and the forum can be used to discuss other developmental issues for promoting women's empowerment. Some of the activities during the sessions are: registration and review of birth planning cards, health education on pregnancy and child care, pregnancy related experience sharing among group members, correct preparation of a balanced diet during pregnancy (group members cook and eat together during the sessions), routine ANC services (examination, fundal height, fetal heart sounds etc), administration of TT vaccines where applicable, IPT, iron fefol, deworming medications and

free distribution of ITN, etc. During the reporting period, 603 pregnant women (in 28 groups) participated in the group sessions with an average of 3 sessions per group across the district.

Review of PHU records indicated an increase in skilled attendance at birth and reduction in maternal morbidity during pregnancy over the past months. A structured survey will be conducted in Year 5 to ascertain the effect of the group sessions on maternal morbidity and mortality in the project's operational communities.

Graph 6. PWSG quarterly attendance and sessions conducted



Note: Attendance / number of sessions conducted in quarter 4 was lower than quarter 2 and 3 due to the election activities, rainy and farming season, and Ramadan.

Village Savings and Loan (VS&L) scheme for emergency referral

The project worked with the CHCs to educate community members especially men, mothers, and mothers-in-law to support women during pregnancy and to set up emergency referral system to PHUs. As a result, emergency referral mechanisms using the hammock/blanket system were established in all 54 project operational communities. However, the delay in referral of cases from the PHUs to the district hospital was another problem causing the very high maternal mortality in the district. During a joint planning meeting with the DHMT, a decision was made to institute a simple community based initiative of fund raising to facilitate transportation (e.g., hiring vehicles, etc.) for emergency referrals. As such, the idea of the Village Savings and Loan (VS&L) scheme was introduced in December 2006. The project negotiated with a CARE sister project (USAID-funded LINKS project) to provide trainings for staff and community members on VS&L and to support the establishment of the scheme in the project's operational communities. To date, 146 community members were trained on VS&L scheme and 62 groups were formed with an average saving of Le 678,746.00 (Approximately 230 USD) per group. Fourteen (14) referrals were made with funds from the VS&L scheme. The community strongly supported the idea, which subsequently won the admiration of the project's non-operational communities. Furthermore, once the DMO presented the contribution of VS&L scheme in maternal mortality reduction in Koinadugu district, the DHMT and CARE started to receive requests from other districts to provide trainings on VS&L scheme for its possible replication in their respective districts.

Progress on the MNC indicators, according to the 2007 LQAS results, is summarized in the below table.

Indicators	Baseline April 2004	LQAS May 2005	**LQAS June 2007**	Project Target
% of women aged 15-49 who know at least two symptoms that indicate the need to seek referral for emergency obstetric care.	37.8%	57.8%	**62.1%**	65%
% of children aged 0–23 months whose births were attended by skilled health personnel. *(includes doctor, nurse, MCH Assistant) TBAs were not considered skilled.	15.1%	23.2%	**44.2%**	30%
% of mothers able to report at least two known neonatal danger signs.	7.4%	23.2%	**45.3%**	35%
% of mothers who received/bought >= 90 iron supplements while pregnant with the youngest child less than 24 months of age.	60%	87.3%	**96.8%**	75%
% of mothers who received a Vitamin A dose during the first two months after delivery.	17.8%	52.6%	**67.4%**	50%
% of mothers who received deworming medication during the second or third trimester of a pregnancy within the last two years.	21.7%	33.7%	**81.1%**	-
% of mothers who took anti-malarial medicine to prevent malaria during pregnancy.	31.0%	58.1%	**90.9%**	50%

More detailed information on activities carried out in Year 4 in the area of MNC is provided below.

Key activities for MNC (as outlined in the DIP)	**Status of activities**	**Comments**
BCC 1) Develop IEC materials on MNC.	1) **On target:** IEC materials such as posters and flip charts on birth waiting homes, pregnant women support groups, dangers signs during pregnancy, etc., were developed. The project and partners continued to implement the BCC component of MNC strategy developed in August 2006.	Ongoing
2) Conduct health promotion on appropriate MNC practices, birth preparedness, tetanus toxoid vaccination and iron supplementation for pregnant women and Vitamin A supplementation for post partum women.	2) **On target:** CHC refresher sessions were conducted on birth preparedness and danger signs during pregnancy. Radio panel discussions were held on the role of TBAs and MCH Aides in the establishment and commencement of PWSG sessions, Importance of PWSG, rationale for the establishment of birth waiting homes and the role of TBAs in the functioning of the home. A song in the local dialect on danger signs in pregnancy and 2 jingles on danger signs during pregnancy and were developed. Pregnant women support group: 28 pregnant women support groups were formed in 28 locations and 81 sessions were conducted by PHU staff, TBAs and project staff. From the support group membership, 211 deliveries were conducted in the PHUs. Birth preparedness: Birth planning cards were developed by the project in collaboration with the DHMT and to date, 676 cards were distributed to pregnant women by PHU staff. These birth planning cards are reviewed on monthly basis during the pregnant women support group sessions to ensure whether items listed in the cards have been secured by the pregnant women.	

Key activities for MNC (as outlined in the DIP)	Status of activities	Comments
3) Facilitate Home Based Life Savings Skills (HBLSS) training for TBAs and CHCs	3) **Not yet on target**: Discussions are underway to provide training for the TBAs on the newly defined roles (e.g., supervision of pregnant women at the birth waiting homes) and HBLSS.	
4) Co-ordinate the set up of a community based CHC referral system.	4) **On target**: 62 village savings and loans groups were established for emergency referrals with an average savings of 678,746.00 Le per group. The hammock system, for the referral of cases from the communities to the PHUs, was established in all 54 communities and 22 non-operational communities (through sensitization during CHC rollout.)	
Access to Quality Health Services 1) Facilitate training of PHU staff in appropriate presumptive treatment of malaria in pregnant women.	1) **Completed:** The project supported the DHMT to conduct refresher trainings in malaria standard case management including IPT for 22 PHU staff.	
2) Facilitate training for PHU workers on quality obstetric care	2) **Completed:** The project contributed some funds to the training of 22 PHU staff in emergency obstetrics and the use of equipments like the pathograph when conducting deliveries. The training was organized by the DHMT in collaboration with MOHS and UNICEF.	
3) Increase accessibility of MNC services (added after MNC strategy development)	3) **On target:** Outreach services: Antenatal services which included the vaccination of pregnant women with TT were recorded for 2,130 women of child bearing age and 2,572 for under five children at out reach sessions. CHCs participated in sensitizing and mobilization of communities for attendance. Birth waiting homes: Sensitization for the construction of birth waiting homes was done jointly with DHMT and Local Council. 19 homes are ready for use with 3 under construction.	
Cross-cutting 1) Community based verbal autopsy and disease surveillance.	1) **On target**: Community surveillance and monitoring system was set up. Training of all stakeholders including volunteers was conducted.	
2) Support to MNC working group (added after MNC strategy development)	2) **On target**: The project actively participated in all district MNC working group meetings.	

3. Challenges encountered in project implementation and strategies to overcome these constraints

During the period under review, project progress was impeded by the following factors. Actions taken by the project to address the challenges are also highlighted below.

Challenge 1:
The ongoing and prolonged rehabilitation of the District Hospital hindered the effective functioning of the district health management information system due to lack of office/working space with access to computers for the monitoring and evaluation (M&E) officer of the DHMT. Offices of the district health units were temporarily located in private homes with no

electricity and this brought the collation and analyses of PHU data for programming to total halt.

➔ ***Actions taken and/or to be taken:*** *Prior to the arrival of the student intern from Emory University, the project discussed with the DMO and the hospital construction contractor to assign a space for the DHMT M&E officers and the intern to facilitate the set up of the community surveillance and monitoring system. As a result, one of the completely rehabilitated buildings in the hospital was handed over to the DHMT as their temporary office space until the completed construction of all of the buildings, which is due in December 2007.*

Challenge 2:
The project was designed to use Community Integrated Management of Childhood Illness (C-IMCI) as the guiding framework. However, the government of Sierra Leone has been slow in IMCI roll out across the country, and official publication of protocols is still pending. The Ministry of Health and Sanitation (MOHS) and UNICEF insist that the facility-based IMCI is already being rolled out in the country, but no evidence has been found to date. There must be some confusion or misunderstanding among key stakeholders between the vertical disease-specific programming and the more holistic approach of IMCI, as it was discovered that the content of the IMCI training conducted in Koinadugu district during the reporting period was more or less identical to the training on standard case management of malaria.

➔ ***Actions taken and/or to be taken:*** *With the recent finalization of the Child Health Policy and the arrival of a new UNICEF nutrition office,r who seems to be keen to move forward with some proven community-based approaches, including C-IMCI, the MOHS finally embarked on the development of a C-IMCI manual with UNICEF support at the national level. The consultation with partners for finalization of the manual is planned in November 2007, and CARE SL Health Sector Coordinator will be committed to providing her input. Without waiting for official publication of the manual, the project and DHMT have decided to prepare staff at district and PHU levels for the introduction and roll-out of C-IMCI in near future. The technical assistance has already been secured to (re)orient the project staff and partners to C-IMCI for the first quarter of Year 5. While UNICEF is expected to be a key actor in providing technical assistance and backstopping to the Ministry of Health on C-IMCI, given CARE SL's rich experience in community-based health initiatives and its strong presence in Koinadugu district, the project intends to play a significant role at the district level in supporting the DHMT to actually translate concepts into practice, with set quality standards during Year 5.*

Challenge 3:
Project activities were impeded by the national presidential and parliamentary election exercises in May and June, two months ahead of the official announcement of formal campaigns which takes place in late July and is continued until after the run–off elections and official announcements of the results in September 2007. During the period, project participants at community level were heavily engaged in the political activities and had little time to focus on other developmental issues. At the district level, participation of partners such as District Councilors in project activities became very challenging. Staff movement to operational locations was also restricted very close to the polls for safety and security precautions.

➔ ***Actions taken and/or to be taken****: Project staff were relocated to less politically sensitive areas and project implementation schedules were restructured in collaboration with community members. Also staff were encouraged to pair up on bikes so that they could have the courage to ply the routes to access operational communities. The project concentrated on inviting the Council Health chairperson to represent them in project meetings at district level.*

Challenge 4:

Vaccine shortages at Peripheral Health Units (PHUs) during the reporting period, especially right after the measles and malaria campaign in November 2007, negatively affected the overall immunization coverage in the project operational communities and the district at large. This was as a result of the low stock of vaccines, especially DPT 3, delivered to the district referral hospital by the central medical stores. Also, the shortage of vaccines led to cases of missed opportunities, which contributed to the current high rate of immunization defaulters.

➔ ***Actions taken and/or to be taken****: Discussions were held with the District Health Management Team (DHMT) on the issue and it was resolved that the DHMT was to further discuss with the EPI department in Freetown the possibility of increasing vaccine supply to the district. As a result, vaccines were supplied to the district. The project also provided immunization defaulter tracing system using the "Tickler boxes" for 58 PHUs and trained PHU staff in the use of the boxes as a means of addressing the identified gap created during the vaccine shortage.*

Challenge 5:

Limited supply of under five cards throughout the reporting period, coupled with the frequent absence of CBGP volunteer secretaries in the months of July and August 2007, negatively affected CBGP activities. Approximately 75% of the CBGP volunteer secretaries selected by community members for the CBGP sessions were community teachers. During the reporting period, the Ministry of Education and UNICEF introduced a distance learning programme for the community teachers. The programme required the teachers to attend the lectures in the district head quarter town, thereby creating a gap in the implementation of the CBGP sessions at community level.

➔ *Actions taken and/or to be taken: It was agreed that communities with teachers doubling as CBGP secretaries should communicate their departure and duration of travel when leaving their communities to the PHU in-charges so that the PHU staff can coordinate the weighing activities. Assistance from nearby community secretaries was also sought in cases where neither PHU staff nor secretaries were available. For the limited supply of under five cards, the project in collaboration with the DHMT resolved to use photocopied cards as an alternative to the original.*

4. Technical Assistance required during Year 5

As already mentioned, the project will formally introduce PD Hearth and the full-scale roll-out of C-IMCI, in which CARE would play a supportive and significant role, is expected in Year 5. While some project staff were trained on both PD Hearth and C-IMCI over the past years and some or many of the aspects of these approaches are already in place, the initial training was conducted a long time ago and it is high time to (re)orient staff and partners to these topics, as is in line with the Mid Term evaluation (MTE) recommendation. Another recommendation of the MTE was around strengthening the project's nutrition intervention to develop a full Essential Nutrition Action (ENA) strategy through increasing attention to areas that require more emphasis, such as sick child feeding. The findings of the latest LQAS survey also suggested the need to intensify the messages on complementary feeding and feeding of the sick child. Thus, the project is also seeking technical assistance (TA) in complementary feeding / feeding of the sick child. The project has proactively identified and secured the services of a qualified consultant in child and health nutrition who agreed to cover all three areas. The

training will focus on complementary feeding and feeding of the sick child, but it will be discussed within the broader ENA context, where an overview of different approaches to implement ENA, such as PD Hearth, C-IMCI, CBGP, and Community Therapeutic Care (CTC), will also be provided.

The CARE Child Survival Project, along with the IRC Child Survival Project in Kono, was selected for TA from the Child Survival Technical Support Project (CSTS+) to carry out the Child Survival Sustainability Assessment (CSSA). As the project is entering its final year, the IRC and CARE are jointly seeking TA to facilitate the consolidation of reflections to date and to further refine the CSSA indicators toward the end of the project.

Lastly, the final evaluation of the project is scheduled to take place in July and August 2007, using an external consultant. The Knowledge, Practice and Coverage (KPC) survey will be repeated and IRC will be invited to participate in the evaluation.

5. Substantial Changes in the Project

No substantial changes have been made.

6. Project's Monitoring Strategies

The project conducted a baseline survey in 2004 to enable the project to track progress on the indicators during the implementation of planned activities. Monitoring of progress on certain indicators addressing knowledge and behavior was done in 2005 and 2007 using the Lot Quality Assurance Sampling (LQAS) Survey. Findings from the surveys were used to redesign implementation strategies in the respective supervision areas. Qualitative assessment was also conducted during the Mid Term Evaluation to validate and back up the quantitative findings.

In Year 4, the project's second LQAS survey was conducted in June 2007. Ongoing monitoring and project review was also done through evidence-based discussions with project participants at the district and community levels. The discussion included the identification of gaps and their solutions. The project also hosted a team of student researchers from George Washington University, USA, who conducted a qualitative assessment of the project's CHC approach in March 2007. The report is attached in the annexes.

The table below summarizes the progress on the project indicators.

Comparison of Baseline Survey and 2005 LQAS, 2007 LQAS Levels and Project Targets

Indicators	Baseline April 2004	LQAS May 2005	LQAS June 2007	Project Target
Nutrition/feeding practice Percent of children aged 0-23 months who were breastfed within the first hour after birth.	19.5%	55.3%	67.4%	35%
% of children aged 0–5 months who were exclusively breastfed during the last 24 hours	8.3%	32.4%	97.9%	15%
% of children aged 6-23 months who received a high dose Vitamin A supplement during the last six months.	68.2%	73.2%	54.2%	85%

Indicators	Baseline April 2004	LQAS May 2005	LQAS June 2007	Project Target
% of children aged 6-59 months who received deworming medication during the last six months.	15.9%	33.9%	35.4%	-
Maternal and Newborn Care % of women aged 15-49 who know at least two symptoms that indicate the need to seek referral for emergency obstetric care.	37.8%	57.8%	62.1%	65%
% of children aged 0–23 months whose births were attended by skilled health personnel. *(includes doctor, nurse, MCH Assistant) TBAs were not considered skilled	15.1%	23.2%	44.2%	30%
% of mothers able to report at least two known neonatal danger signs.	7.4%	23.2%	45.3%	35%
% of mothers who received/bought >= 90 iron supplements while pregnant with the youngest child less than 24 months of age.	60%	87.3%	96.8%	75%
% of mothers who received a Vitamin A dose during the first two months after delivery.	17.8%	52.6%	67.4%	50%
% of mothers who received deworming medication during the second or third trimester of a pregnancy within the last two years.	21.7%	33.7%	81.1%	-
% of mothers who took anti-malarial medicine to prevent malaria during pregnancy.	31.0%	58.1%	90.9%	50%
EPI % of mothers with children aged 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child less than 24 months of age.	47.2%	29.5%	86.3%	65%
% of children aged 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before first birthday.	45.7%	46.2%	90.3%	60%
% of children aged 12–23 months who received a measles vaccine.	69.5%	69.7%	90.3%	80%
Malaria % of children aged 0–23 months who slept under an ITN the previous night.	0.57%	18.8%	84.8%	15%
% of children aged 0-23 months with a febrile episode that ended during the last two weeks who were treated with an effective anti-malarial drug within 48 hours after the fever began.	27.4%	0% (the new treatment protocol using ACT has been approved by MOHS but is not yet being implemented in the district)	72.2%	40%
Knowledge % of mothers of children aged 0–23 months who know at least two signs of childhood illness that indicate the need for treatment.	79%	81.1%	45.3%	95%

Indicators	Baseline April 2004	LQAS May 2005	LQAS June 2007	Project Target
% of sick children aged 0–23 months who received increased fluids and continued feeding during diarrhea episode in the past two weeks.	48.7%	10.7%	15.8%	-
HIV/AIDS % of mothers with children aged 0–23 months have ever heard about an illness called AIDS. (Not the original KPC Indicator. KPC Questionnaire questions for HIV/AIDS have been revised – and the original indicator is no longer comparable to subsequent assessments).	53.5%	62.1%	92.6%	-

Overall, the LQAS survey that was conducted in June 2007, recorded marked improvements in the project's indicators (e.g. exclusive breastfeeding in the last 24 hours for children 0-5 months old, and the use of ITNs by children 0-23 months old.) During the remaining period, the project will continue to work on improving all indicators listed in the above table with special focus on the areas highlighted (in red). Clearly, maternal knowledge on feeding of the sick child seems to be the largest gap to be filled in Year 5. The planned TA on infant feeding / nutrition will contribute towards intensifying the BCC efforts to address this gap. Many other areas seem to exceed the project's target by now (though the project is aware of the fact that LQAS survey results cannot be treated same as those of the KPC survey due to its small sample size). However, the project still recognizes the need to significantly improve certain indicators, especially on those relating to MNC, with more aggressive roll-out of the district's MNC strategy in Year 5. (Full report of 2007 LQAS survey is attached in the annexes.)

The latest data on more routinely monitored indicators are presented below. This also shows that the project is progressing on track.

Number of health clubs formed that have:

- A documented set of organizational by laws – ***54 (100%)***
- Conducted 10 documented meetings per year – ***54 (100%)***
- Demonstrated documented conduct of health-related activities in the previous 3 months – ***54 (100%)***
- % of HCs with documented female membership of at least 40% - ***98%***
- Number of HC members who have participated in the CARE health promotion mobilization training – ***2,339***

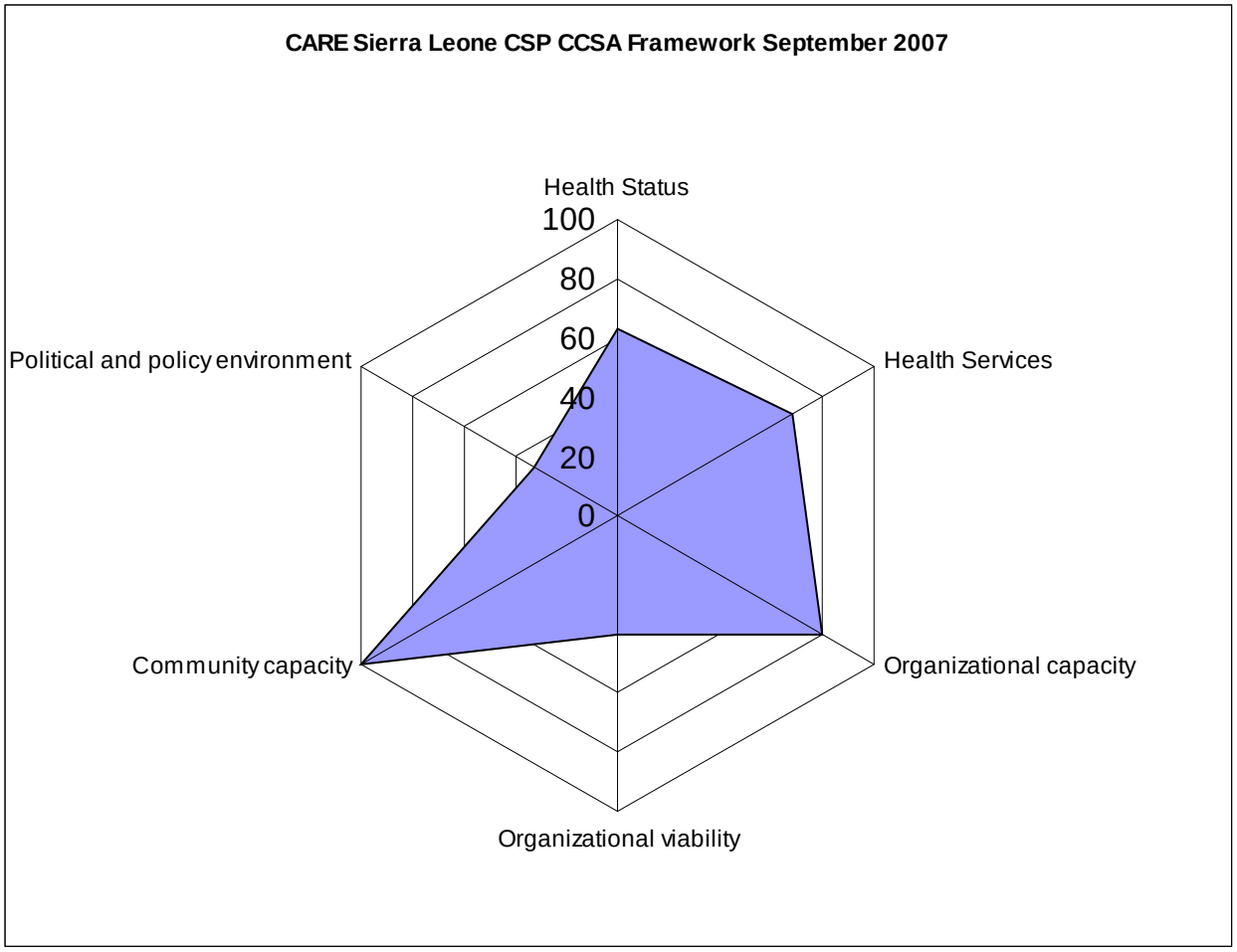
7. Sustainability

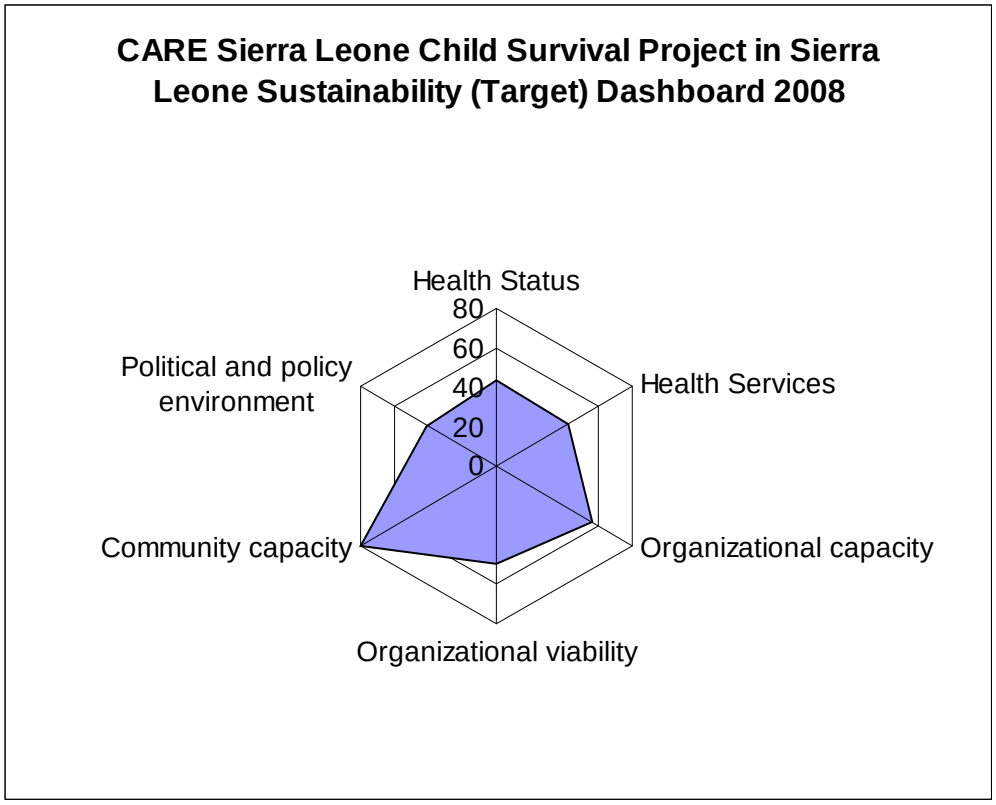
As one of the project's objectives is distinctly dealing with sustainability issues, many of the activities described earlier in this report were meant to not only improve health outcomes, but to also sustain positive outcomes. The following activities are the examples: exchange learning visits of DHMTs, Local Councils, VDCs between Koinadugu and Kono to instill a new sense of ownership of the project interventions into the partners and to build their capacity; monthly district health coordination meetings to build capacity of district stakeholders and to ensure equitable distribution of the resources across the district; capacity building of the health service providers in public sector (i.e., PHU staff); and involvement of all stakeholders in the planning, implementation, monitoring and evaluation of the project activities at both district and community levels, etc.

Sustainability dash board

The project made significant progress on the sustainability indicators as shown on the sustainability dash board. Five of the six components, with the exception of political and policy environment, marked the notable improvements, In fact, 'health status', 'health services', 'organizational capacity', and 'community capacity' components have already reached or exceeded the originally set target for 2008. During the remaining life of the project, continuous efforts will be made to improve political and policy environment, as well as organizational viability while further strengthening other components.

The project held discussions with the DHMT and Local Council partners to review progress on the sustainability indicators during the reporting period. The project also initiated a contact with the CARE Nepal Child Survival Project through the CARE HQ Technical backstop so that it may invite staff from Nepal to share their experiences on sustainability indicators with IRC and CARE in Sierra Leone.





8. Project Exit Strategy / Expectations on Progress towards Phase-out

To put it simply, the plan for project exit is to hand over the interventions to community structures and government partners, who, in turn, will sustain their commitment beyond the life of project. The strategy was set at the project onset; thus, the project has been making tremendous efforts to ensure the communities also understand that the *'Communities themselves will bring about the positive change, not the project.'* In post-conflict Sierra Leone, where people are used to relief aid and expected quick tangible outcomes (hardware), this was initially challenging. In this context, CHC approach was extremely effective for the project field staff's persistent efforts to bear fruits, as it's interactive methodology addressed not only health outcomes, but also the social cohesion that was missing most in the war-torn communities.

The project also recognizes that the hand-over of the interventions should be a gradual process; thus, the project's field staff is slowly decreasing the frequency of contact with each individual community structure. Some of the interventions, such as CBGP activities, have already been taken over by CBGP volunteers under the supportive supervision of VDCs and PHU staff. Likewise, CHC monthly action plans are now developed, implemented, and monitored without much involvement of project staff. Although the introduction of some new interventions, such as PD-Hearth, may add challenges, overall, the project is optimistic about the progress toward sustainability after the phase-out.

To keep this trend, the project will continue its efforts to ensure the following:

- Inclusive partnership and coordination: The project will continue to actively participate in the monthly partnership meetings, both at the district and community level. At the national level, advocacy efforts will be intensified to fill the gaps in the political and policy environment.

- Total involvement of VDCs as a custodian of the community health and development initiatives: The project will continue to support the VDCs in performing their oversight functions in a variety of community development and health initiatives. Development of a productive interface between VDCs and other developmental agencies within their chiefdoms and across the district (such as National Commission for local action (NaCSA), the Islamic bank, and other NGOs) will be further promoted.
- Capacity building of the existing structures: Capacity building efforts of community structures will be continued, with more focus on cross-fertilization among themselves and peer-education approaches. In terms of topic, governance issues will be emphasized. Capacity building of the public health sector (DHMT, PHU) will also be continued.
- Maintaining community enthusiasm: In order to promote and sustain the positive behavior change among people, community enthusiasm for the benefits they have already seen is essential. To enable community members to actually see the benefits (not only to feel it), a community surveillance and monitoring system was introduced toward the end of Year 4. This will be supported and strengthened until it is fully institutionalized in Year 5.

9. Programme management system

9.1 Financial Management System

Match funds required for the implementation of the activities throughout the life of the project were raised by the Country Office. All costs incurred, including salaries were charged in line with the project budget. Some of the major items were highlighted below.

Travel

Apart from the in-country travels related to project implementation, the project covered the expenses of the following international travels:

- Travel expenses for the Child Health Technical Advisor from Atlanta (Mariana Stephens)
- Travel to India for the Child Survival Annual meeting (April 2007) attended by the Project Manager.

Supplies

Funds were spent on the following project activities:

- Stationery and office supplies
- Training, workshop and community meeting supplies
- 58 Tickler immunization defaulter tracing boxes for PHUs
- IEC material development
- Items for the operation of 21 birth waiting homes in 5 chiefdoms
- VS&L scheme start u items distributed to 25 groups in 3 chiefdoms

Expenditures are projected for the following supplies in the fifth year:

- IEC materials (posters, flipcharts and jingles)
- Supplies to support partners
- Training, workshop and community meeting supplies

Contractual

Through the partnership with Emory University and George Washington University (Capstone project), the project obtained the technical assistances in:

- Setting up the community surveillance and monitoring system
- Qualitative assessment of CHC approach

Transportation services

Fuel, vehicle repairs and maintenance costs were expended according to the project budget.

9.2 Human Resources

The Child Survival project staff continued to receive technical backstopping and other support for the timely implementation of project activities from the in-country Health Sector Coordinator and the Atlanta based Child Health Team. The Health Sector coordinator based in Freetown paid frequent supportive visits to the filed site and made vital recommendations for the quality implementation of the programme.

The current national Project Manager assumed managerial responsibilities of the project in June 2006, after the departure of the expatriate Project Manager, and has continued to lead the field based project team.

The current staff strength of the project include: Project Manager (1), Assistant Project Manager (1), Health Education Officer (1), Monitoring and Evaluation Officer (1), Field Supervisors (2), Community Health Mobilisers (5), Drivers (2), Radio Operator (1), and the Office Cleaner (1).

Communication Systems and Team Development

The country has a strong focus on strengthening the capacity of staff, with emphasis on national staff to implement project activities according to agreed upon standards. In view of this, funds were provided for the Project Manager to attend the annual Child Survival workshop in India in April 2007. The workshop was organized by the Child Health Team in Atlanta in collaboration with CARE India. The workshop theme focused on community based neonatal survival intervention models and participants had the opportunity to visit the Society for Education and Research Institute (SEARCH) in Gadchirolli (India) to share experiences on community based neonatal survival implementation activities. Participants also shared experiences with other CARE Child Survival Projects and received technical information and updates from the facilitators (mainly from the Child Health Team). A roll-out training session was organized for the project staff by the CARE Sierra Leone representative and DHMT partners and technical materials received from the workshop were shared. CO health theme members were also debriefed on the experience gained from the workshop.

Based on the training needs assessment that was conducted to identify staff knowledge gaps, the project instituted a system of bi-weekly peer education on relevant child survival intervention topics, facilitated by all project staff. These technical update sessions contributed immensely in building staff confidence and knowledge in programming principles and quality implementation of health programmes.

Training was provided for staff in the following areas:

1. Community data surveillance systems
2. Information, Education and Communication material development strategy

3. Community based growth promotion
4. Principles of First Aide
5. Adult learning and facilitation principles
6. Positive Deviant Hearth Model
7. Project Financial Management (Budget mate and financial reporting)
8. The use of the radio in health communication
9. Principles of Village Savings and Loan scheme
10. Human Resources administration
11. Behavior Change Communication
12. Technical update sessions on:
    - Project logical frame work
    - Good Governance in project implementation
    - Right Base Approach
    - Report writing skills
    - Standard Case Management on malaria
    - Pregnant women support group implementation strategies

Project staff also utilized web learning opportunities through the enrollment and completion of courses with the CARE Academy on “Ending poverty at CARE”, “CARE International Project Standards” and” People Management”. Staff was also encouraged to source learning materials from the internet.

9.3 Local Partner Relationship

Participatory planning and action with the total involvement of the project partners at district and community levels continued effectively during the reporting period. Monthly planning meetings were conducted and quarterly review of work plans was done in all project implementation chiefdoms. The VDC and PHU staff, the project’s main coordination partners at community level, participated in all planning and monitoring activities with routine feedback provided by the project.

9.4 Collaboration and Coordination in Country

Project staff coordinated and collaborated with partners at national, district and community levels. Senior project staff continued to participate and play critical roles in all district level planning and coordination meetings organized by the Local Council and the DHMT.

At the district level, the Project staff participated in the monthly health coordination meetings organized by the DHMT and made efforts to include the discussions on the COPR recommendation with all health implementing NGOs in the Koinadugu District. The project was also very proactive in the formation of the first working groups on maternal and child health and malaria. The groups comprise all agencies implementing health programs with a focus on MNC and malaria within the district. The groups meet every month to discuss progress challenges and map out strategies to overcome the challenges.

Cross visits between IRC and CARE Child Survival Project mentioned earlier, created a very strong bond between the two organizations. The IRC and CARE projects have also benefited from other learning opportunities through inviting each other to participate in the trainings and workshops organized by each agency.

The project also trained other interested NGO staff across the country on the CHC methodology using the new toolkit.

Within the CARE Sierra Leone Country Office, the Health and HIV/AIDS theme group continued to meet, share learning and harmonize implementation strategies across the country office health projects.

The Health Sector Coordinator continued to participate in MOHS health task force meetings and working groups (e.g., Roll Bank Malaria, Nutrition, etc.), and provided feedback in the process of finalizing reproductive health policy, child health policy, and the reproductive and child health strategic plan. CARE Sierra Leone also actively took part in the development of the strategy for community-based malaria prevention and control interventions.

9.5 Organizational Capacity Assessment

CARE Sierra Leone has undergone an A-133 audit. The preliminary report suggests that there are no disallowed costs or critical findings, but it highlighted improvements on the internal control system.

10. Mission collaboration

The USAID mission in Sierra Leone is transitioning from one Strategic Plan to another. The new Strategic Plan has only one Strategic Objective—"Enhanced Democratic Governance." The project's work in enhancing community governance structures through working with CHCs and VDCs, is one of the successes on which this strategy is built.

The project has routinely provided reports and updates, including the findings and recommendations from the Mid Term Evaluation to the USAID mission in Freetown. In the field, collaboration with other USG-funded programs is even more regular and robust. This operational collaboration has been easy to establish and maintain, as CARE is also the lead member of a consortium (the Consortium for Rehabilitation and Development, CORAD) which implements both a large Title II program (which includes a maternal and child health component) – LEAD, and the local mission's largest program (agricultural marketing) - LINKS. As noted earlier, the project learned from and collaborated with LEAD in successfully introducing the Village Saving & Loan scheme, which gained such admiration from the DHMT that the scheme became a part of district-wide MNC strategy. Costs (to all three USG-funded projects) are minimized and duplications are avoided through integrated district planning alongside other programs in Koinadugu district and lessons learned (especially those related to local governance and civil society) are regularly shared across projects in Theme Group meetings and wider program meetings.

Although the local mission has no health-related objective per se, the USAID team remains an important ally with regard to host-government relations and donor coordination; thus, making the project a key contributor to enhanced democratic governance at the local level. CARE SL senior management is in contact with the local Mission on a weekly basis and has benefited from its strategic support in opening doors which might otherwise remain shut.

11. Result Highlight: CHC Approach (Promising Practice)

Problem being addressed

The foundation of the project's community mobilization and much of the BCC strategy is based in the CHCs. CHCs also focus not only health outcomes but also social cohesion, community capacity and good governance. The approach, therefore, is addressing the overarching goal and all the 4 objectives of the project rather than the specific health problems.

Project's input

As a first step, the project revitalized VDCs as important partners in the development process. With the help of VDCs, the project initiated the CHCs by holding a community meeting to explain the approach to the community. Interested community members were then invited to attend weekly CHC sessions, held at a time set by the community members. After several weeks, the project encouraged the community to develop a CHC leadership structure and identify CHC leaders. Since this process is community-driven, each CHC varies in its structure, but most CHCs elect about six officers to lead their CHCs. For 25 weeks, participatory sessions on basic health were facilitated by the project. Community members who have attended at least 20 sessions out of 25 were issued a membership certificate. After the completion of the lessons, CHCs were encouraged to mobilize their communities around health issues through the creation of monthly action plans. As part of their plans, CHC members implement community development initiatives, review health lessons, conduct outreach sessions to other communities to share health messages, and work with the PHU to ensure success of outreach activities such as ANC.

Magnitude of the intervention

CHCs are organized in all the 54 project operational communities. The project has trained 2,339 CHC members (62% female) to date. The CHC approach is now a model that is already being incorporated into other programs, both within CARE and in other organizations. CARE sister projects alone trained additional 2,423 CHC members in non-project operational communities. Furthermore, the trained CHC members are now reaching their peers through outreach activities in the neighboring communities. A total of 268 males and 432 females benefited from such rollout sessions last year.

Results

Widespread participation in CHCs among all strata of society has led to increased knowledge, behavioral change, and community participation in the formal health sector, which created an atmosphere of enthusiasm and empowerment to continue with positive health behaviour. Capstone assessment (Annex 2) indicated CHC as major source of health information and the significant improvements in project indicators (e.g., exclusive breastfeeding: 19.5% (2003), 55.3% (2005), 97.5% (2007)). PHU staff and CHC members see these improvements as a direct result of CHC training and activities. Improved community cohesion, strengthened leadership, and increased undertaking of self-initiated activities are another outcomes highlighted by the Capstone assessment. Community members indicated that CHC had helped to create unity, stimulate a collective spirit, increase women's participation in decision-making, and enable an environment where everyone's ideas were valued.

In conclusion, the inclusive mandate, ranging from health promotion to community management of health programs and to other social development initiatives, has helped the CHC approach not only to provide improved health outcomes, but also to transfer organizational capacity so that the community can begin the transition to self-initiated development.

Efforts to reproduce the success of CHC approach should emphasize coordination with government, integration with community structures, and true community priorities.

Activities for Year 5		**Year 5**				**Personnel**	
Major Activities	**Activity Focus***	**1**	**2**	**3**	**4**	**Who at CARE**	**Who (Other)**
Objective 1: Strengthened family and household knowledge and decision-making skills related to health of women and children resulting in the practice of positive behaviors to improve maternal and child health and prevent, recognize and manage common diseases.							
Implementation of health promotion/education campaign through CHCs targeting HH knowledge, beliefs and practices.	BC	x	x	x		CHM, CHS	DHMT, Community
Develop a productive interface between community surveillance systems developed through the CHCs and DNO/PHU that results in problem identification and response.		x	x	x			
Training of PHU staff, and health club members to implement BCC strategy to HH members of community resulting in decrease in harmful practices; increase in practice of beneficial preventive practices; improved recognition of danger signs; and increase in appropriate care seeking behavior.	Q and BC	x				CHS, CHM, APM, HSC, PM	DHMT
Objective 2: Improved quality and accessibility of services provided by MOHS personnel and MOHS extension services							
Promote dialogue between communities and DHO/PHUs.	Q	x	x	x		CHM, CHS, APM, PM	PHU staff, DMO, WC
Facilitate training and implementation in supervision, training of trainers, and quality assurance for DHO/PHU staff.		x	x				
Conduct quarterly quality assurance (QA) workshops for PHU staff.	Q	x	x	x		PM, APM	DHMT
Work with DHO to identify and prioritize problems in district health services (including HMIS) and design and implement solutions that are based on qualitative and quantitative data.		x	x	x		PM, APM, M&E	DMO, DHS, M&E, PHU staff
Adapt/develop curricula for training of community health workers in collaboration with MOHS.		x				PM, APM, HEO	DHMT
Conduct malaria treatment and dosage new drug protocol (ACT) with PHUs with post-test assessment of skills	Q and BC		x			PM, APM	DHMT
Conduct ongoing monitoring of CS Project results in collaboration with DHO/PHU colleagues and feed results back into project including the use of LQAS.	Q	X	X	X	X	PM, M&E, APM, CHS, CHM, HEO	PHU staff, M&E, DHMT
T.A. for Complementary Feeding and Feeding of Sick Child / facilitate initial and refresher IMCI training		X				PM, APM, M&E	DMO, DHS, M&E, PHU staff

refresher IMCI training							
Objective 3: Enhanced community capacity to form groups and institutions that sustain health initiatives, demonstrate social cohesion, and promote good governance mechanisms							
Assist well-run CHCs to identify needs of their organization and provide TA to build their capacity.	BC	X	X	X		CHS, CHM, APM, PM, HEO	DHMT
Collaborate with communities in a participative evaluation of their own efforts.	BC	X	X	X	X	CHS, CHM, APM, M&E	DHMT
Assist communities and CHCs to access multi-sectoral development opportunities to improve their communities.	A	X	X	X		CHS, APM, PM, HSC	PHU staff, DHMT
Advocate with GOSL at national and district level to develop policies/processes that support responsibly managed community-level initiatives in remote areas where GOSL does not provide adequate services (e.g., sell GOSL-provided ITNs or essential drugs).		X	X	X	X	PM, APM, HSC	DHMT
Objective 4: Ensured sustainability of the CS project							
Community, District and national level monthly, quarterly and annual collaboration on issues pertaining to CS, Malaria, Nutrition, Maternal and Newborn Care (MNC) and EPI.	BC	X	X	X	X	PM, APM, CHS, CHM, HEO	PHU staff, VDC members, DHMT
Create opportunities for partner organizations to develop inter-organizational links, access to information and assistance, and accountability.	Q	X	X	X	X	PM, APM, HSC	
Advocate for opportunities for partners to achieve or work towards financial viability.	Q	X	X	X	X	HSC, PM	DHMT
Support the planning process for the re-establishment of the District Medical Store.	A			X		HSC, PM, APM	DHMT

- **The activity addresses A=Access, BC=Behavior Change, or Q=Quality**

Annex A

For Di Pikin Dem Wel Bodi
The Health of the Child Project
FY2003-FY2008

Lot Quality Assurance Sampling Survey
Koinadugu District

June 2007

CARE International in Sierra Leone
Koinadugu District, Sierra Leone

Acknowledgement

The child survival project staff would like to thank the communities of Follosaba Dembelia, Dembelia Sinkunia, Neini, Sengbeh and Wara Wara Yagala chiefdoms where the Lot Quality Assurance Sampling (LQAS) survey was conducted. Without their patience, responses and warm hospitality the survey would not have been nearly as successful.

Thanks and appreciation also goes to the District Health Management Team (DHMT) Koinadugu and the District Council for being represented in the survey. The project field agents and supervisors who served as enumerators are acknowledged for their dedication and hard work in ensuring data collection and analysis was effectively carried out.

Thank you.

List of Acronyms

ACT	Artemisini Combination Therapy
AIDS	Acquired Immunodeficiency syndrome
ARI	Acute Respiratory Tract Infection
BCC	Behaviour Change Communication
BCG	Bacillus Calmette Guerin
CARE SL	CARE International in Sierra Leone
CBGP	Community Based Growth Promotion (Promoters)
CBO	Community Based Organizations
CHC	Community Health Club
CHM	Community Health Mobilizer
C-IMCI	Community Integrated Management of Childhood Illnesses
CSP	Child Survival Project
CSTS	Child Survival Technical Services
DHMT	District Health Management Team
DIP	Detailed Implementation Plan
DPT	Diphtheria Pertusis and Tetanus
EPI	Expanded Programme in Immunisation
HAPP	HIV/AIDS Prevention Programme
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illnesses
IPT	Intermittent Preventive Treatment
ITN	Insecticides Treated Nets
KPC	Knowledge Practice and Coverage
LQAS	Lot Quality Assurance Sampling
MCH	Maternal and Child Health
MNC	Maternal and Newborn Care
MOHS	Ministry of Health and Sanitation
MOSI	Malaria Outreach and Safety Initiative
NIDS	National Immunisation Days
MTCT	Mother to Child Transmission
M&E	Monitoring and Evaluation
OPV	Oral Polio Vaccine
ORS	Oral Rehydration Salts
PHU	Peripheral Health Units
PM	Project Manager
PO	Project Officer
PVO	Private Volunteer Organisation
PWSG	Pregnant Women Support Group
SP	Sulfadoxine Pyrimethamine
SSS	Salt and Sugar Solution
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
VCCT	Voluntary Confidential Counselling and Testing
USAID	United State Agency for Intentional Development
VDC	Village Development Committee
WRA	Women of Reproductive Age

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Tables and Figures

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1 EXECUTIVE SUMMARY

The CARE Sierra Leone Child Survival Project (CSP) is a 5-year project sponsored by USAID. The project is implemented in partnership with the Ministry of Health and Sanitation (MOHS) in Koinadugu District, the northern part of Sierra Leone. Direct beneficiaries include an estimated 39,838 children under age 5 and 56,240 Women of Reproductive Age (WRA). These figures were adjusted from the DIP total of 48,630 under five and 51,491 WRA (a decrease of 4% in the total number of beneficiaries) after national census in 2004. The overall goal of the project is to improve the health status of women of childbearing age (15-49 years) and children under five years in Koinadugu district. The project intervention areas which are implemented through the Community Integrated Management of Childhood Illness (C-IMCI) include: Immunisation, Nutrition, Malaria and Maternal and Newborn Care (MNC).

The Lot Quality Assurance Sampling (LQAS) Survey was conducted as part of the project's monitoring strategy towards its progress. The sampling frame was constructed using village level population data from the five chiefdoms where the child survival project is operating. CARE field officers in collaboration with Village Development Committees (VDCs) and Community Health Club (CHCs) members collect population data from villages in the five chiefdoms and updated it every six months. Nineteen (19) households from each chiefdom were randomly selected. The probability of selecting a household in a community was proportional to the community's population size.

Overall coverage rates for the Lot Quality Assurance Sampling Survey for key indicators were as follows:

Table 1
LQAS Key Indicators

Indicators	Numerator	Denominator	Percent
Nutrition/feeding practice Percent of children aged 0-23 months who were breastfed within the first hour after birth.	64 (No. of children 0-23 months who were breastfed within the first hour after birth)	95 (No. of children 0-23 months old)	67.4%
% of children aged 0–5 months who were exclusively breastfed during the last 24 hours	93 (No. of children 0-5 months who were exclusively breastfed during the last 24 hours)	95 (No. of children 0-23 months old)	97.9%
% of children aged 6-23 months who received a high dose Vitamin A supplement during the last six months.	26 (No. of children 6-23 months who received a high dose Vitamin A supplement during the last 6 months)	48 (No. of children 6-23 months)	54.2%
% of children aged 6-59 months who received deworming medication during the last six months.	17 (No. of children 6-23 months who received deworming tablets during the last 6 months)	48 (No. of children 6-23 months)[1]	35.4%
Maternal and Newborn Care % of women aged 15-49 who know at least two symptoms that indicate the need to seek referral for emergency obstetric care.	59 (No. of mothers with children 6-23 months who know at least 2 symptoms requiring seeking referral for EmoC)	95 (No. of mothers with children 6-23 months)	62.1%
% of children aged 0–23 months whose births were attended by skilled health personnel. *(includes doctor, nurse, MCH Assistant) TBAs were not considered skilled	42 (No. of children 0-23 months whose births were attended by skilled health personnel)	95 (No. of children 0-23 months)	44.2%
% of mothers able to report at least two known neonatal danger signs.	43 (No. of mothers able to report at least 2 neonatal danger signs.	95 (No. of mothers with children 0-23 months)	45.3%

[1] No children above 24 months were included in the sample.

Indicators	Numerator	Denominator	Percent
% of mothers who received/bought >= 90 iron supplements while pregnant with the youngest child less than 24 months of age.	92 (No. of mothers who received/bought >=90 iron supplements while pregnant)	95 (No. of mothers with children 0-23 months)	96.8%
% of mothers who received a Vitamin A dose during the first two months after delivery.	64 (No. of mothers who received Vitamin A dose during the first 2 months after delivery)	95 (No. of mothers with children 0-23 months)	67.4%
% of mothers who received deworming medication during the second or third trimester of a pregnancy within the last two years.	77 (No. of mothers who received deworming medication during the 2nd or 3rd trimester of a pregnancy)	95 (No. of mothers with children 0-23 months)	81.1%
% of mothers who took anti-malarial medicine to prevent malaria during pregnancy.	30 (No. of mothers who took anti-malarials for prevention during pregnancy)	33 (No. of mothers whose child 0-23 months with a febrile episode in the past 2 weeks)	90.9%
EPI % of mothers with children aged 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child less than 24 months of age.	82 (No. of mothers who received at least 2 TT injections before the birth of their youngest child)	95 (No. of mothers with children 0-23 months)	86.3%
% of children aged 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before first birthday.	28 (No. of children aged 12-23 months who are fully vaccinated)	31 (No. of children aged 12-23 months)	90.3%
% of children aged 12–23 months who received a measles vaccine.	28 (No. of children aged 12-23 months who are fully vaccinated)	31 (No. of children aged 12-23 months)	90.3%
Malaria % of children aged 0–23 months who slept under an ITN the previous night.	28 (No. of children aged 0-23 months who slept under an ITN the previous night)	33 (No. of children 0-23 months with a febrile episode in the past 2 weeks)	84.8%
% of children aged 0-23 months with a febrile episode that ended during the last two weeks and were taken to a clinic who were treated at clinic with an effective anti-malarial drug within 48 hours after the fever began.	13 (No. of children aged 0-23 months with a febrile episode who were treated at clinic with an effective anti-malarials within 48 hrs after the onset)	18 (No. of children 0-23 months with a febrile episode in the past 2 weeks and taken to a clinic)	72.2%
Knowledge % of mothers of children aged 0–23 months who know at least two signs of childhood illness that indicate the need for treatment.	43 (No. of mothers with children 0-23 months who know at least 2 signs of childhood illness that requires treatment.	95 (No. of mothers with children 0-23 months)	45.3%
% of sick children aged 0–23 months who received increased fluids during diarrhea episode in the past two weeks.	3 (No. of children aged 0-23 months who received increased fluids during diarrhea episode in the past 2 weeks)	19 (No. of children aged 0-23 months with diarrhea episode in the past 2 weeks)	15.8%
% of sick children aged 0–23 months who received increased food during diarrhea episode in the past two weeks.	0 (No. of children aged 0-23 months who received increased food during diarrhea episode in the past 2 weeks)	19 (No. of children aged 0-23 months with diarrhea episode in the past 2 weeks)	0%
HIV/AIDS % of mothers with children aged 0–23 months have ever heard about an illness called AIDS.	88 (No. of mothers with children aged 0-23 months who have ever heard about AIDS)	95 (No. of mothers with children 0-23 months)	92.6%

The child survival project will utilise the findings and recommendations from the LQAS to address the identified priorities for the next project year. Health outcomes priorities will be targeted at particular supervision areas that have demonstrated particularly low coverage rates.

2 BACKGROUND

Project activities are implemented in close collaboration with the District Health Management Team (DHMT) including staff from the twenty-two (22) Peripheral Health Units (PHUs) in the five operational chiefdoms of Wara Wara Yagala, Sengbeh, Follosaba Dembelia, Dembelia Sinkunia and Neini.

The project is implemented through innovative strategies that build partnerships between communities and the government. The goal of the project (i.e., to improve the health status of women of childbearing age (15-49 years) and children less than five year in Koinadugu district) will be achieved through the attainment of four principal objectives:

1. Strengthened family and household knowledge and decision-making skills related to the health of women and children resulting in the practice of positive behaviors to prevent, recognize and manage common diseases;
2. Improved quality and accessibility of services provided by MOHS personnel and MOHS extension services; and,
3. Enhanced community capacity to form groups and institutions that sustain health initiatives, demonstrate social cohesion, and promote good governance mechanisms;
4. Ensured sustainability of the activities and achievements of the project.

Project implementation focuses on the following four interventions through the Community Integrated Management of Childhood Illnesses (C-IMCI) strategy: EPI (15%), Nutrition (20%), and Malaria (35%) and Maternal and Newborn Care (30%). Project implementation commenced with a baseline survey conducted in February 2004.

Capacity building of institutions, at both community and district levels as well as partners is a key project approach towards improving health services in the target areas. Working closely with implementing partners such as the District Health Management Team (DHMT), the local radio station - Radio Bintumani, Community Health Clubs (CHCs) and the local Council, training, organizational diagnosis activities and developing participatory plans of action have all been conducted at various levels within these institutions.

Behaviour Change Communication (BCC) activities are centred around 54 CHCs in the project operational communities. The CHCs develop monthly action plans such as community awareness on health issues in an effort to prevent disease, improve home management of diseases, improve care-seeking practices among caretakers as well as other household members and encourage participation in other project activities. At the end of the month they report on accomplishments made.

Other project related activities include strengthening the health systems in collaboration with the DHMT. This is being done through training of PHU staff on Community Based Growth Promotion (CBGP), disease surveillance, use of tickler method for immunization defaulter tracing etc.

The Lot Quality Assurance Sampling (LQAS) Survey was conducted to determine project progress towards targets.

3 PROCESSES AND PARTNERSHIP BUILDING

Community-based organizations (CBOs) and the MOHS play pivotal roles in the implementation of CS project activities. The District health management team, the district council and staff from sister

project- Malaria Outreach and Safety Initiative (MOSI) participated in the training and data collection of the LQAS. The results will be shared with CARE projects and partners as part of a feedback process to initiate reflection on some of the interventions that the project and community based organizations have implemented in the project areas.

4 SURVEY METHODOLOGY

4.1 What is Lot Quality Assurance Sampling (LQAS)?

The Child Survival Project and partners decided to use the Lot Quality Assurance Sampling (LQAS) approach as part of its impact monitoring. The project recognizes the influence of certain confounders (external factors) that affect any maternal and child health outcomes. Those factors are not very responsive to short-term intervention. More specifically, it is very hard to change long-standing and deeply rooted cultural or religious practices within a 5-year period—the time frame for the CSP to implement activities and demonstrate program effectiveness. Instead, there is a focus on factors that can more likely change, such as health worker performance. The concepts of "lots[2]" and "production units[3]" are important in LQAS. With LQAS, you divide the population into service delivery areas or program management units. These subdivisions serve as lots (strata) in LQAS. Common strata or lots for LQAS are health facility catchment areas or project or MOHS supervision areas. The production unit is usually a health worker or a team of health workers and possibly their clients. Essentially, LQAS in simple terms is just random sampling within service delivery areas (lots).

The LQAS allows the project to draw comparisons between subdivisions of a population. However, the main objective of this LQAS was not to obtain individual estimates from those subdivisions, but rather to base program management decisions using a *binomial* principle. Binomial means that there are only two possible answers or outcomes (for example, yes or no; high or low). In other words, with LQAS, we are not determining the level of coverage in each subdivision. Instead, we are determining whether coverage in each subdivision is one of two things: a) at or above expectation, or b) below expectation

5 Procedures and Methods

5.1 Study location

Koinadugu District is divided into 11 Chiefdoms, of which CARE CSP is working intensively in five, covering fifty-four (54) communities. The project's target chiefdoms include: Wara Wara Yagala, Sengbeh, Folosaba Dembellia, Dembellia Sinkunia and Neini. Project field agents and community members (CHC, VDCs and CBGPs) prior to the survey collected community population data (through the community fact sheets and is updated every six months) from each of the 54 communities. The figures were used as basis to determine the selected areas for the LQAS.

[2] *Lot:* In health applications of LQAS, lots tend to be supervision areas or catchment areas of health facilities. Each lot usually consists of several villages or communities.

[3] *Production unit:* From a health perspective, the production unit is usually a health worker or a team of health workers within each lot. In other words, it is an implementation unit in your project.

5.2 Study Population

Any household with a mother and child between the ages of 0-23 months were considered a survey household. The total sample size was 95 mothers with children 0-23 months old. Once the survey team confirmed the age of the child, the mother or caretaker was interviewed. In an event where the survey team came upon a household with more than one child within 0-23 months of age, the youngest child was selected for the study. If there was no child in a particular household the next closest household was selected until the required number of respondents for that community was completed.

5.3 Questionnaire (Interview schedule)

The same questionnaire as the last LQAS (2005) survey was used with few modifications. The modifications were done on the malaria section to reflect the shift from Chloroquine treatment to ACT. Additionally the anthropometric section was not also included even though nutrition is a core component of the project. This decision was made because of the fact that nutrition data is collected and analysed on a monthly basis from the Community Based Growth Promotion (CBGP) activities within the project area.

A total of two days was spent on training for enumerators on the LQAS methodology and determine the uniformity of the questionnaire administration. This included translation of the questionnaire from English Language to the local dialects. Five teams were involved in the data collection each team assigned to chiefdom (i.e. Wara Wara Yagala, Sengbeh, Follosaba Dembelia, Neini and Dembelia Sinkunia).

5.4 Sample selection

5.4.1 Step One- Sampling communities within each chiefdom

19 households from each chiefdom were randomly selected. The probability of selecting a household in a community was proportional to the community's population size. A sampling frame served as a guide for selecting communities. A sampling frame is listing of all the communities within the chiefdom, which includes each community's population size, and the cumulative population of the chiefdom. This served as a guide for selecting the number of households in a community to be interviewed.

A sampling interval was calculated by dividing the total population of the chiefdom by 19 (the LQAS recommended sample size). Then a number between one and the sampling interval was randomly selected. The community whose population included the randomly selected number was taken as the first LQAS community. Adding the sampling interval to the randomly selected number identified the second community. This process was repeated until the required 19 households were selected. For example the total population for Sengbeh was 4,120, the sampling interval was obtained by dividing 4120/19=(217). A number was randomly chosen between 1 and 217, which was 189, the community whose cumulative population included the random number 189 (Kuranko Sansan) was selected. Then the sampling interval of 217 was added to 189, which was 406, which included Kompala. The other communities in this chiefdom were selected by continuously adding 217 to the cumulative population of the previously selected community until the 19 households were selected. See annex 8.1 for the five chiefdoms and their studied communities.

5.4.2 Step two- sampling households within each selected community

The communities and number of mothers to be interviewed in each community were identified in each chiefdom prior to the field visits. Community maps drawn up by field agents and community members assisted in the identification of entry points in each of the survey communities. Four

potential entry points into each village were identified. One final entry point was randomly selected from the four.

Teams were trained to begin the survey at the nearest house to the randomly selected entry point for each village. Upon completion of this initial household survey the teams were instructed to proceed to the next closest house until the required number of questionnaires were administered. Only households with a child 0-23 months were included in the survey.

5.4.3 Data collection

Five teams of either three or four people (depending on the number of council representative from the chiefdom) each were used for the LQAS. Data collection from all survey villages was done in three days. In the field, supervisors and enumerators reviewed questionnaires for completeness and accuracy. When the supervisors detected errors, inconsistencies or missing information, the enumerator was sent to the respondents to seek clarification or missing information. Once each chiefdom was completed, the completely filled questionnaires were submitted to the survey coordinator.

5.4.4 Data entry, Management and analysis

Data was entered using EPI INFO software, version 3.3.2. The survey coordinator set up the data entry program. The Monitoring and Evaluation Officer (who is also the survey coordinator) reviewed all the questionnaires before entering was done. The Intern attached to the project and the M&E officer participated in the data entering. This report represents the findings from the five CSP operational chiefdoms.

6 RESULTS

6.1 Supervision Areas (SA) and core intervention areas

A supervision area in the child survival project is defined as chiefdom covered by one project field agent (Community Health Mobiliser). There are five Community Health mobilizers with the responsibility of overseeing project field activities within the communities and the Peripheral Health Units (PHUs) within their chiefdoms. In all the five operational chiefdoms, the CSP is working with 22 PHUs. Two Community Health Field Supervisors supervise these Community Health Mobilizers.

6.1.1 Nutrition and feeding practices

The findings in table 1 below indicate the positive progress made by Neini and Sengbeh chiefdoms in early initiation of breastfeeding compared to the other three chiefdoms. Even though Neini is far away from Kabala and does not even have access to the radio, mother in the chiefdom are responding positively to messages related to early initiation of breastfeeding. However, Neini and Wara Wara Yagala chiefdoms did not achieve much progress comparatively as compared to the other three on Vitamin A supplementation during the last six months. This could be attributed to the fact that Vitamin A was in short supply in these chiefdoms. Additionally Neini, Wara Wara Yagala and Dembelia Sinkunia are below in deworming for children 6-59 months during the last six months. This could be also linked to the PHUs in these chiefdoms running out of stock of antihelmentics or mothers were unable to ascertain whether their children received the drugs.

Table 2
Nutrition and feeding practices by supervision areas

Indicator	Neini	Sengbeh	Wara Wara Yagala	Follosaba Dembelia	Dembelia Sinkunia
Percent of children aged 0-23 months who were breastfed within the first hour after birth.	100%	94.7%	47.4%	47.4%	47.4%
% of children aged 0-5 months who were exclusively breastfed during the last 24 hours.	94.7%	100%	100%	100%	94.7%
% of children aged 6-23 months who received a high dose of vitamin A supplement during the last six months.	42.1%	63.2%	36.8%	63.2%	63.2%
% of children 6-59 months who received deworming medication during the last 6 months	31.6%	57.9%	31.6%	56.5%	21.1%

Of the children 0-23 months, 54.1% (52) were 0-6 months old. Of the 0-6 months old 97.9% (43) were exclusively breastfed during the last 24 hours following the survey. Achievements have been made by all the chiefdoms in the practice of exclusive breastfeeding during the last 24 hours before the survey. Improvement are significant compared to 2005 LQAS survey results (Neini – 30.0%; Sengbeh – 50%; Wara Wara Yagala – 0%; Follosaba Dembelia – 40%; and Dembelia Sinkunia – 33.3%). Efforts should be made to increase sensitisation on Vitamin A supplementation and deworming of children 6 months and older to prevent malnutrition. Apart from exclusive breastfeeding, Wara Wara Yagala consistently has poorer coverage, and more targeted efforts are necessary.

6.1.2 Maternal and newborn care

Major activities related to this intervention area began during the third year of the project (starting October 2005). However, community sensitisation activities on MNC started with the community health sessions. It is anticipated that the pregnant women support group (PWSG) activities and the very strong interface between the pregnant women and PHU staff resulted in the positive outcome as indicated below such as high iron supplementation, and deworming during the third trimester. The project should however work with the DHMT to prioritise activities to increase skilled birth attendant and sensitisation on neonatal danger signs. Especially Wara Wara Yagala is not performing well in terms of knowledge about neonatal danger signs as well as danger signs in pregnancy. Neini and Sengbeh are performing relatively better in these aspects, and possibly Wara Wara Yagala could learn the good practices in intensifying BCC efforts.

Table 3
Maternal and newborn care indicators by supervision areas

Indicator	Neini	Sengbeh	Wara Wara Yagala	Follosaba Dembelia	Dembelia Sinkunia
% of women aged 15-49 who know at least two symptoms that indicate the need to seek referral for emergency obstetric care	73.7%	57.9%	50%	68.5%	63.2%
% of children aged 0-23 months whose births were attended by skilled health personnel. (Includes doctor, nurse, MCHA) TBAs were not considered skilled	31.6%	42.1%	42.1%	57.9%	47.3%

Indicator	Neini	Sengbeh	Wara Wara Yagala	Follosaba Dembelia	Dembelia Sinkunia
% of mothers able to report at least two neonatal danger signs.	50%	65.8%	23.7%	39.5%	47.4%
% of mothers who received/ bought >= 90 iron supplements while pregnant with the youngest child less than 24 months.	100%	100%	100%	100%	89.5%
% of mothers who received a vitamin A dose during the first two months after delivery	68.4%	89.5%	63.2%	63.2%	57.9%
% of mothers who received deworming medication during the second or third trimester of a pregnancy within the last two years.	89.5%	84.2%	84.2%	73.7%	73.7%

Folosaba Dembelia is performing well in skilled birth attendance when compared to the other chiefdoms. This is because authorities have formulated bylaws in the chiefdom against home and TBA delivery. The project could advocate for similar measures to be instituted in the other chiefdoms.

6.1.3 Expanded programme on immunization (EPI)

There is an encouraging result in expanded programme on immunization (EPI). This could be attributed to the measles and tetanus toxoid campaigns conducted in November 2006 and April 2007 respectively. Additional outreach points have been established with support from project staff. The use of the tickler box to trace defaulters has also been instituted in all PHUs where CSP is operating with training and support from the project. The training by the DHMT and partners of vaccinators to complement the effort of the MCH Aides in conducting immunization at outreach points might have also contributed to the better coverage in all the supervision areas

Table 4
EPI indicators by supervision areas

Indicator	Neini	Sengbeh	Wara Wara Yagala	Folosaba Dembelia	Dembelia Sinkunia
% of mothers with children aged 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child less than 24 months of age.	89.5%	89.5%	94.7%	89.5%	68.5%
% of children aged 12 – 23 months who are fully vaccinated (against the five vaccine-preventable diseases) before first birthday.	100%	90%	100%	77.8%	90%
% of children aged 12-23 months who received a measles vaccine.	100%	90%	100%	77.8%	90%

Wara Wara Yagala and Neini chiefdoms are achieving positive results in EPI compared to the other chiefdoms. Wara Wara Yagala is closer to Kabala and has access to all facilities (Vaccines and other supplies, radio sensitization etc), which might have resulted in this positive result. Conversely Follosaba Dembelia performed least in EPI as compared to the other four chiefdoms.

The high percentages for fully immunized children 12-23 months could be attributed to the fact that defaulter tracing campaign with the use of the tickler box have been increased in the District.

6.1.4 Malaria

Sierra Leone changed the protocol for the treatment of malaria from Chloroquine to ACT (Artemisinin Combination Therapy) in 2005. The table below indicates that Dembelia Sinkunia is performing below targets with regards to prompt treatment with ACT when compared with the other chiefdoms. The chiefdom is boundary with Guinea and a lot of drug peddling is going on in that chiefdom which might have resulted in the low treatment with ACT for children with febrile episode. Wara Wara Yagala performed least on the % of children who slept under an ITN on the previous night before the survey.

Table 5
Malaria indicators by supervision areas

Indicator	Neini	Sengbeh	Wara Wara Yagala	Follosaba Dembelia	Dembelia Sinkunia
% Of children aged 0–23 months who slept under an ITN the previous night.	100%	100%	71.4%	100%	100%
% of children aged 0-23 months with a febrile episode that ended during the last two weeks who were treated with an effective anti-malarial drug within 48 hours after the fever began.	80%	100%	71%	70%	33.3%

Insecticide Treated Nets (ITNs) are avialable in the district and are distributed to the project's targets. The massive distribution to all under five children during the measles and Malaria campaign and the routine distribution both at PHUs and outreach points have increased the availability and access to ITN by pregnant women and children under five years of age. However, it should be noted that the question on ITN was only asked to mother's whose child had a febrile episode, the previous two weeks to LQAS.

6.1.5 Mother's knowledge and practice

Knowledge on key health topics by community members especially mothers is the first step towards behaviour change. From the results below it is clear that all the chiefdoms have no knowledge on the need of increased food intake by children during an episode of diarrhoea. Also Sengbeh, Follosaba Dembelia and Dembelia Sinkunia are not aware of an increased in fluid during episode of diarrhoea. Increased fluid and food during episode of diarrhoea is very much important to replace the lost electrolytes and for increased immunity for the child. The project in collaboration with PHU staff should increase sensitisation on the need of increasing both food and fluid intake during an episode of diarrhoea or other illnesses. On knowledge about signs of childhood illness that requires treatment, Sengbeh performed better compared to other chiefdoms while Wara Wara Yagala and Folosaba Dembelia performed poorly. Probably skills / experience transfer from Sengbeh to these chiefdoms might help to boost up the coverage of all supervision areas.

Table 6
Mother's knowledge by supervision area

Indicator	Neini	Sengbeh	Wara Wara Yagala	Follosaba Dembelia	Dembelia Sinkunia
% of mothers of children aged 0–23 months who know at least two signs of childhood illness that indicate the need for treatment	50%	65.8%	23.7%	39.5%	47.4%

Indicator	Neini	Sengbeh	Wara Wara Yagala	Follosaba Dembelia	Dembelia Sinkunia
% of sick children aged 0-23 months who received increased fluids during diarrhoea episode in the past two weeks.	33.3%	0%	66.7%	0%	0%
% of sick children aged 0-23 months who received increased food during diarrhoea episode in the past two weeks.	0%	0%	0%	0%	0%
% of mothers with children aged 0-23 months who have ever heard about an illness called AIDS.	94.7%	94.7%	94.7%	89.5%	89.5%

6.2 Key survey content areas

6.2.1 Socio-demographic characteristics and economic status

In the survey, all mothers with children 0-23 months old (respondents) were married. Of these 95 respondents, 20.3% (19/95) had six or more live births. Among the children born alive, 36.8% (7/19) had lost 1 or more children.

During the survey only 48.4% (46/95) of the respondents were living in "better of" houses (houses with either mud or cement brick and iron sheet roofing); 51.6% (49/95) of the houses are made of mud bricks and thatch roof. Only 45.3% (43/95) of households with children 0-23 months of age had tape recorders and 65.3% (62/95) had radios. 100% households surveyed are using wood as their source of fuel for cooking.

The table below shows the economic status of the surveyed chiefdoms:

Table 7
Economic status
N=95

Indicator	Numerator	Denominator	Percent True Coverage
Households with Chickens	46	95	48.4
Households with Sheep/goat	28	95	29.5
Households with Cattle	11	95	11.6
Households with Back-yard garden	73	95	76.8
Households using Wood as fuel	87	95	91.7
Households with Radio	62	95	65.3
Households with Tape recorder	43	95	44.3

Many of the households do not own any cattle or even smaller domestic animals like goats, sheep or chicken.

6.2.2 Immunization

Indicators:

- Percent of mothers with children aged 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child. ***LQA 86.3%***
- Percent of children 12-23 months who are fully vaccinated before first birthday**.** ***LQAS 91.6%***
- Percent of children aged 12-23 months who received a measles vaccine. ***LQAS 91.6%***

81.1% (78/95) of children 0-23 months old had an under five card. The survey revealed an increased access to EPI services either within the PHU or outreach sites. During the last six months 53.7% (26/48) of children aged 6-23 months received a high dose of vitamin A supplement and 39.7% (17/48) of the children received de-worming medication.

Table 8 indicates vaccination coverage rates among those who had an under five card. The statistics are only those verified by cross checking on the under five cards. Polio 3 and DPT 3 are low comparatively to the other vaccines due to the fact that only about 55% of the children surveyed were within the age for them to receive these vaccines.

Table 8
Immunization verified by under five cards

Indicator	Numerator	Denominator	Percent True Coverage Yes
BCG	76	78	94.4
Polio O (Polio given at birth)	75	78	96.2
Polio 1	70	78	89.7
Polio 2	58	78	74.4
Polio 3	28	43	65.1
DPT 1	70	78	89.7
DPT 2	58	78	74.4
DPT 3	28	43	65.1

6.2.3 Breastfeeding/Feeding Practices

Indicators:

- Percent of children aged 0-23 months who were breastfed within the first hour after birth. ***LQAS 67.4%***
- % of children aged 0–5 months who were exclusively breastfed during the last 24 hours. ***LQAS 97.9 %***
- % of children aged 6–9 months who received breast milk and complementary foods during the last 24 hours**.** ***LQAS 51.0%***

Of the12 respondents who gave their children something else to drink three days after delivery, 66.7% (8/12) indicated giving their children plain hot water, 8.3% (1/12) gave milk and 16.7%(2/12) gave traditional medicine. Table 9 shows rates of continued breastfeeding. It is clear that women in the five CSP operational chiefdoms practiced prolonged breastfeeding up to the time a child is 24 months.

Table 9
Continued Breastfeeding

Indicator	Numerator	Denominator	Overall True Coverage Percent Yes
Continued breastfeeding 6-11 months	22	22	100
Continued breastfeeding 12-17 months	18	18	100
Continued breastfeeding 18-23 months	16	18	88.9

69.5% (66/95) indicated using Iodized salt for cooking. This is encouraging as Iodized salt is important for the health of mothers and children.

6.2.4 Diarrhoea

Indicators:

- Percent of children 0-23 months of age who have had diarrhoea in the past two weeks***. LQAS 20.0%***
- Percent of children aged 0-23 months who received increased fluids during an episode of diarrhoea in the past two weeks. ***LQAS 15.8%***
- Percent of children aged 0-23 months who received increased food during an episode of diarrhoea in the past two weeks. ***LQAS 0 %***

89.5% (17/19) of mothers with children 0-23 months with diarrhoea two weeks before the survey indicated seeking treatment at the clinic. 70.6% (12/17) of these mothers sought treatment based on their own decision and 29.4% (5/17) consulted their husbands.
Only 29.5 % (5/17) opted for follow up treatment of diarrhoea in the clinic. All (100%) mothers with children 0-23 months who had diarrhoea indicated that they had heard about ORS, while only 70.0% (11/17) of these mothers proved competency in preparing the ORS correctly. Also 80.0% (14/17) of these mothers had heard about Sugar and Salt Solution (SSS) but only 31.3% (4/14) of them had knowledge on the correct preparation of the SSS.

6.2.5 Acute Respiratory Tract Infection (ARI)

Indicators:

- Percent of children 0-23 months of age who have had an illness with cough in the past two weeks. **LQAS 24.2%**
- Percent of children 0-23 months of age who had trouble breathing among those who had an illness with a cough in the past two weeks. **LQAS 73.9%**
- Percent of mothers of children 0-23 months of age who sought treatment for the illness with a cough in the past two weeks. **LQAS 87.0%**

During the survey it was realised that 87% (22/25) sought treatment but only 80% (20/25) of them did so within 48 hours of onset of illness. 90.0% (23/25) of them sought treatment at the clinic. Among the 23 respondents with children 0-23 months who had an illness with cough and sought treatment during the last two weeks before the survey, 70% (16/23) had antibiotics administered for cough at the health facilities. There is an increased utilization of the clinics for the treatment of coughs. 70% (16/23) of mothers with children 0-23 months of age who had cough decided to seek treatment based on their own decision while 30% (7/23) consulted their husband for treatment of their children. Other relatives had no influence in the decision making process for seeking treatment on ARI infection.

6.2.6 Malaria

Indicators:

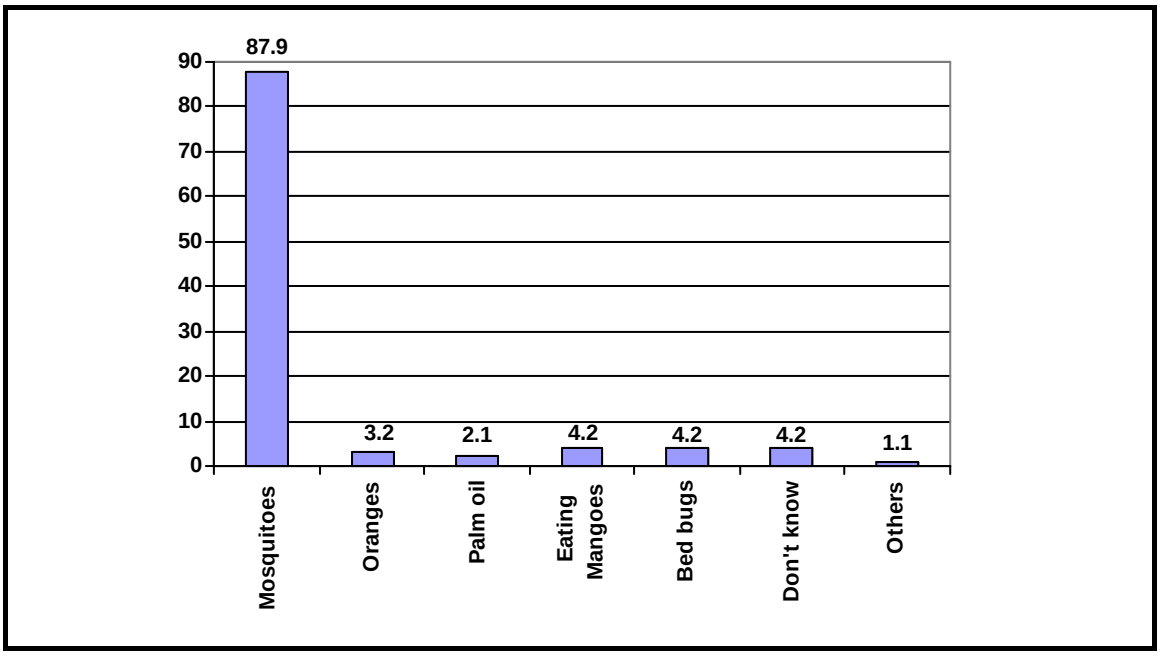
- Percent of children aged 0-23 months who slept under an ITN the previous night. ***LQAS 84.8%***
- Percent of children who were treated with an effective anti-malarial drug within 48 hours after the fever began out of those who were taken to the clinic with a febrile episode during the last two weeks with a febrile episode. ***LQAS 72.2 %***
- Percent of mothers who took anti-malarial medicine to prevent malaria during pregnancy. ***LQAS 90.9%***

Malaria is one of the leading causes of both morbidities and mortalities in Sierra Leone. In the two-weeks preceding the survey febrile episodes were reported by 34.7% (33/95) mothers of children 0-23 months of age. Of the children who had fever during the previous two weeks 33.3% (11/33) of them had fever at the time of the survey. Among the children who had a febrile episode in the last two weeks 67.9% (22/33) of their mothers sought treatment for this febrile episode. The decision to seek treatment for the febrile episode was reported to have been made by mothers themselves in 60.9% (13/22) of the cases and 39.1% (9/22) by the husbands.

The standard case management protocol for malaria was changed from Chloroquine to a combined therapy (Artesunate and Amodiaquine) (ACT) in 2004 because of studies conducted that indicated 60% plasmodia resistance to Chloroquine. Of the children who were taken for treatment, 82.6% (18/22) were treated at the clinics, while 13.0% (3/22) of the mother sought treatment from drug peddlers. Of those seen at the clinic, 72.2% (13/18) of the mothers were able to indicate that their children received ACT.

The figure below illustrates mothers' knowledge on the causes of malaria. While 87.9% (29/33) mothers of children aged 0-23 months indicated that mosquitoes cause malaria, the remaining percentage associated Malaria to other causes.

Figure 1: Mothers knowledge on what causes malaria



66.7% (22/33) of mothers with children 0-23 months who had fever during the two weeks preceding the survey sought treatment either the same or the next day the fever started. Of the respondents whose children had a febrile episode, 90.9% (30/33) indicated having ITNs in their household. Of those who possessed ITN in their household, 93.3% (28/30) of the mothers indicated their children sleeping under an ITN the previous night before the survey. It could be noted that only mothers of children with febrile episode within the last two weeks following survey were asked for ITN usage. Subsequent LQAS will ask this question to all mothers irrespective of whether the child had a febrile episode or not.

Change in Intermittent Presumptive Treatment (IPT) protocol for pregnant women from Chloroquine to Fansidar (SP) also commenced in Koinadugu district the same time as the introduction of the ACT. 90.9% (28/33) of mothers of children 0-23 months with febrile episode two weeks preceding the survey indicated receiving SP as prophylaxis for malaria during their last pregnancy.

6.2.7 Maternal and Newborn Care

Indicators:

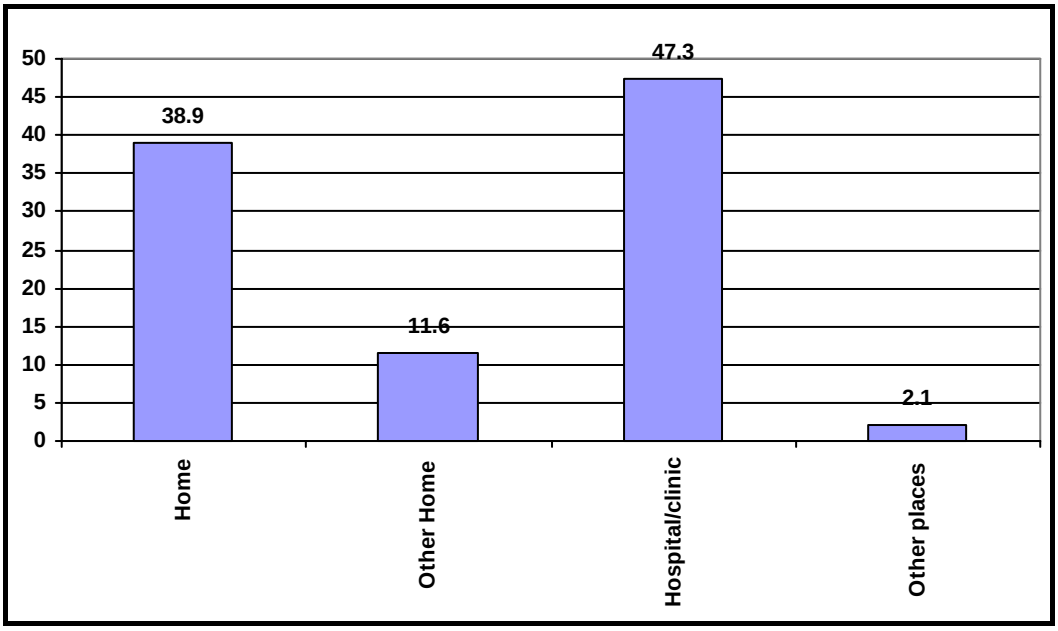
- Percent of children aged 0-23 months whose births were attended by skilled health personnel. ***LQAS 44 .2%***
- Percent of mothers able to report at least two known neonatal danger signs**. *LQAS* 45.3%**

- Percent of women who know at least two symptoms that indicate the need to seek referral for emergency obstetric care. ***LQAS 62.1%***
- Percent of mothers who received /bought >=90 iron supplementation while they were pregnant with the youngest child 0-23 months old. ***LQAS 96.8%***
- Percent of mothers who received a Vitamin A dose during the first two months after delivery. ***LQAS 67.4%***
- Percent of mothers who received deworming medication during the second or third trimester of pregnancy within the last two years. ***LQAS 81.1%***
- Percent of mothers who took antimalarial medication to prevent malaria during pregnancy. ***LQAS 90.9%***

All (100%) of respondents said they consulted someone for antenatal care while they were pregnant with the child 0-23 months of age. Of these mothers 81.1% (77/95) possessed antenatal care record cards.

Figure 2 lists the places where mothers delivered their youngest child 0-23 months.

Figure 2: Where mothers delivered
N=95



There are still more deliveries conducted outside the health facilities as indicated in figure 2 above, while there is a significant increase in the delivery at health facilities over the past few years (17.0% - 2005 LQAS vs. 47.3% - 2007 LQAS). While 47.3% of deliveries conducted at the health facilities, only 44.2% of the births were conducted by skilled health personnel. This is because TBAs are now encouraged to take pregnant women to the health facility for deliveries. In the absence of the MCH Aide, TBAs can conduct deliveries at the health facility.

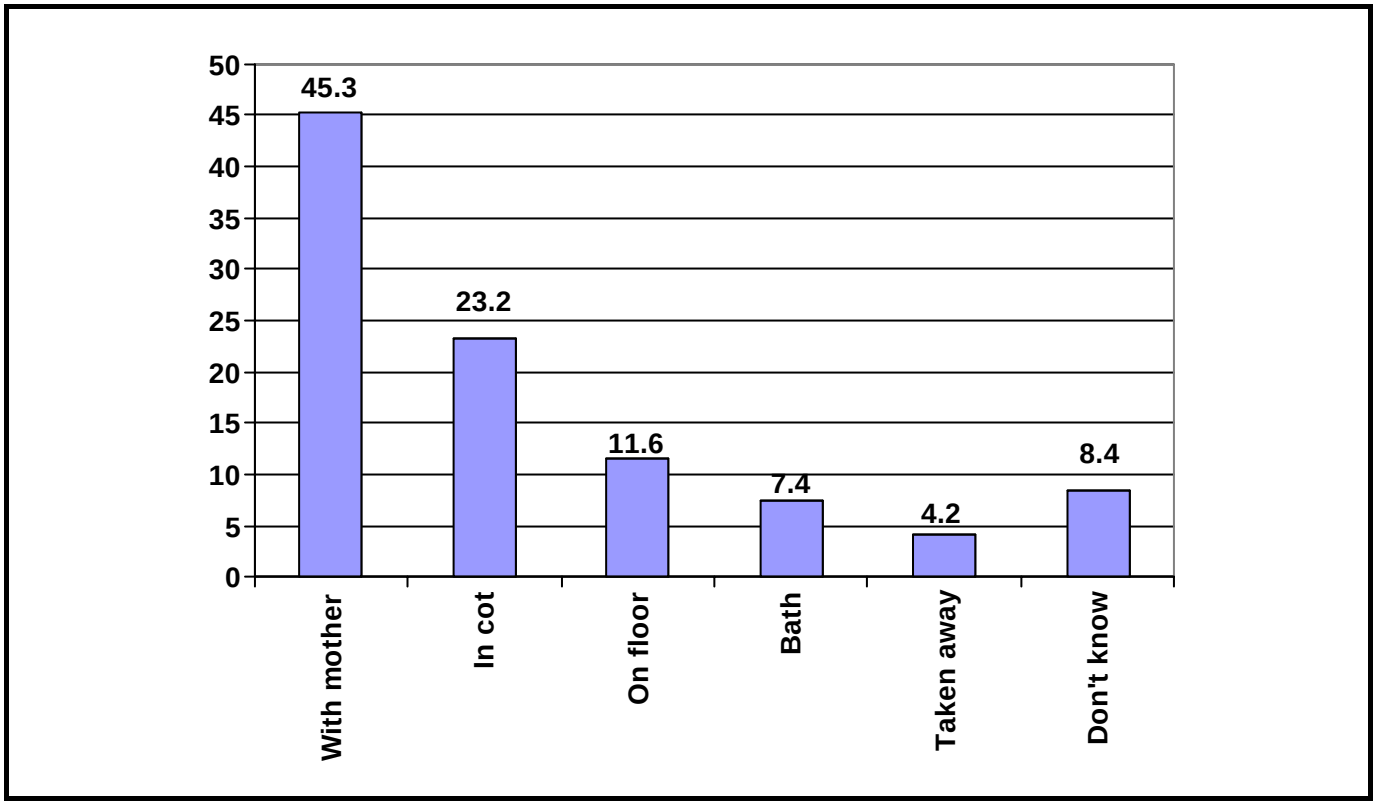
Table 10 below also shows the level of assistance given to mothers during delivery of their child 0-23 months old. 44.2% (42/95) of the respondents had the birth of their child aged 0-23 months assisted by skilled health personnel.

Table 10
Assistance during delivery
N=95

Indicator	Numerator	Denominator	Overall True Coverage Percent Yes
Nurse /Doctor	42	95	44.2
Traditional Birth Attendant	44	95	46.3
Family Members	7	95	7.4
No body	2	95	2.1

Of the 95 with children 0-23 months, 82.1% (79/95) reported having the umbilical cord of their surveyed child cut with new blade and sterilized scissors upon delivery. 45.3% (43/95) of respondents had their babies placed with them immediately after birth. Figure 3 further indicates where mothers reported having their children placed immediately after delivery. 11.6 % (11/95) of infants were placed on the floor immediately after birth.

Figure 3: Placement of child immediately after birth



Among the 95 mothers surveyed, 49.5% (47/95) reported initiating breast-feeding immediately after delivery, 7.4% (7/95) had their babies bathed, and 7.4% (7/95) reported that they left their babies to sleep. 3.2% (3/95) reported that nothing was done to their babies and 5.3% (5/95) did not know what was done to their babies.

Distance between villages /mothers' home and the nearest health facility contributed to the low clinic attendance in Koinadugu district. During the LQAS survey, many of the respondents live as far as 5 miles away from the nearest health facility. Because of the rough terrains, accessing the

health facility is on foot as indicated by all (100%) of the respondents. 95.7% (91/95) of the respondents indicated, it takes an average of three hours to reach the nearest health facility.

Mothers who knew at least two symptoms that indicated the need to seek referral for emergency obstetric care were 62.1% (59/95) and 91.6% (54/59) of mothers indicated the first place they would go for the management of emergency obstetric care would be the clinic/district hospital.

6.2.8 HIV/AIDS

Indicator:

- Percent of mothers with children aged 0-23 months who have ever heard about an illness called AIDS. ***LQAS 92.6%***

Koinadugu district has the highest prevalence of HIV/AIDS in the whole country.[4] Knowledge in the mode of transmission, prevention and stigmatisation could contribute to the reduction in the spread of HIV/AIDS pandemic. The DHMT and partners designed BCC strategies using music, concerts, workshops, radio discussions, leaflets etc. Table 11 shows the information dissemination mechanisms where the 92.6% (88/95) of mothers who have heard of HIV/AIDS obtained their information. Health centres and radio appear to be the most powerful communication tool that most mothers listen to.

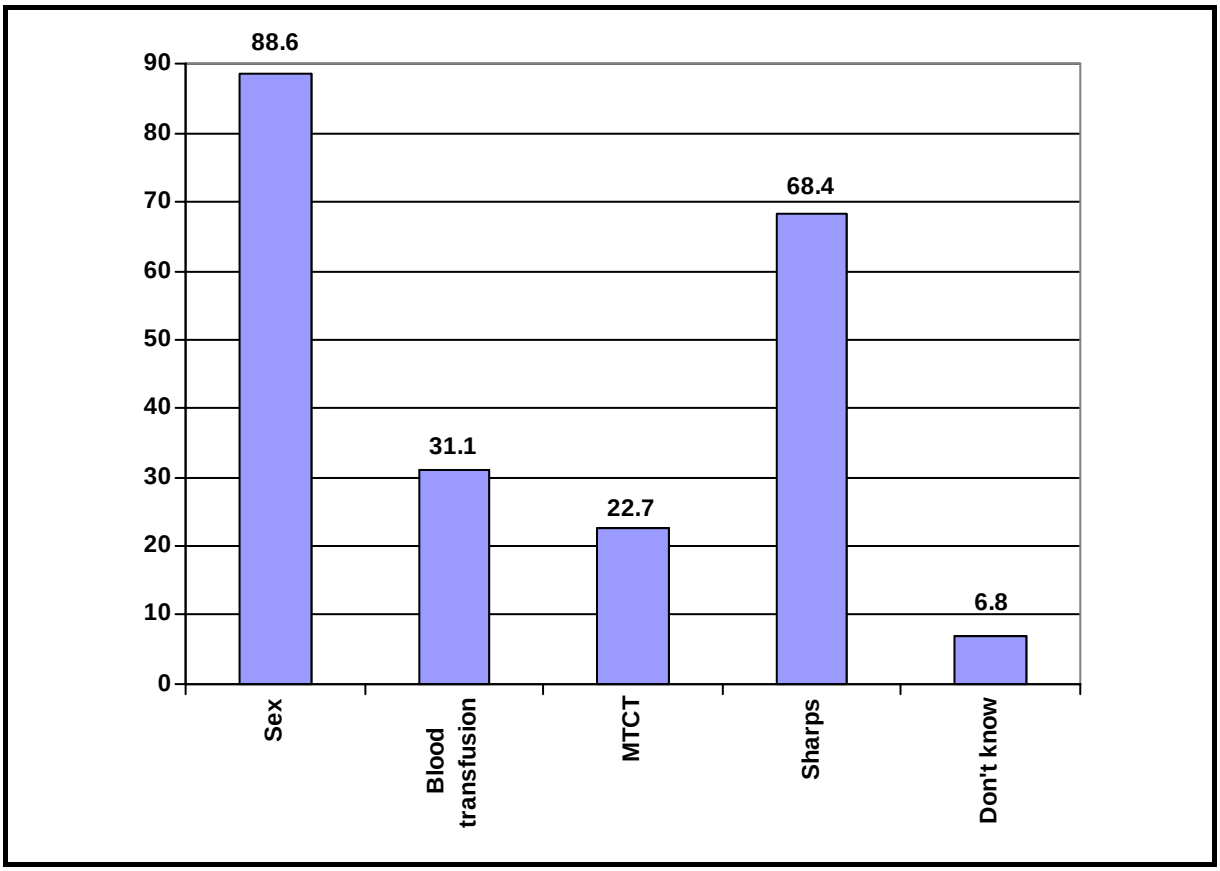
Table 11
Where mother heard about AIDS

Indicator	Numerator	Denominator	Percent true coverage
Radio	55	88	62.8%
Health Centre	56	88	63.8%
Workshops	6	88	6.8%
Village Health Talks	33	88	35.2%
NGOs	34	88	36.4%
Family members	14	88	14.8%
Friends	15	88	15.9%

Mothers who have heard of HV/AIDS have knowledge on the modes of transmission of the disease. Figure 4 depicts mother's knowledge on the transmission of HIV/AIDS.

[4] 2005 Sero-prevalence survey

Figure 4
Mother's knowledge on HIV/AIDS mode of transmission



**MTCT= mother to child transmission*

Of the respondents who have heard about HIV/AIDS, 48.9% (43/88) indicated that it is possible to get the virus that causes AIDS from mosquitoes.

When initially asked to indicate the modes of transmission of HIV, only 22.7% (20/88) of the respondents indicated that HIV could be transmitted from the mother to the child (MTCT). However, when mothers were asked about mother to child transmission, they indicated that HIV can be transmitted from mother to the baby during pregnancy -85.2% (75/88), delivery- 70.5% (62/88) and breastfeeding -67.0% (59/88).

Table 12
Mother's knowledge about AIDS
N=88

Indicator	Numerator	Denominator	Percent true coverage
Can people reduce their chances of getting AIDS virus by having just one sex partner who is not infected and who has no other partners?	71	88	80.7%
Can people get the AIDS virus from mosquito bites?	43	88	48.9%
Can people reduce their chances of getting the AIDS virus by using condom every time they have sex?	63	88	71.6%
Can people get the AIDS virus by sharing food with a person who has AIDS?	33	88	37.5%

Indicator	Numerator	Denominator	Percent true coverage
Can people reduce their chances of getting the AIDS virus by abstaining from sexual intercourse?	70	88	79.5%
Can people get the AIDS virus because of witchcraft or other supernatural means?	0	88	0%
Is it possible for a healthy looking person to have the AIDS virus?	62	88	70.5%
Is it possible that a healthy looking person who has the AIDS virus could transmit it to his/her sexual partner?	72	88	81.8%

Overall, increase of knowledge about HIV/AIDS can be observed when compared with 2005 LQAS report in all aspects.

7 Discussions and Recommendations

7.1 Programme planning implications

Findings of the 2007 LQAS are crucial to the facilitation of better planning of activities for the remaining life of the project for the supervision chiefdoms or indicators that seemed lacking the coverage. Even though the project has improved remarkably in certain indicators based on findings of the 2007 LQAS survey, it should be emphasised that the project should maintain activities in specific chiefdoms that proved well and increase activities in those chiefdoms that are below target. During the remaining period, the project will continue to work on improving health outcomes of indicators measured by the priority targets as in the table below with special focus on highlighted areas / indicators (shaded in yellow).

Table 13
Comparison of Baseline Survey and 2005 LQAS, 2007 LQAS Levels and Project Targets

Indicators	Baseline April 2004	LQAS May 2005	LQAS June 2007	Project Target
Nutrition/feeding practice Percent of children aged 0-23 months who were breastfed within the first hour after birth.	19.5%	55.3%	67.4%	35%
% of children aged 0–5 months who were exclusively breastfed during the last 24 hours	8.3%	32.4%	97.9%	15%
% of children aged 6-23 months who received a high dose Vitamin A supplement during the last six months.	68.2%	73.2%	54.2%	85%
% of children aged 6-59 months who received deworming medication during the last six months.	15.9%	33.9%	35.4%	-
Maternal and Newborn Care % of women aged 15-49 who know at least two symptoms that indicate the need to seek referral for emergency obstetric care.	37.8%	57.8%	62.1%	65%
% of children aged 0–23 months whose births were attended by skilled health personnel. *(includes doctor, nurse, MCH Assistant) TBAs were not considered skilled	15.1%	23.2%	44.2%	30%

Indicators	Baseline April 2004	LQAS May 2005	LQAS June 2007	Project Target
% of mothers able to report at least two known neonatal danger signs.	7.4%	23.2%	45.3%	35%
% of mothers who received/bought >= 90 iron supplements while pregnant with the youngest child less than 24 months of age.	60%	87.3%	96.8%	75%
% of mothers who received a Vitamin A dose during the first two months after delivery.	17.8%	52.6%	67.4%	50%
% of mothers who received deworming medication during the second or third trimester of a pregnancy within the last two years.	21.7%	33.7%	81.1%	-
% of mothers who took anti-malarial medicine to prevent malaria during pregnancy.	31.0%	58.1%	90.9%	50%
EPI % of mothers with children aged 0–23 months who received at least two tetanus toxoid injections before the birth of their youngest child less than 24 months of age.	47.2%	29.5%	86.3%	65%
% of children aged 12–23 months who are fully vaccinated (against the five vaccine-preventable diseases) before first birthday.	45.7%	46.2%	90.3%	60%
% of children aged 12–23 months who received a measles vaccine.	69.5%	69.7%	90.3%	80%
Malaria % of children aged 0–23 months who slept under an ITN the previous night.	0.57%	18.8%	84.8%	15%
% of children aged 0-23 months with a febrile episode that ended during the last two weeks and were taken to a clinic who were treated with an effective anti-malarial drug within 48 hours after the fever began.	27.4%	0% (the new treatment protocol using ACT has been approved by MOHS but is not yet being implemented in the district)	72.2%	40%
Knowledge % of mothers of children aged 0–23 months who know at least two signs of childhood illness that indicate the need for treatment.	79%	81.1%	45.3%	95%
% of sick children aged 0–23 months who received increased fluids during diarrhea episode in the past two weeks.	48.7%	10.7%	15.8%	-
HIV/AIDS % of mothers with children aged 0–23 months have ever heard about an illness called AIDS. (Not the original KPC Indicator. KPC Questionnaire questions for HIV/AIDS have been revised – and the original indicator is no longer comparable to subsequent assessments).	53.5%	62.1%	92.6%	-

7.2 Programmatic implications

7.2.1 Breastfeeding/Feeding practices

Exclusive breast-feeding especially during the first six months after delivery is an important determinant of a child's nutritional status. However, complimentary foods should be introduced after the sixth month to meet the energy and the micronutrient requirements for the rapid growth of the child.

Breast-feeding up to 18 months is widely practised in all the chiefdoms (supervision areas) of the project. While early initiation of breastfeeding immediately after birth is improving largely due to sensitisation efforts, the survey findings showed that some mothers still practice the feeding of their children with hot water during the first few hours after delivery. Sensitization on early initiation of exclusive breastfeeding should be further continued.

Recommendations:

- Behavior Change Communication (BCC) approaches utilized in Sengbeh and Neini chiefdoms could be replicated to Wara Wara Yagala, Folosaba Dembelia and Dembelia Sinkunia chiefdoms that have low coverage rates.
- More sensitization of mothers on the essence of deworming their children every six months, as it is one of the contributing factors of malnutrition.
- PHU staff and CHC members in the participating chiefdoms should emphasize on the importance of breastfeeding immediately after birth.
- Health workers in all supervision areas should be encouraged to continuously educate pregnant and lactating mothers on the importance of exclusive breast-feeding and improving the gradual introduction of complementary feeding (after 6 months).

7.2.2 Diarrhoea

Diarrhoea is among the leading causes of child and infant morality in Sierra Leone and the project has been implementing activities related to diarrhoea disease prevention and management. Early introduction of poorly prepared complementary food contributes to diarrhoea. Unhygienic food preparation and bottle-feeding has led to the high incidence of diarrhoea episodes.

Breastfeeding and increased fluid and food intake during diarrhoeal episode can reduce the risk of dehydration and malnutrition. Non-breastfed children are about three times more likely to develop moderate or severe dehydration during a diarrhoea episode than children who are breastfed. All supervision areas had zero coverage of knowledge on the need to increase food intake during an episode of diarrhoea.

Recommendations

- PHU and CSP staff in all the supervision areas should focus adequately on sensitization of community members on the essence of increasing both food and fluid intake for all children with an episode of diarrhoea to prevent both malnutrition and dehydration.
- BCC on diarrhoea and its management especially ORS preparation needs to be adequately explained to all the communities to raise communities' knowledge and practice on diarrhoea and it management at community level.

7.2.3 Acute Respiratory Infection (ARI)

Acute Respiratory Infections are some of the most common causes of childhood illness in the communities. ARI ranges from mild forms of common colds, ear infections, sore throats, bronchitis to severe pneumonia which may be fatal if not treated quickly and appropriately.

During the 2007 LQAS study it was realised that there were children with ARI during the two-week period preceding the survey. Although 80% of the children with ARI were taken to the clinic for treatment, 10% of other mothers took their children to drug peddlers.

Recommendations

- Reinforce BCC sensitisation in all the five chiefdoms on ARI danger signs and symptoms and the urgently and appropriate health care seeking.
- Mothers in all the project communities should be encouraged to utilize the local health facility whenever they notice illness in their children and be sensitised on the dangers of buying drugs from peddlers.

7.2.4 Malaria

In Koinadugu, Malaria accounts for the most commonly reported condition in the entire district according to PHU records. In all the PHUs health workers attribute all reported fevers as malaria because of lack of malaria diagnostic test kits. The mis-diagnosis and the under treatment of malaria with Chloroquine resulted in resistance of the plasmodium to Chloroquine in Sierra Leone as well as other countries in West Africa. As a result of this the Government shifted the treatment of malaria from Chloroquine to combined therapy of Artesunate and Amodiaquine, which has been implemented throughout the country. During the course of the survey 33.3% (11/33) of the children 0-23 months had fever in the past two weeks before and during the survey. Among the children who had a febrile episode in the past two weeks, 67.9% (22/33) of their mothers sought treatment, out of which 82.6 % (18/22) were taken for treatment at the clinic on a day or the next day. Others went to drug peddlers.

Recommendations

- Though the utilization of ITNs is encouraging, Wara Wara Yagala chiefdom has low ITN utilisation rates when compared with the other supervision areas. The promotion, distribution and monitoring the utilisation of long lasting insecticide treated nets (ITNs) by all pregnant women and children under five years of age should be continued throughout all the supervision areas of the project.
- PHU and project staff should ensure proper sensitization of community members on the new drug and also PHU staff to follow the protocols for the effective management of malaria.
- Effective supportive supervision should be carried out between DHMT and project staffs to assess the competency of PHU staff in the proper diagnosis and treatment of malaria and to ensure ACT is available in all PHUs.

7.2.5 Immunizations

The most effective way to fight the common preventable diseases (TB, Polio, Diphtheria, Whooping cough, Tetanus, Measles, Vitamin A deficiency and Yellow Fever) is immunization before the first birthday for children under five years. A child who is not immunized has the highest chances to contract these preventable diseases. The district has 53 functioning PHUs. In each of these PHUs a vaccinator has been trained to carry out EPI services especially at outreach points. Project staff have been supporting EPI activities in operational chiefdoms in pre-position of vaccines, facilitating the movement of PHU staff and community mobilisation, which have improved the immunisation coverage. Also the implementation of the tickle box to help trace defaulters will further increase coverage if the PHU staff utilise the methodology. The 2007 LQAS survey indicated that 34.9% of the children 0-23 months old failed to report for their third DPT. Possible reason could be that some of the children were not yet due for the vaccines.

Recommendations:

- High percentages in EPI services are encouraging; project and PHU staff should conduct more outreach activities and properly utilize the tickler boxes by making follow up for children who failed to report for their vaccines on time to reduce the drop out rate.
- The project should advocate for the regular supply of vaccines and the prompt and timely repair of all solar panels for the availability of vaccines.
- The project should continue to collaborate with UNICEF and MOHS to maintain sustainable access to EPI services in the district to maintain the current percentages and achieve target.

7.2.6 Maternal and Newborn Care

Sierra Leone has the highest maternal and child mortality rates in the world according to the human development index. The child survival is implementing activities to reduce the high maternal mortality in the country. Antenatal care, tetanus toxoid immunization, pregnant women support group, birth waiting homes, skilled attendance at delivery and postnatal care as components of the child survival project's maternal and newborn care intervention.

The 2007 LQAS study indicated encouraging coverage rates for Tetanus Toxoid vaccinations but deliveries conducted by skilled health personnel and post partum vitamin A administration remains a challenge.

Recommendations:

- The project should work closely with MOHS to establish additional pregnant women support groups especially at outreach points to improve antenatal care services.
- Communication initiatives need to target men (husbands) considering the critical role they play in decision-making with regard to deliveries and when referrals are made for complicated deliveries.
- Roles of the TBAs should be redefined now that there are plans to operationalize birth waiting homes and other practical community based interventions with involvement of TBAs.

7.2.7 Knowledge about HIV/AIDS

The level of awareness on HIV/AIDS and its transmission is increasing in the project area. Though there have been many misconceptions about HIV/AIDS prevention and control, these misconceptions are reducing as a result of sensitization from the radio and project activities. Information about HIV/AIDS is mainly disseminated through the radio, health clinic, village health talks and NGOs as indicated by respondents.

Recommendations:

- Some respondents associate HIV/AIDS transmission with mosquito bite and sharing food with someone who is HIV/AIDS positive. The project and partners should continuously educate community members on the mode of transmission and prevention.
- Since the radio appeared to be the best medium for information sharing, the project in collaboration with the HIV/AIDS prevention project (HAAP) should design appropriate radio messages on HIV/AIDS transmission, prevention, voluntary confidential counseling and testing (VCCT), stigma and discrimination.

7.3 Information Dissemination

Dissemination session was held with project staff, the District Health Management Team (DHMT) and other NGOs working in Koinadugu on the 2nd October 2007 to provide detailed feedback on the outcome of the survey. During the dissemination session a comprehensive review of the data by

supervision areas was done and areas needing improvement identified gaps. Additionally, dissemination of the survey results to communities in the five operational chiefdoms will be conducted primarily during community meetings and team supervisory visits to the various chiefdoms. These meetings will be conducted in collaboration with DHMT and PHU staff in the project area.

In addition to community level dissemination, the survey report will be shared with Country Office health theme group members.

8 APPENDICES

8.1 Chiefdom population statistics

8.1.1 Supervision area A :Dembellia Sinkunia Chiefdom

NAME OF VILLAGE	Total Population	Cumulative Population	Interview Location Number	Number of interviews
Gbindi I	561	561	162, 420	**2**
Gbindi II	801	1362	678, 936, 1194	**3**
Gbindi III	1729	3091	1452, 1710, 1968, 2226, 2484, 2742, 3000,	**7**
Gbindi IV	313	3404	3258	**1**
Gbindi V	250	3654	3516	**1**
Masendeh	74	3728	-	**0**
Dalbaya	217	3945	3774	**1**
Sagalireh	352	4297	4032, 4290	**2**
Yedia	176	4473	-	**0**
Mannah I	287	4760	4548	**1**
Mannah II	134	4894	4806	**1**
Total	**4894**			**19**

n=19 **Sample interval:= 4894/19 (258)** **Random Number=162**

8.1.2 Supervision area B: Folosaba Dembellia

NAME OF VILLAGE	Total Population	Cumulative Population	Interview Location Number
Musaia I	450	450	200, 415
Musaia II	524	974	630, 845
Musaia Junction	152	1126	1060
Koromasilaya	614	1740	1275, 1490, 1705
Gbentu I	280	2020	1920
Gbentu II	125	2145	2135
Gbentu III	241	2386	2350
Gbentu Haffia	462	2848	2565, 2780
Hamdalai	281	3129	2995
Dogoloya I	134	3263	3210
Dogoloya II	453	3716	3425, 3640
Dogoloya III	364	4080	3855, 4070
Total	**4080**		

n=19 **Sample interval:= 4080/19 (215)** **Random Number=200**

8.1.3 Supervision area C: Neini

NAME OF VILLAGE	Total Population	Cumulative Population	Interview Location Number	Number of interviews
Yiffin Saransiya	901	901	44, 170, 296, 422, 548, 674,800	**7**
Telikoro	226	1127	926, 1052	**2**
Yiben	426	1553	1178, 1304, 1430	**3**
Soya	529	2082	1556, 1682, 1808, 1934, 2060	**5**
Fankoya	321	2403	2186, 2312	**2**
Total	**2403**			**19**

n=19 **Sample interval:=2403/19 (126)** **Random Number= 44**

8.1.4 Supervision area D: Sengbeh

NAME OF VILLAGE	Total Population	Cumulative Population	Interview Location Number	Number of interviews
Nyafurandoh	186	186	-	**0**
Kurankosansan	69	255	189	**1**
Foronoya	144	399	-	**0**
Kompala	149	548	406	**1**
Bambukoro I	440	988	623, 840	**2**
Bambukoro II	410	1398	1057, 1274	**2**
Yufunu	62	1460	-	**0**
Koinadugu	1522	2982	1491, 1708, 1925, 2142, 2359, 2576, 2793	**7**
Kalkoya	497	3479	3010, 3227, 3444	**3**
Fasanya	198	3677	3661	**1**
Kondeya	227	3904	3878	**1**
Nafayie	216	4120	4,095	**1**
Total	**4120**			**19**

8.1.5 Supervision area E: Wara Wara Yagala

NAME OF VILLAGE	Total Population	Cumulative Population	Interview Location Number	Number of interviews
Kamajimbo	224	224	54,195	**2**
Igaia	242	466	336	**1**
Kasumpe	138	604	477	**1**
Kamanso	87	691	618	**1**
Alusanya	226	917	759, 900	**2**
Makakura	215	1132	1041	**1**

Makakura/Konkoya	202	1334	1182, 1323	**2**
Kodalla	113	1447	-	**0**
Sorkralla	120	1567	1464	**1**
Bendukura	308	1875	1605, 1746	**2**
Songabalia	250	2125	1887, 2028	**2**
Yataya	228	2353	2169 , 2310	**2**
Timbo Sokrala	324	2677	2451, 2592,	**2**
Total	**2677**			**19**
n=19	**Sample interval:= 2677/19 (141)**		**Random Number= 54**	

8.2 Survey Participants:

No.	Name	Organization
1.	Bockarie Sesay	CARE -CSP
2.	Abu Bakarr Jalloh	CARE -CSP
3.	Dauda K. Kamara	CARE - CSP
4.	Princess Hawa Lahai	CARE-CSP
5.	Momodu Sesay	CARE – MOSI
6.	Edmond Brandon	CARE –CSP
7.	Alimamy Ben Kamara	CARE –MOSI
8.	Iysattu Kamara	CARE – CSP
9.	Daniel Kamara	CARE – CSP
10	Abu Bakarr Marah	CARE – CSP
11.	Sandy Mansaray	Councillor –Sengbeh
12	Finah S. Kamara	Neini Chiefdom secretary
13	Sulaiman Jalloh	DHMT- M&E Officer
14	Lansana Marah	DHMT- Zonal supervisor
15	Sowo Tucker	CARE – CSP
16	Amadu Kamara	Councillor- Folosaba Dembelia
17	Andrew Papayoh Sesay	Councillor- Wara Wara Yagala
18	Sayoh Francis	CARE –CSP
19	Kemoh Gibateh	MOHS- Disease Surveillance Officer
20	Madusu Momorie Kamara	Councillor – Neini
21	Mohamed Wurie Jalloh	Councillor- Dembelia Sinkunia
22	Vandy Kamara	CARE -CSP

8.3 Questionnaire

1. Chiefdom	2. Section	3.Village	4. Respondent	5. Date ____/_____/07	6.Team

	Name of the youngest child (0-23 months)	Name:_____
001.	Date of Birth (as recorded on: birth certificate, antenatal card or under-five card).	Day |____| Month |____| Year |____|
002.	**If no documentation available, record mothers estimation in months.** If there is a card write N/A in the space provided for number of months.	Number of months ……
003.	Sex	Male ……1 Female……..2

100.Child Immunization (Record information for the youngest child that is<24 months)

101.	Does (name) have an under-five card?	Yes …….1 (if yes, ask to see it) No..... …….2 (if no, go to 110)
102.	Record all vaccinations dates (mm/dd/yy) from the card. BCG	Yes ..... …….1 Date:_____/_____/_____ No..... …….2 Yes, scar..... …….3
103.	Polio 0 (polio given at birth)	Yes ....……..1 Date:_____/_____/____ No..... …….2
104.	Polio 1	Yes ..... ……1 Date:_____/_____/_____ No..... …….2
105.	Polio 2	Yes ..... ……1 Date:_____/_____/_____ No..... ……2
106.	Polio 3	Yes ..... ……1 Date:_____/_____/____ No..... ……2
107.	DPT 1	Yes ..... ……1 Date:_____/_____/_____ No..... …….2

108.	DPT 2	Yes ..... …….1 Date:_____/_____/_____ No..... …….2
109.	DPT 3	Yes ……1 Date:_____/_____/_____ No ……2
110.	Has (name) been vaccinated for measles?	Yes (verified) ……..….1 Date:_____/_____/____ Yes (no card) ……2 No ……3 N/A ……4 (<9 months)
111.	Did (name) take a vitamin A dose in the last 12 months? (only for children >6 months)	Yes ……..1 No ……2 Don't know ……8 N/A ……3
112.	Did (Name) receive de-worming medicine in the last six months? (only for children >6 months)	Yes ..... ……...1 No..... ……...2 Don't know ..... ……...8 N/A..... ……...3
113.	Did you (the mother of survey child) receive de-worming medicine between the 4^{th}-9^{th} month of your pregnancy with (name)?	Yes ..... ……1 No..... …… ……2 Don't know ..... ……8
114.	Did you receive blood tablets while you were pregnant with (name)? **Be sure to show her the sample tablets.**	Yes ..... ……1 No..... ……2 Don't know ..... ……8
115.	Did you receive a dose of vitamin A during the first two months after delivery of (name)? **Be sure to show her the sample capsule.**	Yes ..... ……1 No..... ……2 Don't know ..... ……8
<u>200. Socio-Demographic Data</u>		
201	What is your marital status?	Married……..1 Divorced…….…...2 Widow……...3 Single……4
207	How many live births have you had?	One……1 Two……...2 Three…….……3 Four……..4 Five……...5 Six…….……6 Seven……7 Eight……..8 Nine……..9 Ten plus……..10
208	Of these live births, are all these children alive today?	Yes……1 If yes, go to 201) No…….2

209	If not, how many have died?	……
300. Economic Status		
301	What type of house do you live in?	Mud and wattle w/grass roof……..1 Mud and wattle w/iron sheets roof…….…..2 Mud Brick w/grass roof……..3 Mud Brick w/iron sheets Roof…….4 Cement Brick w/grass Roof…….5 Cement Brick w/iron sheet Roof……6 Hut (single round structure with2 doors ……..7 Other……8
302	302. Does your household have?	**Yes No** Radio…….. 1 2 Tape recorder…. 1 2 Charcoal pot…… 1 2 Stove (single-burner)1 2 Stove(multi-burner) 1 2 Bicycle…….. 1 2 Motorcycle…… 1 2 Sewing machine…. 1 2 Large cooking pot.. 1 2
303	What fuel do you use to cook with normally?	Wood……. 1 Charcoal…… 2 Kerosene……... 3 Other……..… 4
304	Does your household own Poultry?	Yes……1 No…….2
305	Does your household own sheep/goats?	Yes……1 No…….2
306.	Does your household have a back -yard garden?	Yes……1 No…….2
307.	Does your household own cattle?	Yes……...1 No…….2

400. Breastfeeding/Feeding practices(Record information for the youngest child that is < 24 months)

401.	Did you ever breastfed (name)?	Yes..... ……1 No..... ……2 (if no, go to 407)
402.	How long after birth did you start breastfeeding (name)?	Immediately/within first hour after birth……1 After the first hour……...0

		Don't remember……..8
403.	During the first three days after delivery, did you give (name) the liquid that came from your breasts?	Yes…….1 No……..2 Don't know……..…….8
404.	During the first three days after delivery, did you give (Name) anything else to eat or drink before feeding him/her breast milk?	Yes…….1 No……..2 (If no, go to 406)
405.	What did you give (Name)? Anything else? Do not read the list Record all mentioned by circling letter for each one mentioned.	Milk (other than breast milk)……..A Plain water…….B Water with sugar and/or salt…….C. Fruit juice……..D Tea infusions…….E Liquid or semi-liquid traditional medicine…….F Infant Formula……G
406.	Are you currently breastfeeding (Name)?	Yes……..1 (go to 8) No……0
407.	For how long did you breastfeed (Name)? If less than one month, record ''00''months	Months…….|___|___|
408. A B C D E F G H	Now I would like to ask you about the types of liquids (name) drank yesterday during the day and night. Did (Name) drink any of the following liquids yesterday during the day or at night? Read the list of liquids (A through H starting with breast milk). Place a check mark in the box if child drank liquid in question. Breast milk? Plain water? Commercially produced Formula? Any other milk such as tinned, powdered, or fresh animal milk? Fruit juice? Tea or coffee? Any other liquid? Optional liquid group: add if commonly given to infants/children Liquid or semi-liquid traditional medicine?	A……|___| B……|___| C……|___| D……|___| E……|___| F……|___| G……|___| H……|___|
409	Did (name) drink anything from a bottle with a nipple yesterday or last night?	Yes..... ……1 No..... ……0 Don't know…….8
410	Now I would like to ask you about the food (Name) ate yesterday during the day and at night, either separately or combined with other foods.	

a	Did (Name) eat any of the following foods yesterday during the day or at night? READ THE LIST OF FOODS.PLACE A CHECK MARK IN THE BOX IF THE CHILD ATE THE FOOD IN QUESTION. Pap or soft Rice? Any (Brand name of commercially fortified baby food e.g. Bennimix) Any bread, rice, noodles, biscuits, cookies, or any other foods made from grain? Any white potatoes, white yams, manioc, cassava, or any other foods made from fruits. Any pumpkin, carrot, squash, or sweet potatoes that are yellow or orange inside? Any dark green leafy vegetables? Any ripe mangoes, paw paw, (or other local vitamin A-rich fruits)? Any other fruits or vegetables? Any liver, kidney, heart or other organ meats? Any beef, pork, lamb, goat, rabbit, (insert wild game meet such as antelope deer)? Any chicken , duck or other birds? Any egg? Any fresh or dried fish or shellfish? Any foods made from beans, peas, or lentils? Any nuts? Any cheese or yoghurt? Any food made with other oil, fat, or butter? Any other solid or semi-solid food?	A……|____| B……|____| C……|____| D……|____| E……|____| F……|____| G……|____| H……|____| I……..|____| J……..|____| K…….|____| L……..|____| M……|____| N…….|____| O…….|____| P……..|____| Q…….|____| R……..|____|
411.	How many times did (Name) eat solid, semi-solid, or soft foods other than liquids yesterday during the day and at night? IF CAREGIVER ANSWER SEVEN OR MORE TIMES, RECORD "7" SEMI-SOLID FOODS COULD BE PAP, MASHED RICE, PORRIDGES ETC.	Number……|___| Don't know……..|___|
412.	IN AREAS WHERE IODIZED SALT IS AVAILABLE May I see the salt that is used for cooking?	Fortified ……...1 Not fortified…….0 Not available for check…8
413.	Did (Name) receive a Vitamin A dose like this during the last six months? SHOW CAPSULE	Yes……...1 No……0 Don't know……..8
414.	e) currently taking iron tablets or iron syrup (like this, or any of these)? THE IRON TABLET.	Yes……1 No……0 Don't know……...8

<u>500. Diarrhoea</u> **Record information for the child that is < 24 months**

501.	Has (Name) had diarrhoea in the past two weeks?	Yes.....……1 No.....……2 (if no, go to 601)
502.	Did you breastfeed (name) while he had diarrhoea?	Child not breastfed…...…1 Less than usual ...……2 As usual.....……3 More than usual..……4 Don't know.....……8
503.	Did you give (name) food while he had diarrhoea?	No.....……1 Less than usual ...……2 As usual.....……3 More than usual..……4 Don't know.....……8
504.	Did you give (name) liquids while he had diarrhoea?	No.....……1 Less than usual ...……2 As usual.....……3 More than usual..……4 Don't know.....……8
505.	Did you feed (name) during the recovery period? **If the child still has diarrhoea code as N/A=5**	No.....……1 Less than usual ...……2 As usual.....……3 More than usual..……4 N/A.....……5 Don't know.....……8
506.	What did you give (name) when he had diarrhoea? (circle all that apply)	Nothing.....……1 Water. .....……2 ORS .....……3 Water meresin ....……4 Rice pap.....……5 Pills.....……6 Syrup .....……7 Don't know.....……8 Jelly water .....……9 Other.....……..10
507	Did you seek treatment from someone outside the home for (name's) diarrhoea?	Yes.....……1 No.....……2 (if no, go to 511)
508.	Where did you **first** go for treatment?	District hospital..……1 Clinic .....……2 TBA.....……3 Traditional.....……4 BFV .....……5 Spiritual.....……6
509.	Who decided that you should go there for (Name's) illness?	Self .....……1 Husband.....……2 In-laws.....……3 Auntie.....……4 Friend .....……5 Health worker.....……6

510.	Where did you go **next** for treatment?	District hospital ..……1 Clinic .....……2 TBA.....……3 Traditional .....……4 N/A.....……5
511.	Have you heard of ORS?	Yes.....……1 No.....……2 (if no, go to 513)
512.	Please describe how you prepare ORS? **Correct description**: 1. Use 1 liter of clean drinking water (1liter = 3 soft drink pints) 2. Use the entire packet 3. Dissolve the powder fully (Stir well) Once mother has provided a description record whether she described ORS preparation correctly or incorrectly. If she mentioned all three of the above circle '1', Anything else circle '2'	Correctly.....……1 Incorrectly .....……2
513.	Have you heard of SSS?	Yes.....……...1 No.....……...2 (if no, go to 601)
514.	Please describe how you prepare wata merresin? **Correct description**: 1. Use 1 liter of clean drinking water (1liter = 3 soft drink pints) 2. Add 8 level teaspoons (or bottle stoppers) sugar and 1 level teaspoons (or bottle stoppers) salt 3. Stir well Once mother has provided a description record whether she described SSS preparation correctly or incorrectly. If she mentioned all three of the above circle '1', Anything else circle '2'	Correctly.....……...1 Incorrectly .....……...2

<u>600. Acute Respiratory Infections</u> Record information for the child that is < 24 months

601.	Has (Name) had an illness with a cough in the past two weeks?	Yes.....…….1 No.....…….2 (if no, go to 701)
602.	When (name) had an illness with a cough, did he/she have trouble breathing or breathe faster than usual with short fast breaths?	Yes.....…….1 No.....…….2 Don't know.....…….8
603.	Did you seek treatment for the cough/fast breathing?	Yes.....…….1 No.....…….2 (if no, go to 608)
604.	How long after you noticed (Name's) cough and fast breathing did you seek treatment?	Same day .....…….1 Next day .....…….2 Two days .....…….3 Three days or more……4

605.	Where did you **first** go for treatment?	District hospital ..…….1 Clinic .....…….2 TBA.....…….3 Traditional .....…….4 Spiritual .....…….5 BFV .....…….6 Drug peddlers .....…….7 Pharmacy.....…….8
606.	Who decided that you should go there for (Name's) illness?	Self .....…….1 Husband.....…….2 In-laws.....…….3 Auntie .....…….4 Friend .....…….5 Health worker.....…….6 BFV .....…….7
607.	Where did you go **next** for treatment?	District hospital ..……1 Clinic .....……2 TBA.....……3 Traditional .....……4 Spiritual .....……5 BFV .....……6 Drug peddlers .....……7 N/A.....……8
608.	Which medicines were given to (name)?	Nothing.....……1 Aspirin.....……2 Panadol.....……3 Septrine .....……4 Pen VK.....……5 Herbs .....……6 Amoxil.....……7 Don't know.....……8

<u>700. Malaria:</u> Record information for the youngest child that is < 24 months

701.	Has (Name) been ill with fever in the past two weeks?	Yes.....……1 No.....……2 (if no, go to 801)
702.	Does (Name) have a fever now?	Yes.....…...1 No.....…...2
703.	Did you seek advice or treatment for (name's) fever?	Yes.....…..1 No.....…..2 (if no, go to 711)
704.	Where did you go **first** for treatment?	District hospital ..……1 Clinic .....…....2 TBA.....……3 Traditional .....……4 Spiritual .....……5 BFV .....……6 Drug peddlers .....……7

705.	How long after you noticed (names) fever did you seek treatment from that person/place?	Same day .....……1 Next day .....……2 Two days .....……3 Three days or more …..4
706.	Who decided that you should go there for (name's) illness?	Self .....……1 Husband.....……2 In-laws.....……3 Auntie.....……4 Friend .....……5 Health worker.....……6
707.	Where did you go **next** for treatment?	District hospital ..……1 Clinic .....……2 TBA.....……3 Traditional .....……4 Spiritual .....……5 Drug peddlers .....……6 N/A.....……7
708.	Was (name) treated with any medicine?	Yes.....……1 No.....……2 (if no, go to 712)
709.	Which medicines were given to (name)? Circle all medicines that were given. If mother is unable to recall drug name(s) ask her to show them to you or show her the packet of ACT.	ACT……1 Chloroquine……2 Halfan syrup……...3 Fansidar……..4 Herbs……..5 Others…….6 Don't know……8
710.	How long after the fever started did (name) start taking the medicine?	Same day .....……..1 Next day…. .....……..2 Two days……...3 Three days or more…..4 Don't know……8
711.	Did (name) receive an injection (mark late) at anytime for his fever?	Yes.....……...1 No.....……...2 Don't know.....……...8
712.	What causes Malaria? Record all mentioned.	Mosquito bites……1 Witchcraft..... ……2 Injection/drips ..... ……3 Sucking oranges ... ……4 Drinking beer ..... ……5 Eating plenty oil ... ……6 Sharing razors/blades….7 Palm wine……..8 Eat plenty Mango. ……9 Bed bugs……10 Eating sugar……..11 Don't know……12 Other……..…13
713.	Do you have bed nets in your room? If she responds yes, ask if you can see the net.	Yes (verified) .....……1 No.....……2 (if no, go to 715)

		Yes (not verified)……..3
714.	Who slept under the bed net last night?	Child.....……..1 Myself .....……..2 Husband.....……..3 Myself w/child ...……..4 Myself w/husband…….5 All of the above..……..6
715.	Is the bed net an insecticides treated net (ITN)?	Yes.....……..1 No.....……..2 Don't know.....……..8
716.	When you were pregnant with (name) did you take any drugs to prevent you from getting malaria?	Yes.....……..1 No.....……..2 (if no, go to 801) Don't know……8 (if don't know, go to 801)
717.	Which drugs did you take?	Chloro1quine.....……..1 Fansidar.....……..2 Herbs .....……...3 Don't know.....……...8

800. Maternal and Newborn Care

801.	Did you see anyone for Antenatal care while you were pregnant with (name)?	Yes.....……..1 No.....……..2
802.	Do you have a maternal health card for your pregnancy with (name)? **Ask to see the card if mother responds yes**	Yes (verified) .....……..1 No.....…….2 Yes (not verified)…….3 Don't know.....…….8
803.	Before you gave birth to (Name) did you receive an injection (marklate) in the arm to prevent the baby from getting tetanus that is convulsions after birth?	Yes.....…….1 No.....…….2 (if no, go to 805) Don't know.....…….8
804.	How many times did you receive such an injection (marklate)?	Once .....……1 Twice.....……2 More than twice..……3 Don't know.....……8
805.	**Now I would like to ask you about the time when you gave birth to (Name).** Where did you give birth?	Home .....……1 Other home.....……2 Clinic .....……3 Hospital .....……4 Other.....……5
806.	Who assisted you with (Name's) delivery?	TBA.....……1 Nurse .....……2 Doctor.....……3 MCH assistant ....……4 Family member ..……5 No one .....……6
807.	What instrument was used to cut the navel cord?	New razor blade …….1

		Old razor blade……2 Knife……3 Scissors……4 Other……5 Don't know……8
808.	Where was (name) put immediately after birth?	With mother……1 In cot……2 On floor……3 Bath……4 Taken away……5 Don't know……8
809.	What did you do with (name) immediately after birth?	Breastfed……1 Bathed……2 Let sleep……3 Nothing……4 Don't know……8
810.	What are the symptoms immediately after birth that could indicate the child is not well?	Not breathing……1 Jaundice/Yellow……2 Convulsions……3 Not crying……4 Conjunctivitis……5 Others……6 Don't know……8
811.	How far (in miles) are you from the nearest health facility?	Distance (in miles)_____
812.	How would you get there?	Walk……1 Bicycle……2 Hammock……3 Motorcycle……4 Vehicle……5
813.	How long would it take you to get there?	Less than 1 hour……1 1-3 hours……2 More than 3 hours……3 Don't know……8
814.	Who would decide that you should go there?	Self……1 Husband……2 In-laws……3 Auntie……4 Friend……5 Health worker……6 BFV……7
815.	What are the symptoms during pregnancy indicating the need to seek health care? (Circle all that are mentioned)	Fever……1 Shortness of breath……2 Bleeding……3 Swelling of body……4 Paleness……5 Persistent vomiting……6 Abdominal pain……7

		Don't know.....……8 Others .....……9
816.	Where is the first place you would go for care if you had these symptoms?	District hospital ..……1 Clinic .....……2 TBA.....……3 Traditional .....……4 N/A .....……5 Don't know.....……8

900. HIV and AIDS

901.	Have you ever heard an illness called AIDS (SIDA)?	Yes……...1 No .....……2 (if no, go to 905)
902.	Where did you hear about HIV/AIDS? **A maximum of three responses is allowed for this questions**	Radio .....……1 Health Centre .....……2 Workshops.....……3 Village health talks…..4 Handouts .....……5 NGOs.....……6 Family members…….7 Friends.....……8 Others .....……9
903.	How is HIV/AIDS transmitted? **A maximum of three responses is allowed for this questions**	Unprotected sex..……1 Blood transfusion……2 Mother to child…..……3 Communal use of sharp instruments .....……4 Don't know.....……5
904.	Can people reduce their chances of getting AIDS virus by having just one sex partner who is not infected and who has no other partners?	Yes……1 No……..2 Don't Know……88
905	Can people get the AIDS virus from mosquito bites?	Yes……1 No……..2 Don't Know……88
906	Can people reduce their chances of getting the AIDS virus by using condom every time they have sex?	Yes……1 No……2 Don't Know……88
907	Can people get the AIDS virus by sharing food with a person who had AIDS?	Yes……1 No……..……...2 Don't Know……88
908	Can people reduce their chances of getting the AIDS virus by abstaining from sexual intercourse?	Yes……1 No……..2 Don't Know……88
909	Is it possible for a healthy looking person to have the AIDS virus?	Yes……1 No……..2 Don't Know……88
910	Is it possible that a healthy looking person who has the AIDS virus could transmit it to his/her sexual partner?	Yes……1 No……2

		Don't Know……88
911	Can the virus that causes AIDS be transmitted from a mother to her baby (Interviewer **asks A-C)** A) During pregnancy? A) During delivery? B) By breastfeeding?	Yes No DK 88 1 2 88 1 2 88 1 2
912	When you were pregnant with (Name), did you see anyone for antenatal care?	Yes…….…….1 No……...2 Don't Know……..88
913	During any of the antenatal visits for the pregnancy , did any one talk to you (interviewer asks A-C) a) Babies getting the AIDS virus from their mother? b) Things that you can do to prevent getting the AIDS virus? c) Getting tested for the AIDS virus?	Yes No DK 88 1 2 88 1 2 88 1 2

Interviewer……
Sign after complete

Supervisor……
Sign after checked for completeness

Child Survival and Health Grants Program Project Summary

Nov-01-2007

CARE
(Sierra Leone)

General Project Information:

Cooperative Agreement Number:	**GHS-A-00-03-00013-00**
Project Grant Cycle:	**19**
Project Dates:	**(9/30/2003 - 9/29/2008)**
Project Type:	**Standard**
CARE Headquarters Technical Backstop:	**Mariana Stephens**
Field Program Manager:	**Vandy Kamara**
Midterm Evaluator:	**Jean Capps**
Final Evaluator:	
USAID Mission Contact:	**Chris Barratt**

Field Program Manager Information:

Name: **Vandy Kamara**
Address:
Kabala
Phone:
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Funding Information:

USAID Funding:(US $): $1,488,582 **PVO match:(US $)** $520,725

Project Information:

Description:

The goal of the Project is to improve the health status of children under five and women of reproductive age.
CARE in partnership with PHU will implement interventions in expanded program of immunization (EPI), nutrition, malaria and maternal and newborn care (MNC) through a grassroots, civil-society building variation of the overarching Community Integrated Management of Childhood Illness (C-IMCI) approach.

CARE will also work with community health providers – Blue Flag Volunteers (BFVs), traditional birth attendants (TBAs), traditional practitioners, and drug peddlers –or through the HCs. The Project will collaborate with the Ministry of Health and Sanitation (MOHS) in district-wide activities to train PHU staff in IMCI, expand and improve services, and plan a Behavior Change Communication (BCC) campaign to improve family and community practices.

The CARE capacity-building strategy will work through a partnership structure, with local organizations such as HCs, Talking Drum (TD) and Norway-Sierra Leone Health Project (NSL).

Location:

Northern Province, Koinadugu District,Sierra Leone

Project Partners	Partner Type	Subgrant Amount
Community Health Clubs	Collaborating Partner	
Christian Extension Services	Collaborating Partner	
CRS	Collaborating Partner	
CCF	Collaborating Partner	
Red Cross	Collaborating Partner	
Medicos Del Mundo	Collaborating Partner	
Koinadugu District Health Management Team	Collaborating Partner	
Koinadugu District Local Council (Health Committee	Collaborating Partner	

General Strategies Planned:

Strengthen Decentralized Health System

M&E Assessment Strategies:

KPC Survey
Health Facility Assessment
Organizational Capacity Assessment with Local Partners
Lot Quality Assurance Sampling
Community-based Monitoring Techniques
Participatory Evaluation Techniques (for mid-term or final evaluation)

Behavior Change & Communication (BCC) Strategies:

Social Marketing
Mass Media
Interpersonal Communication
Support Groups

Groups targeted for Capacity Building:

PVO	Non-Govt Partners	Other Private Sector	Govt	Community
US HQ (CS unit) Field Office HQ CS Project Team	PVOs/NGOs (Int'l./US) Local NGO	Traditional Healers	National MOH Dist. Health System Health Facility Staff	Health CBOs CHWs

Interventions/Program Components:

Immunizations (15 %)

(IMCI Integration)
(CHW Training)
(HF Training)
- Classic 6 Vaccines
- Mobilization

Nutrition (10 %)

(IMCI Integration)
(CHW Training)
(HF Training)
- Comp. Feed. from 6 mos.
- Maternal Nutrition

(IMCI Integration)

Micronutrients (10 %)

- Iron Folate in Pregnancy

Malaria (35 %)

(IMCI Integration)
(CHW Training)
(HF Training)
- ITN (Bednets)

Maternal & Newborn Care (30 %)

(IMCI Integration)
(CHW Training)
(HF Training)
- Integr. with Iron & Folate
- Birth Plans

Target Beneficiaries:

Infants < 12 months:	**4,517**
Children 12-23 months:	**3,877**
Children 0-23 months:	**8,394**
Children 24-59 months:	**9,921**
Children 0-59 Months	**18,315**
Women 15-49 years:	**51,491**
Population of Target Area:	**112,921**

Rapid Catch Indicators:

	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 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	**22**	**95**	**23.2%**	**8.5**
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	**28**	**95**	**29.5%**	**9.2**
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	**8**	**25**	**32.0%**	**18.3**
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	**44**	**95**	**46.3%**	**10.0**
Percentage of children age 12-23 months who received a measles vaccine	**66**	**95**	**69.5%**	**9.3**
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	**77**	**95**	**81.1%**	**7.9**
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	**10**	**95**	**10.5%**	**6.2**
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	**59**	**95**	**62.1%**	**9.8**

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**

Comments for Rapid Catch Indicators

One key error was found during analysis related to the way way the question was asked regarding the bednet indicator -- this was only asked for those children who have a febrile episode in the past two weeks. The sick child indicator referred to children who had had diarrhea in the past two weeks. The possible answers to the HIV/AIDS question were modified slightly between Baseline and KPC. The most accurate methods will be used for the next LQAS and for Final Evaluation (a mini LQAS done only in an ITN distribution area had already corrected this question and skip pattern.)