USAID/BENIN: INTEGRATED COMMUNITY CASE MANAGEMENT PERFORMANCE EVALUATION

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DISCLAIMER

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ACRONYMS LIST

ACT	Artemisinin-based Combination Therapy
ARI	Acute Respiratory Infections
BASICS	Basic Support for Institutionalizing Child Survival
BCC	Behavior for Change Communication
BDHS	Benin Demographic and Health Survey
CAME	Central Stores for Essential Medicines
CBBE	Beninese Center for Environmental Protection and Welfare
CBO	Community Based Organization
CCM	Community Case Management
CHW	Community health worker (relais communautaire)
COGECS	Health Center Management Committee (Comités de gestion de centres de santé)
COP	Chief of Party
COR	Contracting Officer's Representative
CoVADES	Corps of African Volunteers for Economic and Social Development
CRAMS	Health Zone Officer in charge of Research and Social Mobilization
CSO	Civil Society Organization
CTB	Coopération Technique Belge (Belgian Technical Cooperation)
CTM	Cotrimoxazole
DAF	Director of Administration and Finance
DDS	Departmental Health Directorate
DEDRAS	Organisation pour le Développement Durable, le Renforcement et l'Auto-promotion des Structures Communautaires
DNSP	National Directorate of Public Health (Direction Nationale de la Santé Publique)
DSME	Maternal and Child Health Directorate (Direction de la Santé de la Mère et de l'Enfant)
EEZS	Health Zone Management Team (Equipe d'Encadrement de Zone Sanitaire)
GOB	Government of Benin
GRADE	Group for the Analysis of Development
GSM	Global System for Mobile Communications
HC	Health Center
HZ	Health Zone
iCCM	Integrated Community Case Management
IMI	Integrated Management of Illnesses
IMCI	Integrated Management of Childhood Illness
IPTp	Intermittent Preventive Treatment in pregnancy
IRPS	Regional Institute for Public Health (Institut Régional de Santé Publique)
ITN	Insecticide Treated Net
LDP	Leadership Development Program
LLIN	Long Lasting Impregnated Net
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goals
MILD	Long-acting insecticide-treated mosquito nets
MIS	Management Information System
MOH	Ministry of Health

MOU	Memorandum of Understanding
MSH	Management Sciences for Health
NGO	Nongovernmental Organization
NHIS	National Health Information System
NHMIS	National Health Management Information System
NMCP	National Malaria Control Program
OIC	Officer in Charge
ORS	Oral Rehydration Salts
PARZDS	Project d'Appui au Renforcement des Zones et Départements Sanitaires
PILP	Project to Intensify Malaria Prevention (Projet d'Intensification de Prévention du Paludisme
PMTCT	Preventing Mother-to-Child Transmission (of HIV/AIDS)
PMI	President's Malaria Initiative
RC	Relais Communautaire (Community Health Worker)
SMS	Short Message Service
SP	Sulfadoxine-pyrimethamine
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

Millennium Development Goal (MDG) 4 "Improve Child Health" target 4A aims to reduce mortality of children under-5 by two-thirds between 1990 and 2015. According to the World Health Organization, Benin has infant and child mortality rates of 73 and 115 deaths per 1,000 live births mainly due to preventable childhood illnesses, especially malaria, acute respiratory infections, and diarrhea (WHO 2012). However, care seeking and treatment of these major childhood illnesses remain poor. Preliminary 2012 Benin Demographic Health Survey (BDHS) survey show that 31% of children with ARI symptoms, 39% of children with symptoms of fever and 37% of children with diarrhea sought medical treatment from a health facility or professional health provider during their last occurrence of illness. Benin has scarce human resources to meet these needs, with a health workforce density of less than 0.05 per 10,000 population (WHO 2012). Prior to this project there were no established links between local health centers and existing community health workers (*relais communautaires* or RCs) and few, if any, of the community health workers had been systematically trained in health care delivery.

The integrated community case management (iCCM) project in Benin, award dates from July 30, 2009 to July 29, 2012, was funded at a level of $4,499,973 by USAID under a contract with the Partnership for Child Health Care, Inc. and implemented by MSH/BASICS. The purpose of this program as defined by USAID/Benin was "to support implementation of integrated community case management of childhood illnesses among children under-five for malaria, diarrhea, and pneumonia, and provide immunization and nutrition messages, by community-based organizations and community health workers." There is good evidence that community case management is an effective strategy to decrease mortality and morbidity from these illnesses when implemented well (USAID MCHIP 2011).

The focus of the project is on the integrated management of common childhood illnesses, including malaria, diarrhea and pneumonia. It is supported by an information campaign on the importance of immunizations and good nutrition through community-based organizations and RCs. The geographic coverage included the five health zones of Kandi-Segbana-Gogounou, Banikoara, Ouaké-Copargo, Djougou-Bassila and Tchaourou in the Departments of Alibori, Donga and Borgou.

OBJECTIVES OF THE EVALUATION

The general objectives of this evaluation are to assess the iCCM project's achievement of objectives and targets; measure coverage and quality of care of community level service delivery; and attempt to understand the project's contribution to observed results by comparing service coverage and quality in USAID focus health zones with those in non-USAID focus health zones. This evaluation was also designed to assess the capacity and sustainability of health zones and local NGOs to support community level workers and compile lessons learned for scale-up and challenges encountered.

EVALUATION DESIGN

The overall evaluation design was a non-experimental, post-only design intended to measure coverage and quality of iCCM services. Data was collected at the national level and in three of the five health zones covered by the project using standardized instruments. These three zones were the zones of Djougou-Ouake-Copargo, Tchaorou and Kandi in the North. A cluster survey of 309 mothers from these zones whose child had been sick with fever, diarrhea of cough during the past two week was also performed. A sample of 300 similar mothers in villages in the South from Ouidah, Allada and Come Health zones were interviewed as controls. These health zones were chosen because the RCs had not received training in iCCM and the population was socioeconomically similar to the project area. Direct observation of the skills of 119 of the trained RCs was performed. Key informant interviews were conducted at the central, departmental, zonal and health center

levels and focus groups were conducted at the community level. Documents reviewed included annual and quarterly project reports, special reports and RCs' records on iCCM services delivered as captured in the project database.

FINDINGS

This evaluation clearly demonstrated that this project has established good quality iCCM with good coverage in semi-remote (more than 5 km from the nearest health facility) villages in rural Benin using members of local communities. The evidence of good coverage is demonstrated by the findings that:

- 1048 community-based RCs were trained, equipped and supervised to establish iCCM;
- Over 86,000 clinical contacts took place and children were treated with established standard treatments for malaria, diarrhea and acute respiratory infection;
- RCs were trained and deployed in 1716 villages, 43% of all villages more than 5 kilometers from the nearest health facility in the five health zones covered by the project;
- Significantly more children were treated at the community level within the first 12 hours of the onset of illness than those in control villages where the RCs had not been trained in iCCM;
- Many patients were receiving treatment who previously did not attend for clinical care and relied on self-medication or traditional healers;
- RCs performed an average of 3,000 household visits per year over the last two years of the project to encourage mothers to take preventive action for their child's health—for example, by using insecticide-treated bednets.

However, it should be noted that 83% of the RCs are male, which given religious and cultural precepts in Benin, may make prove to be an obstacle to the delivery of maternal health services and family planning as it has in other countries.

Quality of Care Provided at the Community Level

Overall, direct observation of RC clinical skills reflected that, for the most part, diagnostic questioning was done well in a simulation of the examination of a two-year old child presenting with fever. The 119 RCs asked about the age of the child in 94% of the cases, about fever in 93%, about diarrhea in 82%, respiratory symptoms in 76% and length of time of symptoms in 94% of cases. The one weak area arose in asking about "danger signs." The RC skills were deficient in this area. Only 59% asked about whether the child was not able to drink or breastfeed, 67% about convulsions, and 31% about whether the child had abnormal sleeping or difficulty waking. The findings that only 50% uncovered the child's chest and 51% counted the child's respiratory rate using a counting device were a notable deficit.

We examined the drug stocks of the 119 RC whose clinical skills we observed. We found that 69% of RCs had a supply of the common drugs used in iCCM on hand to meet projected demand. The main deficiency was in the area of zinc blisters; only 65% had one blister of these and ORS sachets, only 66% had 2 sachets. One hundred and two (87%) had 10 tablets of cotrimoxazole and 103 (87%) had 10 tablets of artemisinin-based combination therapy (ACT). Project records indicated that drug stock outs were uncommon and not a problem for the RCs after 2010.

How mothers perceive the quality of care their children receive is important because it influences how they select and make health care decisions in the future. We found that significantly more

mothers, 217 (91%), perceived that the correct treatment is given by the RC in the intervention areas compared with the RCs in the control area, 76 (70%), P <0.0001. Similarly, significantly more mothers in the intervention area, 232 (98%) are satisfied with the health care given by RC than those in the control areas 94 (87%), P < 0.0001. Interviewees were also asked about what they saw as the positive impact of RCs on community health knowledge and health seeking behavior. This analysis demonstrated that access to follow up health care, valued by 112 (50.1%) in the intervention area is significantly more valued that the 25(23%) in the control group, P <0.0001.

The project further strengthened the quality of health care through the development of an integrated system of tools for implementation, reporting and supervision of iCCM activities. This system also links the health zones (HZs) to the RCs in their area through reporting and thereby aids in the supervision and supporting of RCs.

Deficiencies were found by the project in relationship to maintenance and supervision of RC clinical skills. These deficiencies were overcome by developing a collaborative approach to supervision of clinical skills. Six months after application, this approach to supervision was found to be effective in that RC performance deteriorated very little and is now a project best practice.

Capacity and Sustainability of Health Zones and Local NGOs to Support the RCs

The project strengthened the capacity of NGOs and established good teamwork and collaboration between the health zone (HZ), Africare, UNICEF and NGOs supporting RCs. The project also established good links between the local health centers, community members and the RCs that help to maintain the RCs. The use of local NGOs was crucial in facilitation of the establishment of two-way relationships between the RCs and their local health facilities where none was present before.

There is some doubt about the sustainability of NGO activities post-project. Now that there is no ongoing funding for NGOs to continue to perform their supportive activities, there is doubt as to whether RCs will continue to function at the same level, especially in more remote areas. However, time will tell whether the links already established between local communities, their RCs and local health facilities prove to be strong enough to sustain supportive activities without the facilitation of the NGOs.

The officers in charge (OICs) of the local health facilities were trained to become the supervisors of their local RCs in iCCM using the tools developed for this purpose. RCs were further linked to their local health facility. The local facility is the referral point for patients that could not be managed locally and the place that RCs took their monthly case reports and received restocking of the drugs used for treatment. In turn the RCs trained by the project improved the link of community members to their local health facility in several ways.

Our analyses demonstrated that there is good community support for the project RCs and trust in them to competently provide services. Mothers in the project area believed that the trained RCs improved their access to health care and follow-up health care. In focus group discussions, mothers indicated that due to their trust in their RC they would take their child to health facilities if instructed by the RC. Similarly, through their home visits the RCs encouraged mothers to bring their children for immunizations. The establishment of regular stipends through local mayors with performance bonuses that was scheduled to begin in September 2012 is also expected to support the sustainability of RC activities.

Achievement of Project Objectives and Activities

The achievement of project objectives was reviewed both in terms of the project indicators and results achieved under each of the three project components. Project documentation reviews, key

informant interviews, and information in the project database all indicate that project deliverables under all components were of good quality.

A key innovation demonstrated by the project was the use of short message service (SMS) communication by RCs to facilitate community level health programs. The pilot conducted by the program demonstrated that this usage can be highly effective. The Belgian Technical Cooperation (BTC), PARZDS-Facilité has learned about the approach as well as the collaborative approach to RC supervision developed by the project and has obtained funding to facilitate their further development. However, the feasibility of maintaining this innovation in the long term and its further scale up require further study.

The project implemented a trial of the integration of the Rapid Diagnostic Test (RDT) for malaria into iCCM delivered by the RCs. As malaria is the most commonly diagnosed and treated presumptive cause of fever with no other symptoms in Benin, correct diagnosis of malaria cases has the potential to rationalize the use of many resources at the community level. The evaluation found that the training of RCs in the use of RDTs was both relevant and practical. However, further study is needed to develop a cost-effective model for scaling up the wider use of this test.

KEY LESSONS

This project demonstrated several key lessons for community-based projects. These are presented here along with their implications in terms of important factors effecting scale up of iCCM. Some of the key lessons are in relation to:

Leadership and Governance

- Good collaboration among the NGOs, the HZ leadership, the donors and the health facilities played a key part in successful project implementation.

- The project facilitated change in MOH policy that allowed RCs to administer the treatment of ARI as part of iCCM.

- A decentralized system of payment to RCs with elements of local accountability to community leaders needs to be established and developed in a sustainable manner for scale up of iCCM.

Adequate Financing

The project demonstrated that delay in finances for project commodities and equipment can inhibit project activities. For successful scale-up, adequate funding must be in place beforehand. Funding of drug supplies for the iCCM needs to sustained long term and become part of the national system.

Service Delivery and Demand

The project demonstrated that basic training and tools can be used to establish and maintain quality iCCM with adequate coverage within poor rural communities using local community members. Our analyses demonstrated that there is now demand for these services. However, time is needed to assimilate and put into practice the different elements of this package. The rate of progress will vary among different areas, and the type of facilitation of the process may need to vary accordingly.

Gender Considerations in Health Care Delivery

The RCs are predominantly male. Experience in other settings where religious and/or cultural practice limit the contact between males and females from other families suggests that this may

hinder the RCs role meeting women's health needs. But, a major cultural change is needed to enable women to take on the role of RCs. Nevertheless, encouraging women to take on a role outside their household in health matters could lead to an important change that would help women improve their own health and facilitate the scale up of programs especially addressing female reproductive health.

Information Systems

A high-quality, practical, community-based information system can be set up using the RCs as done in this project. After the sustained use of the system developed in this project is established, consideration could be given to scaling up its use by other HZs. The capacity to manage and lead such a scale up process is not currently available in the health system and may require the engagement of outside assistance.

RC Performance

A supervisory system to maintain RC performance using health personnel from their local health facility was established by the project. While overall this system achieved performance objectives and provided a simple approach that would facilitate scale-up, it did not adequately address maintenance of clinical skills. Subsequently, an effective collaborative approach to supervision was developed. This system needs to be developed further and established more widely if RC performance in the area of clinical skills is to be maintained and scaled up.

Local NGOs

Local NGOs played an important role in facilitating the establishment of community-based health programs. Especially in more remote areas, it was the NGOs who visited local RCs rather than health center personnel. In terms of scale-up, especially in remote areas, and areas where health personnel have no previous, positive experience working with trained RCs, NGOs can play an important role. This approach to scale up would require adequate funding and does present the risk that implementation would flag when NGO support was phased out.

Education of health center staff

A key bottleneck to scale-up of iCCM is that in many areas health center staff have had no previous link with trained RCs. We have discussed above how NGOs had a key role in overcoming this in the project. Health center staff need to be educated about the benefits to them and the health of their patients that trained RCs can provide.

RECOMMENDATIONS

Our recommendations are grouped below under key areas of focus for this evaluation and those who are likely to have a key role in their implementation.

To Maintain and Improve the Coverage and Quality of iCCM By RCs

Ministry of Health and International Donor Partners

> **Recommendation 1:** To encourage more female involvement in health care activities, the involvement of women's groups in promoting community based iCCM and associated activities, especially nutrition, should be part of the design of future community based projects. Culturally appropriate affirmative action to promote women as RCs should also be used. However whether the latter are used initially or subsequently once these groups had been established needs to be determined locally.

Recommendation 2: Sufficient funding should be provided in future health projects to adequately examine underlying cultural beliefs that lead to males being brought for health care more frequently than females. This funding should also be adequate for the testing of definitive small scale behavioral change communication and other interventions to address it.

Recommendation 3: The community based information system established by the project should be maintained in the HZs where it was first established and be extended to other HZs with similar personnel and, ultimately, be incorporated into the national health information system.

At the moment the data collected by this system is reported to local health centers and to the HZ management level. For this information to be added to the national health information system a planning committee could be established at the national level and in each HZ involved. These committees would include representatives of both the MOH concerned with child health and health information systems and HZs involved in the project. Either a WHO expert or a consultant experienced in health information systems at the community level would need to be engaged to advise on the details and costing of the system components that would be need to be established to make this system operational. Initially this system could be established on a trial basis using the HZs involved in the project and then more widely as resources become available.

Recommendation 4: A pilot should be conducted in the project area to test the feasibility of establishing community-based vital events registration using the RCs trained through the project in community-based data collection.

This could be done by applying the same process discussed under the previous recommendation. However the planning committees at each level should also include appropriate representatives of national and local government already engaged in this area so that locally acceptable practical approaches of registration, data storage and management are established. A consultant experienced in these processes in similar developing countries would need to be engaged for this purpose.

Recommendation 5: The feasibility of the incorporation of the regular use of RDTs into iCCM should be investigated to develop a practical sustainable affordable approach. Part of this approach must include regular supervision including the development of a quality assurance system.

To Improve the Capacity and Sustainability of Health Zones, Local NGOs and the Community to Support RCs

Ministry of Health and International Donor Partners

Recommendation 6: The collaborative approach to supervision of RCs be continued to be developed, as PARZDS plans to do, and that the feasibility of extending it to other HZs be examined.

Recommendation 7: That the pilot SMS/GSM project be maintained, as planned by PARZDS, and the feasibility of its possible extension to other HZs studied.

Health Zone Management

Recommendation 8: Education about the advantages of having competent motivated RCs in the communities in the health center's catchment area and supervising and establishing cooperative relationships with them should be included in the ongoing training of Health Center staff.

This could be implemented by MOH developing a training module that incorporates these ideas as part of routine Health Center practice. Workshops sharing the experience of those health personnel who already have good RCs in their area could also be used.

Recommendation 9: HZ teams work with local Health Center OICs, local majors and RCs to develop good local strategies to motivate RCs in addition to basic remuneration.

This could be implemented by HZ teams establishing working groups including members of these groups for this purpose.

Non-Governmental Organizations

Recommendation 10: NGOs should periodically engage some trained health professionals at local health facilities to gain needed skills and establish credibility with this group. These health professionals could support clinical supervision of RCs and behavioral change communication within local communities.

I. BACKGROUND

A. PROJECT CONTEXT AND OBJECTIVES

The iCCM/Benin project is under the President's Malaria Initiative (PMI) and Child Survival, contract no GHA-I-00-04-00002-00, award dates July 30, 2009 to July 29, 2012. Funding was $4,499,973 from USAID under a contract with the Partnership for Child Health Care, Inc. and implemented by MSH/BASICS. It was planned to start in July 2009 and conclude in July 2012; however, the project did not effectively start until December 2009.

According to the World Health Organization, Benin has infant and child mortality rates of 73 and 115 deaths per 1,000 live births mainly due to preventable childhood illnesses (WHO 2012). Malaria, followed by acute respiratory infections, diarrhea and anemia are the leading causes of mortality and morbidity in children under five. Care seeking and treatment of these major childhood illnesses remain poor. Preliminary 2012 BDHS survey data show that 31% of children with ARI symptoms, 39% of children with symptoms of fever and 37% of children with diarrhea sought medical treatment from a health facility or professional health provider during the last occurrence of illness (BDHS 2012). Although the care seeking behavior for ARI declined from 36% (BDHS 2006) to 31% (BDHS 2012), there was a significant improvement during the last six years regarding the management of fever and diarrhea in Benin. Benin has scarce human resources to meet these needs with a health workforce density of less than 0.05 per 10,000 population (WHO 2012). Malnutrition is also a major problem in children in Benin with 47% of rural children under 5 being stunted (WHO 2012). Only 20% of children under-five sleep under an insecticide treated net (ITN) (WHO 2012). Safe water and adequate sanitation are also lacking for many with 75% of the population having access to improved drinking water and 13% improved sanitation (WHO 2012).

The Government of Benin (GOB) views malaria control as a top priority. The National Malaria Control Program (NMCP) had developed a five-year strategic plan (2006-2010) that included long-lasting ITNs (LLINs), rapid diagnostic tests (RDTs), artemisinin-based combination therapy (ACTs), and sulfadoxine-pyrimethamine (SP) for intermittent preventive treatment in pregnancy (IPTp). The overall goal of the GOB was to reduce malaria morbidity and mortality by 50% by the year 2010. As part of the government's overall goal to reach the MDGs, the GOB has adopted increasing integrated management of childhood illnesses (IMCI) coverage within the country. This strategy included increasing IMCI coverage to all health zones by 2010; training public sector, private sector and community health care providers in the IMCI package (including nutrition) and supporting vitamin A supplementation every year. Currently they are pursuing its spread to 20 health zones with UNICEF support, adding 6 more in 2012 and hope to eventually extend it to all 34 health zones.

The purpose of this program as defined by USAID/Benin is "to support implementation of integrated community case management of childhood illnesses among children under-five for malaria, diarrhea, and pneumonia, and provide immunization and nutrition messages, by community-based organizations and community health workers."

The focus of the project within this larger program was on IMCI, including malaria, diarrhea and pneumonia among children who live more than 5 kilometers from the nearest health facility. It was supported by an information campaign on the importance of immunizations and good nutrition through community-based organizations and community health workers (*Relais communautaires* or RCs). The geographic coverage included the five health zones of Kandi-Segbana-Gogounou, Banikoara, Ouaké-Copargo, Djougou-Bassila and Tchaourou in the Departments of Alibori, Donga and Borgou. The population of these health zones was estimated by the project to be 1,120,743 in 2011.

An iCCM strategy with four core elements was designed to:

1. Develop, maximize, and sustain the capacity of NGOs and MOH in five health zones to collaborate in ensuring access to high-impact interventions at the community level.
2. In the five health zones, deliver high-impact interventions at the community level through a continuum of care.
3. Advocate for the inclusion of acute respiratory infections (ARI) in the iCCM/Integrated Management of Childhood Illness (IMCI) package.
4. Contribute to the institutionalization of the integrated iCCM/IMCI package at the national level.

This strategy is reflected in the key elements of the Results Framework.

Strategic Objective: Strengthen key components of USAID's MCH Program by focusing on community-level actions

Components:

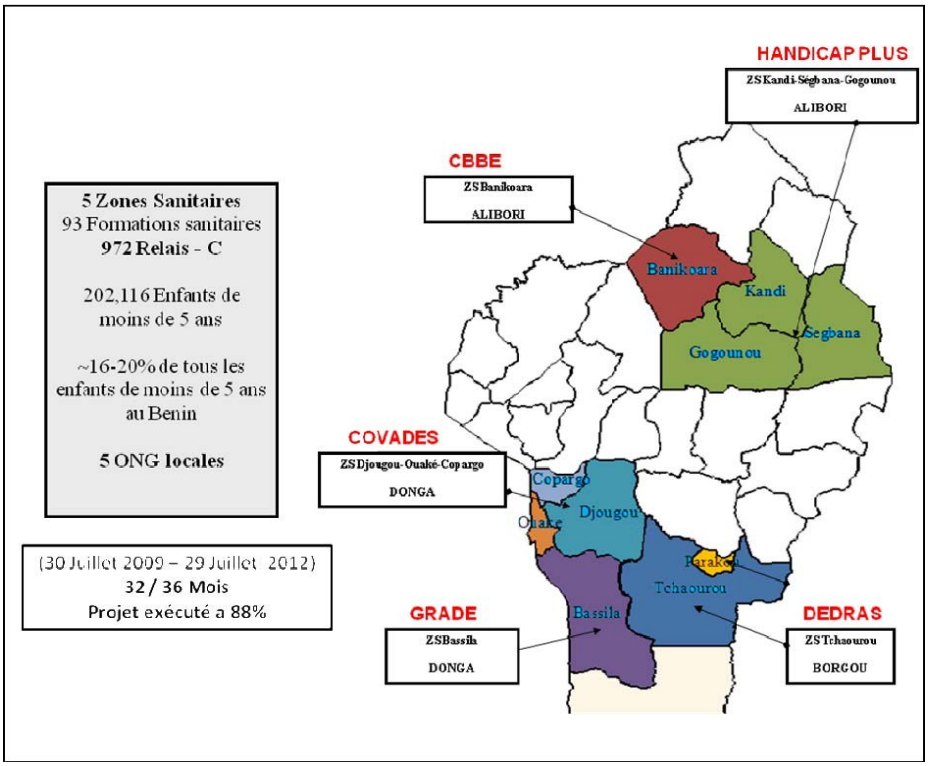
1. NGO Grants for Community Case Management
Purpose: Number of children correctly treated at the community level significantly increased

2. Technical Assistance for developing iCCM approaches and tools with the MOH
Purpose: Technical assistance to the GOB and to grantees in the implementation of integrated Community Case Management provided.

3. Strengthen links between the CHWs and their respective health facility
Purpose: Link between the community, the community health worker and their respective health facility strengthened.

The 5 health zones covered by the project and the local NGO (in red) that the project worked with in these areas are illustrated below.

Figure 1 health zones and local NGO involved in the project



B. EVALUATION OBJECTIVES AND QUESTIONS

The general objectives of this evaluation are to:

1. Assess the iCCM project's achievement of objectives and targets
2. Measure coverage and quality of care of community level service delivery and attempt to show attribution of project results by comparing service coverage and quality in USAID focus health zones with those in non-USAID focus health zones
3. Assess the capacity and sustainability of health zones and local NGOs to support community level workers
4. Compile lessons learned for scale-up and challenges encountered

The general questions to be addressed by this performance evaluation are the following:

1. What is the coverage and quality of care of community level service delivery (iCCM)?
2. What is the capacity and sustainability of health zones and local NGOs to support community level workers?
3. How well has the MSH/BASICS program achieved its activities and objectives?
4. What are the lessons and good practices:
    a. from this community-focused integrated package of services delivery to children under 5 years old that have the potential for scale-up across the health system?
    b. in terms of project management, partnerships/collaborations with the Health facilities, the NGOs and the Community Health Workers and monitoring and evaluation of activities at the community level?

C. EVALUATION METHODOLOGY

Evaluation design

The overall evaluation design was a non-experimental, ex-post design and intended to measure coverage and quality of iCCM services.

Data was collected at the national level and in three of the five health zones covered by the project. This selection was made on the basis of representative sampling of project implementation areas and logistical considerations. These three zones are the zones of Djougou-Ouake-Copargo, Tchaourou and Kandi in the North. (See Appendix 2 for the final workplan of our evaluation)

For controls for the cluster survey, mothers in the South from Ouidah, Allada and Comè Health zones were interviewed. These zones were chosen because it was known that the general socioeconomic conditions in these areas were similar to those in the project areas and the RCs in these areas had not received training in iCCM. These factors were confirmed by interview of senior health staff in these areas and the initial findings of the survey itself (Appendix 5). There have been widespread community level interventions by other organizations, such as UNICEF in other health zones closer to the project site and so mothers chosen from these zones will give a clearer contrast with those in project areas.

Data was collected through examination of project documents, a cluster survey, direct observation of the skills of the trained RC, Key Informant Interviews at Central, Departmental, Zonal and health center levels and focus groups at the community level. (See Appendix 3 for Persons Interviewed and Appendix 4 for analytical tools used). Document review included annual and quarterly project

reports, report on training, special reports and *RC's* records on iCCM services delivered which were already entered into a database.

Cluster survey

Sampling
For the cluster survey, 30 clusters of 10 mothers with children under-five years of age who have had fever, cough and or diarrheal disease within the last two weeks, who live in villages 5 to 10 kilometers from the nearest health facility, where RC were trained in iCCM by the project were selected. These mothers were compared with 30 clusters of 10 mothers with children with the same characteristics from villages in the South of the country in areas where there were no *RC* trained in iCCM by the project and where limited similar community level treatment interventions took place. The relevant characteristics of the control zones were verified by interview of senior MOH personnel in these health zones. The content of these key informant interviews are included at the end of Appendix 5 (Findings of key informant interviews). In total 310 surveys took place in project health zones and 300 in the control zones. This level of sampling gave a power of 80% to show differences in variables between the two groups of the order of 10% or more (Saifuddin, 2009; Hayes and Bennett, 1999).

Village selection
BASICS data lists all villages in the three zones we are concerned with that have a presence of trained *RC* and the required distance from the nearest health facility. The villages with trained *RC* which are 5 to 10 kilometers from their nearest health facility were listed. From this list we randomly selected 10 villages in each of the 3 zones. A similar randomization process was used to select 10 villages with a similar distance from the nearest health facility in the South in the three zones mentioned above.

Three focus groups, respectively of village leaders, women with children under-five and RC, were performed in each of the three project zones sampled according to standardized discussions points. Key informant Interviews were conducted with 37 persons according to guidelines developed in advance. Persons Interviewed are listed in Appendix 3). The BASICS End of project presentation was also attended and all current BASICS staff interviewed on site in Parakou.

Data Collection Methodologies and Analysis

A standardized questionnaire was developed to assess household behavior in the case of iCCM conditions (diarrhea, malaria, and pneumonia), including whether or not treatment was sought, the timing of seeking treatment, and clients' perceptions of the RC (competency, accessibility, respectful behavior, etc.) (See Appendix 4) . Respondents were also asked about how their health-seeking behavior has changed since the presence of the RC in their community.

There were 12 surveyors trained to work in groups of two, each group under the care of one supervisor. These personnel were literate with some health and/or previous survey experience, selected from rural areas adjacent to the project intervention sites, and intensively trained for one day. A master data form was developed in Epi Info 7. Supervisors checked all data collected in the field and brought it to a central place on the first day of data collection and then every second day where data was further checked by members of the consultant team and then double entered into a data base. Data was analyzed by consultants, tabulations drawn up and conclusions drawn after triangulation with data collected from key informant interviews, observations of trained RC performance, focus group findings and examination of project documents. Key results of this analysis are presented in Appendix 5.

For the observation of RC clinical skills, if there was not a real patient and mother available, a mother with a well-child was asked to simulate a child presenting with fever. Clinical encounters

were observed and recorded according to a standardized observation instrument (See Appendix 4). A standardized questionnaire was also administered to the RC covering the management of common illnesses and their treatment. Information was also collected on drug supply, and other supplies that should be present with the RC in their community. Further details concerning these latter topics was also collected through interview of the RC's local supervisors. These observations were performed by the interviewers mentioned above also trained for this purpose. The evaluation aimed to perform 120 of these observations in the same communities that the surveys were executed and in adjacent villages. A total of 119 observations were performed. Key results of the analysis of these data collection observations and questionnaires are presented in Appendix 6.

Details of focus group discussions and key informant interviews are reported in Appendices 7 and 8 respectively. Copies of the BASICS data base at Parakou were also obtained and reviewed in relation to obtaining data presented in tables and figures presented here (Appendix 9 Lists Documents Reviewed).

Confidence in the methodology

Our findings are based on a sampling of the activities performed by this project in five health zones after three years. However, the sampling processes we followed were random such that no particular community members surveyed or trained RCs observed had a higher chance of being sampled than any others. The sample sizes we chose for the case control survey had good power (80%) to show practically important differences between cases and controls-differences in factors of 10% or more. All surveyors were trained to use standardized tested data collection instruments. The surveyors themselves were not associated with the project. Similarly the focus groups we conducted canvassed the views of a cross section of the mothers, local leaders and RCs involved in the areas sampled. The key informant interviews we conducted sampled all key stakeholders involved in this project. Results from quantitative and qualitative methods used were consistent with one another. Given this methodology we assert that our overall findings and conclusions are a reasonable reflection of the overall achievements of this project. Of course this does not mean that some local findings may not differ from those overall.

II. FINDINGS AND RECOMMENDATIONS BY KEY COMPONENTS

A. PROJECT INDICATORS

A new set of indicators was developed for this project. Progress in relationship to these indicators is presented in Table 1 below. Targets are in red and italics while accomplishments in black.

Table 1 Progress of the iCCM project in relation to objectives 2010-2012

Indicator	Calculation	Source and Baseline	2010	2011	2012	Observations
Number of people trained by the project in the treatment or prevention of malaria	Number of people trained by the project (health workers, CHWs, community members) in the treatment or prevention of malaria	project reports Baseline = 0 Target = 1300	0 ***0***	1300 ***1207***	108 ***108***	-1048 CHWs -142 health workers -16 NGO outreach workers -In year 3, 102 CHWs trained + 6 Health center Nurses
Number of fever cases treated in project areas	Number of fever cases treated in project areas	Routine data from CHWs Baseline = 0	6,057 ***9,623***	24,226 ***38,601***	15,769 ***18,373***	The data for Year 1 is for 5 months; the data for Year 3 is for 6 months.
Number of diarrhea cases treated in project areas	Number of diarrhea cases treated in project areas	Routine data from CHWs Baseline = 0	1,971 ***1,934***	7,884 ***4,428***	1,845 ***1,371***	The data for Year 1 is for 5 months; the data for Year 3 is for 6 months.
Number of service delivery points served by the project reporting shortages	Number of service delivery points reporting shortages	Routine data from CHWs Baseline = 0	0 ***N/A***	0 ***0***	0 ***0***	There isn't any stock out recorded in year 2 and 3 in the project area.
Number of people trained in child health and nutrition in project areas	Number of people trained by the project (health workers, CHWs, community members) in child health	project reports Baseline = 0	0 ***0***	1300 ***1207***	108 ***108***	-1048 CHWs -142 health workers -16 NGO outreach workers -108 persons trained in RDT
Number of cases of ARIs treated with antibiotics by project-trained CHWs	Number of cases of ARIs treated with antibiotics by project-trained CHWs	project reports Baseline = 0	1,040 ***2,535***	4,154 ***2,135***	2,800 ***3,016***	The data for Year 1 is for 5 months; the data for Year 3 is for 6 months.
Number of laws, policies, regulations, and guidelines on the accessibility and use of health care services redacted with the help of the project	Number of laws, policies, regulations, and guidelines on the accessibility and use of health care services redacted with the help of the project	project reports Baseline = 0	1 ***1***	1 ***1***	1 ***1***	This law allowed ARI inclusion in IMCI package Guideline for training, supervision, database, etc.

This table demonstrates generally good progress and achievement relative to project targets in most areas. The target levels for number of cases of malaria, diarrhea and ARI treated are reasonably good since they were based on projections from the utilization rates given by the national statistical reports. Targets for cases of diarrhea treated were not achieved, possibly reflecting differences in the project area as compared to national statistics.

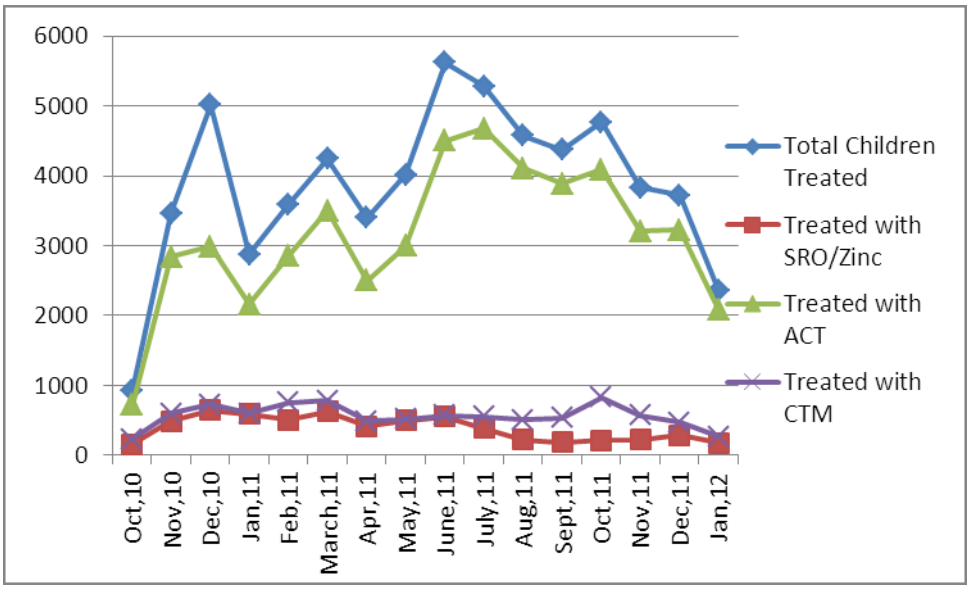
B. COMPONENT ONE: NGO Grants for Community Case Management

Project results under this component include the provision of quality integrated community case management through the project area, mobilization of local NGOs and promotion of community awareness of consistent proper use of impregnated bed nets.

Coverage and Quality of ICCM

To be of maximum benefit, treatment for the common causes of morbidity needs to be readily available and of good quality. Delays in diagnosis and management can be fatal. Data on the increased availability of health care at the community level is available through the community based information system of this project based on the reporting of treatment provided by the RC. This project trained 142 health professionals who in turn trained 1048 RC. Access to health care is especially a problem for families living far from the nearest health facility. The project therefore concentrated on villages more than 5 kilometers from the nearest health facility. The iCCM provided by these RC is illustrated in Figure 2, presenting data from the project database. Before this project this treatment was not widely available at community level in project health zones.

Figure 2 Clinical Management Provided by RCs trained by the Project



The RC were trained to treat their sick children according to strict guidelines and with standard treatments according to Benin MOH guidelines. The above figure and Table 2 below illustrate the great increase in clinical management of malaria, diarrhea and acute respiratory infection that occurred at community level due to this project. At the start of the project community based management of ARI was not approved by the MOH. As noted by the UNICEF representatives interviewed, the project played a pivotal role in advocacy for the change of this policy. Table 2 below

summarizes the 86309 new clinical cases that the RC managed over the three year of the project as reported by the RC based project information system.

Table 2 Case Management of New Cases of Infants Under-Five 2010 – 2012 by RCs

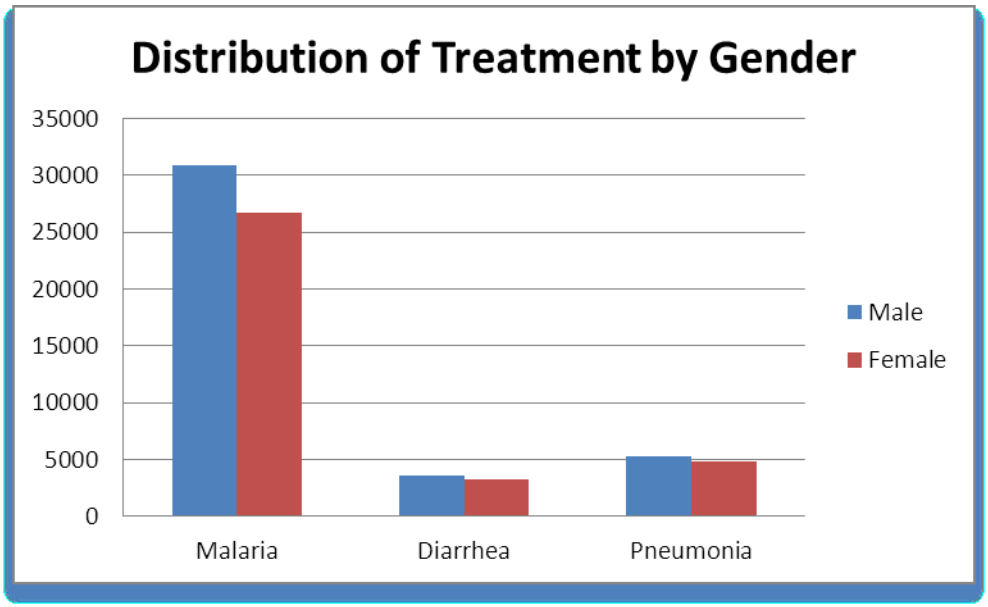
	2010		2011		2012	
Illness	Target No.	Actual No.	Target No.	Actual No.	Target No.	Actual No.
Malaria	6057	9623	24226	38601	15769	18373
Diarrhea	1971	1934	7884	4428	1845	1371
ARI	1040	2535	4154	6730	2800	3016

This table also illustrates that the project achieved its targets for new cases treated each year.

Coverage by Gender

Data from the project database illustrates cases seen by the RC by sex. Figure 3 below illustrates children under-five treated over the course of the project by RCs by gender

Figure 3 Children Under-Five Treated over the Course of the Project by RCs by Gender



There is a slight predominance of male cases amongst Malaria cases. That male children also predominate in children brought for any treatment at health facilties is also a common finding in MOH health facilities. The project did carry out a small qualitative study addressing gender bias but the results of this study were inconclusive. It is recognized that it will be difficult to make changes in this area of behavior but small practical approaches can be developed to facilitate gradual change in this area. **It is recommended** that sufficient funding be provided in future health projects to adequately examine underlying causes for this difference and to test definitive small scale behavioral change communication and other interventions to address it.

It is noted that RCs trained by the project are 83% male with mean age 34 years and are mostly farmers practicing Islam[1]. Males predominated amongst RCs because they were chosen by their communities. Consistent with a policy of promoting sexual equality, the project encouraged communities to select women and men equally. However, the communities were resistant to doing so for many cultural and religious reasons focusing on fears concerning women working alone and visiting other households especially at night. Also the project noticed that many of those who resigned were women especially young women who did so when they were married.

Culturally appropriate local selection of RCs by their communities is important for sustainability. However, because mothers are the main guardians of sick children and to encourage equity it is important that women are also involved in RC activities. Given the low contraceptive prevalence rate of 17% and the unmet need for family planning of 26% it would also be important the women become involved in their own reproductive health at the community level (WHO 2012). Africare already uses women's groups in its activities in Benin. The evidence is that women's groups are an important facilitating group for community based care of children (USAID MCHIP 2010). Greater female involvement in child health could be encouraged by initially getting them involved in groups. There is good evidence that women's groups are particularly successful in facilitating community based approaches to child malnutrition, a major problem in Benin (Marsh, D. R., & Schroeder, D. G. (2002) (WHO 2012). **It is recommended** that the involvement of women's groups in promoting community based iCCM and associated activities, especially nutrition, be part of the design of future community based projects.

Not only was treatment of these common diseases made more readily available but also trained RCs were distributed reasonably equitably between the villages in the health zones , Table 3 below.

Table 3 Distribution of RC Trained by the Project by Health Zone and Villages

	Banikoara	**Bassila**	**D-C-O**	**K-G-S**	**Tchaourou**	**Total**
Total villages (>5kms)	462	104	472	348	330	1716
Covered Villages (>5kms)	181	54	250	147	109	741
RC/FG trained	186	108	360	223	172	1048
RC/FG with complete kit	0	108	0	223	172	503
% coverage	39%	50%	69%	42%	33%	43%
Source: Project Data, January 2011, BASICS.						

[1]Prise en Charge Intégrée des Maladies de l'Enfant. Evaluation Post-formation des RC Communautaires du project USAID/BASICS au Benin. Rapport Final, July 2011

The above table shows that RCs trained were reasonably evenly distributed across all health zones. As these are the figures at the time of initial training all RCs had not received a complete kit of drugs and supplies at that time as was the subsequent case.

The training of these RC also led to earlier attendance of mothers with their children for treatment. This is illustrated by one of the findings from our case control study presented below. Table 4 presents the amount of time that mothers waited before seeking health care after the onset of their child's illness in the intervention area and in control areas that had RC not trained in iCCM. There were 236 respondents who sought health care from the RC in the intervention area and 108 who sought care from their RC not trained in iCCM, in the control area.

Table 4 Time Delay before Seeking Healthcare in Intervention and Control Areas with RC

	BASICS	**CONTROL**	
Delay in seeking health care			
Less than 12 hours	117 (49.6%)	11 (10.2%)	128
12 to 24 hours	77 (32.6%)	36 (33.3%)	113
24 to 48 hours	25 (10.6%)	46 (42.6%)	71
More than 48 hours	17 (7.2%)	15 (13.9%)	32
N	236 (100%)	108 (100%)	344

When those who waited less than 12 hours were compared with those who waited 12 or more hours, the 117 (49.6%) in the intervention group were significantly more likely ($P < 0.0001$) to seek health care early than the 11 (10.2%) in the control group.

While treating sick children as early as possible is very important to decrease severity of illness and prevent mortality, it is desirable that training the RC in iCCM would bring new cases of treatable illness under care at the community level rather than only redirecting cases away from the local health facilities. To gather some insight on whether this was the case we addressed this issue in the analysis of data from our case control study as presented below.

Table 5 presents health care seeking behavior of mothers for their child before the presence of RC trained in iCCM in their community compared with control communities that have RCs without this training. There are 240 mothers (77.7%) out of 309 interviewed in the intervention area who now attend RCs. first. In the Control area the 108 people who now attend RC represent only 36% of all 300 interviewed.

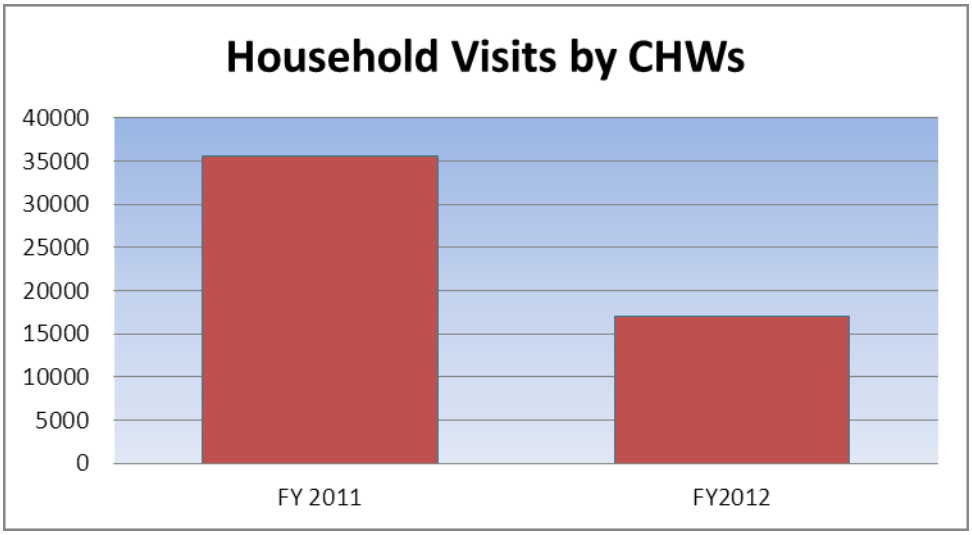
Table 5 Use of Health Care before the Presence of Local RC Compared with Current Control Practice

Initial Source of health care		BASICS	CONTROL	Total	
Health Center		147 (61.25%)	86 (79.63%)	223 (66.95%)	P = 0.000
Self-Medication		67 (27.92%)	43 (39.81%)	110 (31.16%)	P = 0.027
Traditional Practitioner		3 (1.25%)	10 (9.265)	13 (3.74%)	P = 0.000
	N	240 (100%)	108 (100%)	348	

Table 5 shows that before the presence of the trained RC in the intervention area 67 (27.9%) of people now attending the RC resorted to self-medication of their child. This indicates that an important proportion of those consulting the trained RC are new patients rather than just those who previously attended the Health Center. Patients are also being attracted away from the Health Centre since only 26 (8.4%) of the 309 mothers interviewed in the project area now attend Health Centers first. It is too early to ascertain if the number and severity of cases seen at the Health Center level has changed in a predictable trend although some health personnel interviewed at this level say they have detected a change.

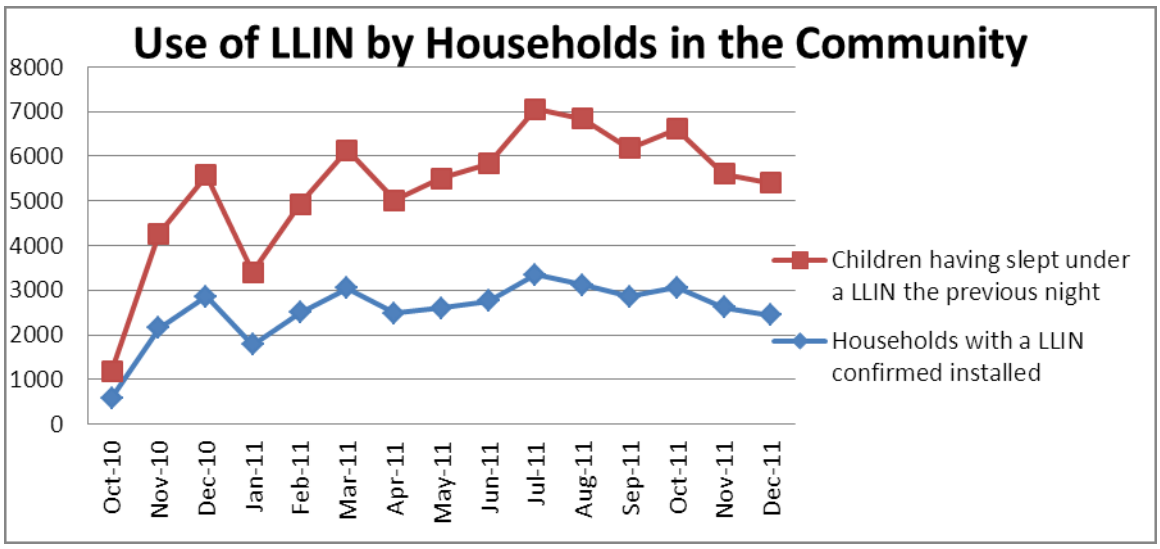
In addition to the management of acute cases, RC are trained to do household visits to educate mothers about nutrition, mobilize them to bring their children for immunization and to encourage them and their children to use permethrin impregnated bed nets. Data on these activities are reported by RC and recorded in the project database. Figure 4 reports household visits notified by the RC and Figure 5 the increase in bednet coverage and usage throughout the project area.

Figure 4 Household Visits by RC Reported Through the project Database



Numbers for 2012 do not cover the whole year. When averaged by month the rates are similar.

Figure 5 Number of Infants Sleeping under Impregnated Mosquito Nets and Net Coverage



Bednets are provided through Africare and the MOH. However, the above figures illustrate the role that the project has played in association with its partners, especially Africare and UNICEF, in encouraging their use through household visits by RC. Africare uses the same RCs as the project.

Figures 4 and 5 document the large number of household visits the trained RC made and the contribution they may have made to increase use of bednets. Home visits, used appropriately are recognized as a key component of community based primary health care (USAID MCHIP 2011). These home visits were a key part of the RC activities in that through them the RC carried out preventive actions that help prevent the diseases they were treating in iCCM. That is they promoted good nutrition-an important factor underlying 60% of childhood infection disease, use of ITNS and taking children for immunizations. These visits may also have helped built mothers' confidence in them as health providers as discussed below under Quality of Health Care. Findings from focus group discussions with mothers, village leaders and RCs demonstrated that they actually performed these roles.

Quality of Health Care Provided by the RCs

Assessment of quality of care provided by the RCs comes from several sources: a post training assessment of the ability of RCs conducted through the project in July 2011; the assessment of the clinical skills of RCs performed as part of this evaluation; and perceived skill level as assessed by mothers as part of our case control study. Findings from focus group discussions and key informant interviews also contributed. As noted under project indicators, the project achieved its target of training 142 health workers who in turn trained 1048 RC. Project documents also report that monthly supervision of RCs took place. This reporting was performed by the NGOs working in association with the project and since these NGOs do not have workers with the capacity to assess clinical skills they did not indicate anything about the quality of clinical skills.

The July 2011 assessment of RC clinical skills found that they were deficient in many clinical areas especially examination for respiratory illness and "danger signs" of severe illness for referral[2]. As a result of this assessment a best practice collaborative approach to clinical supervision was developed and successfully implemented. This is described later under Best Practices. None of the RCs we observed had received this approach.

[2] Source. Prise en Charge Intégrée Des Maladies de l'Enfant. Evaluation Post-formation des RC Communautaires du project USAID/BASICS au Benin. Rapport Final" July 2011

We observed the clinical skills of 119 randomly selected RCs using a standardized instrument. These results are reported in detail in Appendix 6. We found that the overall clinical skills of the RCs are good in a simulation of a two-year old child presenting with fever. The 119 RC asked about the age of the child in 94%, about fever in 93%, about diarrhea in 82%, respiratory symptoms in 76% and length of time of symptoms in 94% of cases. When it came to asking about "danger signs" the RC skills demonstrated that there may be some deficiency in this area. Only 59% asked about whether the child is not able to drink or breastfeed, 67% about convulsions, and 31% about whether the child has abnormal sleeping or difficulty waking. This was also found to be a common deficiency in the July 2011 assessment mentioned above. The findings that only 50% uncovered the child's chest and 51% counted the child's respiratory rate using a counting device is a notable deficit.

We also found that the RC level of "functional knowledge" relevant to iCCM clinical skills was very good. In the area of the cutoff points for pneumonia diagnosis, over 90% of RCs could state these. Over 70% could state knowledge of "danger signs". 100% knew the correct drugs to use to treat pneumonia and malaria.

Mother's perception of the quality of care received is important because it influences their selection of health care provider. We asked about mothers' perception of correct management and satisfaction with care given. We compared findings for the 240 mothers who attended RCs in the intervention area with those 108 who attended RC in the control areas. We found that significantly more mothers, 217 (91%) perceive that the correct treatment is given by the RC in the intervention areas compared with the control area 76(70%), P <0.0001. Similarly, significantly more mothers in the intervention area, 232 (97.5%) are satisfied with the health care given by RC than those in the control areas 94 (87%), P < 0.0001.

Table 6 below shows the mothers' perception of the benefits of having RC caring for their children. Each mother could give several answers, the answers mothers gave including the percent of all mothers in their group –either intervention or control is presented below.

Table 6 Mothers Perceptions of the Benefits of Having RC Care for their Children

	BASICS	**CONTROL**	**Total**	
RC live nearby	193 (80%)	76 (70%)	269 (77%)	P = 0.038
Accessibility to health care	177 (74%)	53 (49%)	230 (66%)	P < 0.0001
Availability of medications	130 (54%)	62 (57%)	192 (55%)	P = 0.57
N	240 (100%)	108 (100%)	348	

Table 6 shows that accessibility to health care is significantly valued as a benefit of having RC caring for children in the intervention area. This is particularly of note as the RC were in isolated villages and hamlets beyond a radius of 5 kilometers from the nearest Health Center. Note that the groups did not differ with regard to perceptions about the availability of medicine which suggests that health care was seen as more than medications.

Interviewees were also asked about what they saw as the positive impact of RCs on community health knowledge and health seeking behavior. This analysis demonstrated that access to follow up health care, valued by 112 (50%) in the intervention area, is significantly more valued that the 25 (23%) in the control group, P <0.0001. This may reflect their better access to health care that they perceive as effective.

Drug Supply

An interview with the project Chief of Party indicated that drug stock outs were a problem in the early months of the project but not since then. This problem was solved by USAID/Benin undertaking to pay for the provision of these drugs through the MOH. As part of their monthly reporting RCs report on their use and needs for drugs. There is no evidence we could find of any drug shortages for the RC over the past two years.

We examined the drug stocks of the 119 RC whose clinical skills we observed. We found that 69% of RCs had an adequate supply of all the common drugs they use in iCCM. The main deficiency was in the area of zinc blisters, only 65% had one blister of these and ORS sachets, only 66% had at least 2 sachets. These are not large deficits that could be corrected locally from the closest Health Center. 102 (87%) had 10 tablets of cotrimoxazole and 103 (87%) had at least 10 tablets of ACT.

Non-Governmental Organizations

The five NGO partners in this project played a crucial role. The partners are CBBE, CoVADES, GRADE, DEDRAS and HANDICAP PLUS. The areas each NGO covered are illustrated in Figure 1.

Before this project there was little relationship between community-based RCs and local health facilities. NGO staff were trained by the project to provide facilitative support and supervision to the RCs in their area. They visited their local RCs regularly providing emotional support and encouragement to take on their new role as provider of iCCM, liaised with local community members and government in supporting RC activities both clinical and public health, and acted as conduits for the provision of ongoing small amounts of financial aid for transport. This enabled the RCs to attend supervisory visits and training at their local health facility and escort sick children and their mothers to their local health facilities. They reported regularly to the project and enabled the regular collection of data about such activities as the amount of regular clinical supervision that RCs were receiving from their local health facility.

Information on NGO support and their activities was obtained through key Informant interviews of the leadership of four of the NGOs involved in the project- CoVADES, GRADE, CBBE and DEDRAS. Through the project, the NGOs achieved organizational and institutional capacity building. They all received training in leadership, collaboration with partners, training on USAID procedures and grants management and on the use of Quick-Book 2010 management software.

The project facilitated the development of collaboration between the MOH at the health zone (HZ) level and NGOs. The leadership of all these organizations commented on the value of the collaboration they developed with the MOH in their local HZs and other partners such as Africare and UNICEF as a result of the skills they developed from the training they received through the project and the ongoing collaborative approach of the project. As a result of this collaborative approach, at least quarterly and in some cases monthly, regular joint planning of activities occurred and integration of community health actions within the HZs took place. The NGOs noted that as a result of this cooperation, communities paid more attention to their actions and improved cooperation with municipal authorities. The NGOs reached out to more remote areas than many health personnel and so aided in the reach and support of iCCM in remote areas.

It is recommended that NGOs should periodically engage some trained health professionals to give them skills and credibility with health professionals at local health facilities to do and support clinical supervision of RCs and behavioral change communication within local communities. At the moment there are few, if any, health professionals among local NGO staff. This fact can undermine their credibility with local health professionals and act to limit their cooperation. Now that the project has ceased, very little of the above facilitation is taking place, local clinical supervision of RCs not recorded, and limited financial support is available for the necessary transport.

All the NGOs and indeed MOH leadership interviewed at the HZ level commented on the level of cooperation that had now been achieved through project facilitation. However, nearly all commented that no external support was now available to continue NGO activities post project. The general feeling expressed was that without NGO facilitation of RC activities at the community level many RCs may cease altogether or practice less at the community level and fewer community health promotion activities would take place. Interviews of NGO managers indicated that they were all hoping that a future project would come along to replace the support they received from this project. The project was unable to identify any alternate local sources of support. No future plans had been made by the project to find a replacement for this support.

Africare was a major nationwide NGO partner in the implementation of project activities. Its officers at national and regional levels testified to the collaborative approach that the project was well known for. Africare's activities focused on community based malaria control. At the community level, the project and Africare used the same RCs for community based treatment and promotion of use of impregnated bednets by mothers and children. There was one area of contention. The project provided 10000 CFA support for each RC for the first three months of the project after which it was agreed that Africare would take over the provision of this stipend. However, Africare depended on approval for this funding from the Global Fund. This approval did not come until one year after the month that Africare had agreed to provide it. Lack of this funding proved demotivating for some RCs and threatened to undermine project activities.

Both national and regional Africare officers said that in the future they would seek funding for iCCM programs. Implementing programs for early diagnosis and treatment of malaria, even when it was recognized as the major cause of morbidity and mortality, no longer made sense to them. It is believed by some that the major reason for this change of outlook is that MOH HZ leadership communicated that they no longer wanted to treat malaria in isolation from the other common causes of child mortality and morbidity.

The other major project partner was UNICEF. UNICEF personnel were interviewed at the national level and in Parakou. They were also pleased with the collaborative approach that the project promoted at both national and regional levels. They also promoted iCCM but as part of their broader approach addressing a full range of activities to promote child health. A particularly innovative approach that their personnel had developed in Parakou was a database listing all training that had been provided to health personnel or community members by any agency including the MOH. Once developed to an advanced stage they plan to hand this over to the MOH at health zone level so that all parties can rationalize the training they provide.

C. COMPONENT TWO: Technical Assistance for developing iCCM approaches and tools with the MOH

Key results in this component include strengthening of the capacity of the MOH to implement iCCM; development or refinement of IEC/BCC strategies and materials in support of iCCM and development of community level tools and approaches to support iCCM. The pilot of the use of SMS texting comes under this component and is reported below separately under Innovative Approaches.

The project was active at the national level in promoting iCCM. It helped facilitate changes into law that led to the integration of the management of ARI into iCCM and the use of Cotrimoxazole at the community level for this purpose. It also facilitated the establishment of a project coordination committee. This committee continues post project and is mandated to oversee other projects that could fund its activities. The MOH Maternal and Child Health unit is looking after the activities of this committee. At the national level the Community Health Unit, part of the National Directorate of Public Health is responsible for RC matters but is not collecting data on RC activities.

The project undertook documentary review and revision of IEC materials through a consultant engaged for this purpose. A national level IEC/BCC strategy was also jointly developed with the MOH. Examples of the communication materials that the project helped revise or developed are listed in Table 7 below. These include flip charts, advice cards and books. UNICEF personnel commented on the high value of this project input.

Table 7 Communication Materials that Were Developed or Revised with Project Support

Integrated Community Case Management of Childhood Illness (iCCM)
RC Book
Flip Charts
-Minimum package of nutrition activities
-A newborn is fragile; protect her/him from cold
-Essential care for the mother and child
-Expanded program on immunization
-Pictures kit on Family Health for the CHW
-Treatment of simple malaria, instructions on how to give Coartem
Advice Cards
-Take care of yourself during your pregnancy.
-During your pregnancy, eat more; eat varied foods.
-Pay attention to essential elements of hygiene at birth.
-The newborn is fragile. Keep him warm.
-Protect the newborn; breastfeed immediately.
-Spacing births means a family in good health.
-Simple habits for a newborn in good health.

Community level tools

The project developed an integrated system of tools for implementation, reporting and supervision of iCCM activities. These tools that the RC would use in their daily practice of iCCM were also used in their training. These tools are listed in Table 8 below.

Table 8 Tools Developed for Implementation and Supervision of iCCM

Daily Case contact book
Form for monthly reporting of cases of pneumonia, diarrhea, and ARI seen
Form for reporting of home visitations and counseling given
Form for monthly reporting of drug usage and needs
Form for reporting of clinical supervisory visits of RCs
Referral and counter-referral form
Form for reporting of monthly supervision to be filled out by Health Center personnel.

All these tools were examined and found to be consistent with one another and particularly helpful as they prompt the RC with regard to what questions to ask, examination to do, and what treatment to give in what dosage. These forms also prompted what counseling to give and follow up actions to advise mothers to take. All case contacts are reported to the local Health Center, from there to the MOH at the HZ level and from there onto the project Office where they were entered into the project data base. When attending for monthly supervision, the RCs bring their reports of cases seen, home visitations and counseling actions towards mothers and drug supply usage and needs.

The project data base was searched many times and found to be cumbersome and difficult to use with no user friendly interface. However, the project informed us that training has been provided to HZ Monitoring and Evaluation officers for data collection, analysis and maintenance. The database has been developed, based on MOH guidelines by a local consultant, who is available locally and can be used anytime for adaptation to HZ needs. Examination of the data produced through this system, the source of all project data presented in this report, demonstrates the practical utility of the system for monitoring RC activity. If this data was incorporated into the national health information system it would be a valuable reflection of the pattern of common illnesses at the community level and would aid in the motivation of RCs.

It is recommended that the community based information system established by the project be maintained in the HZs it was established in and be extended to other HZs with similar workers and incorporated into the national health information system. While it is reasonable that this data is reported separately from that collected by health facilities, it provides a resource from which the whole national health system could benefit.

WHO is particularly concerned with strengthening health information systems in developing countries at this time, (WHO 2012). Such systems have been established and are maintained as part of community-based programs, for example in rural Mozambique using similar community health workers. This system in Mozambique has been validated as giving a reliable record of vital events and childhood illnesses (Edwards A, Ernst P, Taylor C et al 2007).

In the future, RCs familiar with the community based information system above and their regular visits to households in their areas could relatively easily collect data for a national community based registry of vital events. In Benin only 60% of births are recorded (WHO 2012). **It is**

recommended that a trial be conducted in the project area HZs of the feasibility of trained established RCs collecting the data for community based vital events registration.

D. COMPONENT THREE: Strengthen links between the CHWs and their respective health facility

The results under this component are concerned with strengthening the links between local communities, their RCs and local health facilities. RC knowledge of iCCM was strengthened and RCs linked to their local health facility through the establishment of supervision, ongoing training and referral system links. A collaborative approach to clinical supervision and a trial of RDT for malaria were successfully tested under this component and are reported below under Best Practices.

The training programs conducted by the project are listed in Appendix 10. Review of this list and available documents concerning these programs demonstrated that the project used a practical competency based approach to training using adult learning approaches, qualified facilitators and progressive feedback and assessments. For example, all these elements are demonstrated through the evaluation document "Prise en Charge Intégrée des Maladies de l'Enfant. Evaluation Post-formation des RC Communautaires du Project USAID/BASICS au Benin. Rapport Final" July 2011.

The OICs of the local health facilities were trained to become the trainers of their local RCs in iCCM using the tools developed under Component 2. After training the local RCs, the OIC became their local supervisors. The RCs were further linked to their local health facility as the health facilities are the referral point for patients that could not be managed locally; the recipient of the RC monthly case reports; and the source of drugs to restock local supplies. The five local NGOs further strengthened this link by providing resources and moral support for RCs to attend supervision at the Health Center level and transport sick patients there.

The RCs trained by the project improved the link of community members to their local health facility in several ways. Under Component One we reported that the analysis of our case control demonstrated that mothers in the project area perceived that the trained RCs improved their access to health care and follow up health care. In focus group discussions mothers said that thanks to their trust in their RC they would take their child to health facilities if the RC told them to. The standard guidelines for RCs were to send sick children less than six months, and those who did not respond to their treatments to the local health center. Similarly through their home visits the RCs encouraged mothers to bring their children for immunizations. RCs also accompanied mothers with sick children to health facilities.

Similarly our analysis reported under Component One (Table 5) demonstrated that many mothers previously using self-medication or attending a traditional healer were now attending RCs. This link to RCs combined with their increasing confidence in them would also encourage them to take their children to the health center if directed by the RC and to bring them for immunizations especially when the RC visits them at home. Community members are further linked to their local Health Center and RC through the referral system. All referrals are recorded in monthly RCs reports and notes sent back to the RC with referred patients when they return to the community. Through the RC, follow up ordered at the health center level is reliably implemented.

Integrated algorithms for iCCM were revised under this component and further modified to integrate RDT for malaria into iCCM. With NGO facilitation, the project database indicated that RCs reported regularly and were regularly supervised. Both group supervision at health facilities and one-on-one supervision takes place. This supervision was generally good with regard to RC general activities and reporting. However, the final BASICS report cited above indicated that the clinical skills of the RCs were not maintained post basic training and many were confused about their new role. Therefore, the new collaborative approach to supervision described below was needed. The commonly used approach of group supervision at the health center level without individual counseling and systematic review of individual skills was working but not in relationship to clinical skills.

Prior to this project, local health facility staff had limited if any contact with the local RCs. They had little reason and no responsibility to do so. However, competent motivated RCs can be a great help from the point of view of the local health facility. By seeing patients first within the community the RCs perform a screening function for fever, diarrhea and pneumonia such that mothers can be reassured and health center staff need not be overburdened with patients that can be seen locally. By identifying and/or treating sicker patients early, RCs can decrease the severity of illness of these patients before they reach the health center not only benefiting the child but also relieving the clinical load at the health center. With their household visitations RCs act as a link from the health center to the mother in the home. Through them mothers can be reached for treatment follow up of their children, bringing their children for immunizations and attendance for their own pregnancy, family planning and other health needs. Even if the RC is male this may not be an overwhelming inhibitory factor as long as the reason for follow up of women is not mentioned.

It has been suggested that to strengthen the link between local health facilities and their RCs national policy be passed officially linking RCs into the national health system and supervision of them made a duty. However, this is a major sudden change to usual practice that even if passed into law is likely not to be followed in practice. Indeed, staff at health centers may see the RCs as rivals because of their treatment role. **It is recommended** that health centers provide education about the advantages of having competent motivated RCs in the communities, and provide ongoing training on supervising and establishing cooperative relationships with them. Through such an approach health center staff may even become advocates for having local RCs. Later if momentum develops amongst RCs and the wider community, RCs can official become part of the national health system with much less opposition and perhaps support from Health Center staff.

Project data indicate that RCs are resigning at the rate of about 7% per year. Marriage in women, age, sickness and other commitments in men were the main reasons mentioned for this retirement as per the Review mentioned above. Elements of job dissatisfaction were not commonly mentioned. Through training provided by the project local MOH trainers now provide ongoing training to replace retirees and add to the numbers of RCs.

There is evidence of ongoing support for iCCM activities within the MOH. Appreciation for the work of RCs was expressed by managers interviewed at the HZ level. Data collected by the community based information system is analyzed at this level. They indicated general ongoing support for RCs and their linkage to and supervision at local Health Center level. They had limited resources to extend the system more widely. However, at the national level the National Director of Maternal and Child Health indicated that it was government policy to extend an integrated approach to all aspects of child health including iCCM to the whole country. There is also evidence from local focus group discussions of local community level support for sustaining RC iCCM activities independent from any HZ level advocacy.

Motivation of Relais Communautaires

Consistent with current GOB policy RCs are now provided with a 10,000 CFA quarterly stipend that is increased by up to 5,000 CFA depending on the extent to which a series of 10 indicators of performance are met. At the moment Africare is providing this stipend in its areas as is UNICEF in the areas covered by its programs. Starting in September 2012, provision of this basic stipend and performance based incentive component is to be handed over to local mayors. However, questions arise as to how many mayors have the financial resources to provide this money. Some members of NGOs say that many RCs will not continue to work if this stipend is not available.

There was much evidence of local community support for maintaining RCs. Focus Group discussions found that most of the community members interviewed valued the services of RCs. Several groups were willing to contribute themselves, or in the case of community leaders, to levy community members a small amount of money each month to support their local RC. Several women and community leaders remarked on their own financial savings as a result of not having to travel to

Health Centers. In one group members described how they supported their local school workers by offering them their own manual labor.

However, personnel of several of the NGOs interviewed pointed out that RCs were chosen by their communities because they were seen as responsible members of their community. Even if they were not paid, one NGO leader said that many of these RCs will continue to work because of their responsible nature and inability to reject the demands of community members who now believe that they can help their sick children. In other words, their internal motivation prevailed. This view was repeated in several of the focus group interviews.

Most RCs are male farmers with some resources other than any they may get as RCs but they must do work other than that of an RC for subsistence. The incentive system that the GOB wants implemented is indeed supported, but additional measures are also recommended to encourage appropriately motivated people who want to become and practice well as RCs. In focus group discussions with RCs, while several individuals complained about not receiving stipends promised by the project and its NGO partners, many RCs said they worked because of the satisfaction they got from helping their community members and the increased recognition they received often despite the fact that they did not receive any stipends.

While a stipend and financial performance incentive should help motivate the RCs the important role of internal motivation in encouraging good performance should not be forgotten. The components of internal motivation--autonomy, mastery and purpose--need to be considered (H. Pink 2011). As pointed out by one of the NGO leaders quoted, the position of RC should continue to be seen as one that will lead to further mastery of health skills as good RCs will be more likely to be chosen for further projects that come into the area. The collaborative approach to supervision described below, under Best Practices, should be promoted widely so that RCs develop autonomy and mutual respect as they give one another feedback on their performance.

There are several other approaches that can be used to facilitate internal motivation of workers. Positive and Appreciative Inquiry approaches to supervision could be taught to key managers and educators of supervising health personnel (B.J.Mohr and J.M.Watkins 2002). This would require engaging an external consultant who initially could present these strategies for consideration when MOH staff are meeting for other purposes. RCs could be encouraged to work together so that they support and encourage one another in their work. Support networks and regular community health worker meetings have been found to be effective in several Africa countries (Freeman P, Freeman M 2011). In poor municipalities especially, but also in all communes, mayors should honor well performing RCs through public recognition and through in-kind rewards from the community.

It is recommended that local health center OICs, and mayors work with HZ managers and MOH facilitators to develop good local strategies to motivate RCs in addition to basic remuneration.

E. ACHIEVEMENT OF PROJECT OBJECTIVES

The achievement of project objectives has been reviewed both in terms of the project indicators listed in table 1 and in relationship to each of the results in the three components. Table I presented the project achievement against target indicators. This table demonstrates that, as quantified, all target indicators have been achieved.

The Chief of Party's (COPs) perspective on whether project objectives and results have been achieved is translated from French and presented in Appendix 11. Under each Component the COP has listed each of the Expected Results with the corresponding achievements that parallel what we have presented in our report.

Under Component 1 the achievements listed include capacity building of 5 local NGOs to support the RCs; conduct of IEC activities; training and establishing 1048 RCs as supervised local providers

of iCCM to 86000 children over three years and home visitations to support local distribution and use of LLINs and attendance of children for immunization.

Under Component 2 the achievements listed include the joint development of a national IEC/BCC strategy with the MOH and review and revision of IEC materials; facilitating the establishment of a monitoring committee at the MOH; establishing supervision and data collection tools and a database to monitor all RC activities; active participation of BASICS in the decision making process regarding the community level and piloting of a SMS/GSM system to improve community-based health communications and referral. This system is discussed in detail in the next section.

Under Component 3 the achievements listed include the establishment and maintenance of links between the HZ level, local health facility, local RCs and community through the delivery of all the technical components and training including supervision systems implemented under the other Components. Under this Component a new collaborative approach to supervision and piloting of the use of RDT for malaria diagnosis were implemented. Details of these Best Practices are described in that section later in this report.

Based on the methodology applied in accordance with the scope of work for this evaluation, project documentation reviewed, key informant interviews held, and a review of information in the project database, we conclude that all project deliverables were of good quality and appropriately applied. We agree with the COP conclusions that the project's results have been achieved.

Our major concern is how sustainable are project achievements, both in relationship to iCCM and the recent pilot projects. There is reasonable evidence that there is support for the ongoing practice of iCCM by the RCs within the MOH at national level as policy, within the MOH at HZ level and at the community level as presented under Component Three. Similarly UNICEF has said that it committed to promoting iCCM as part of its broader strategy to promote child health. Similarly interview of Belgian International Technical Assistant PARZDS personnel indicates that they will support both the extension of the collaborative approach to supervision and the SMS trial.

The project has produced many success stories. Some valuable ones are presented in Appendix 12. Project management issues are discussed in Appendix 13.

F. INNOVATIVE APPROACHES TO USE OF SMS/GSM

To explore the potential of SMS texting to decrease the communication gap between the health centers and RCs a pilot investigation was launched in February 2012. The pilot phase targeted two health zones (Tchaourou and Bassila).

The choice of Tchaourou and Bassila HZs was determined by three key factors:

1) Each of these two health zones consist of a single commune, which made it easier to install a server and engage the coordinator physician in the monitoring team

2) The strength of the local GSM network

3) Project interventions are well developed in these two HZs and the use of mobile phones by CHWs is high.

MedicMobile was contacted to conduct this feasibility study. The objectives of this pilot test were to:

- Create a simple community data reporting system and drugs inventory
- Improve the quality of referral of severe cases to health facilities
- Document and share lessons learned

This pilot phase was critical to assess the feasibility, cost/benefit ratio, local community support and potential of the system to motivate CHWs. The SMS messaging system trial is based on open source Kujua software. All the users of the system are networked using a server and SWAP numbers. The users of the system and their purposes are described in Table 9.

Table 9 Users of the SMS Messaging System and their Purposes

BASICS	Health Zone	Health Center at the Commune level	Hospital	RC
1. Receives all communications 2. Analyze data collected : referrals, stock-outs, cases treated, drugs provided	1. Receive referrals from the RC 2. Acknowledge the reception of referred patients and treatment initiated and follow-up of patients 3. Refer severe cases to hospital 4. Receive alerts regarding stock-outs and take corrective action	1. Manage the server of the frontline SMS 2. Generate monthly summaries for health areas 3. Receive monthly reports 4. Data analysis	1. Receive referrals from the health area 2. Acknowledge the receipt of referred patients and request patient follow-up.	1. Refer children with danger signs 2. Refer moderately malnourished children 3. Refer urgent cases 4. Communicate drug restocking needs. 5. Send monthly reports.

The project signed a partnership agreement with MooV Benin. MooV Benin provided the project with a SWAP number to link all users and donated 307 post-paid SIM cards. Through the partnership, a special rate of F CFA 15/SMS was set. The service provider worked in concert with the project to address ongoing problems as they occurred. To implement the project the following training took place: one person was trained to take charge of the configuration and maintenance of the system; the heads of HZ statistics units were trained in system use and data analysis; and 25 trainers were given training skills in SMS which they used to train189 RC. A local user manual was also developed. The quantitative results of this project since its implementation are illustrated in Table 10.

Table 10 Initial Results of SMS Pilot in Tchaourou and Bassila

	Tchaourou February-May 2012	Bassila March-May 2012
Severe case referral alert	33	18
Stock-out alerts	47	13
Report of cases and their treatment	281	170
Report on stock management	103	33

Qualitative assessments found that**:**

- The system is reliable and connects the RCs and their supervisors through real time communication.
- The system needs to be improved through a much longer pilot phase.
- The system has great potential and can be used in other domains of the health system such as the mobilization for vaccination campaigns, the development of health services cartography and t information sharing between health zones.
- HZ actors found the project innovative and are interested in sustaining it after an assessment of its financial implications.
- The RCs appear to be motivated by the acquisition of cellphones through the project.

Wider and ongoing implementation of SMS messaging in health care in Benin at the community level faces several challenges. The development of the application required, and still relies on, external expertise despite the training of a local technician in charge of configuration and maintenance. Insufficient network coverage and network outage are limiting factors. Frequent deactivation of some numbers required ongoing follow up by the service provider. The costs related to the implementation of the system. An ADSL broadband connection is essential for a proper functionality of the server.

The project COP informed us that a focal person has been trained to take over the technical aspects of the system. Negotiations have been made with MooV to allow free SMS for the RCs. The Donga Departmental Health Director has been asked to continue the negotiations with MooV and take care of the server for the SMS system that was located in the project Office. However the extent to which this Director owns this project and will facilitate its sustainability is not clear.

It is recommended that this pilot SMS/GSM project be maintained and its possible extension to other HZs be studied. It is understood that PARZDS has undertaken this role. Continued contact between the RCs and the heads of health posts in the pilot area needs to be facilitated now to maintain continued use of the system while improving it.

III. BEST PRACTICES

Use of NGO Facilitators

The use of NGOs as local facilitators of community based iCCM and other health activities at community level is recognized as an outstanding practice. As described above, without their involvement the relationships between the RCs and their local health facility would not have been widely established. Similarly the establishment of RCs as points of access to the provision of local access to health care and escort of severely ill children and mothers to local health facilities would not have been as well established.

Collaborative Supervision

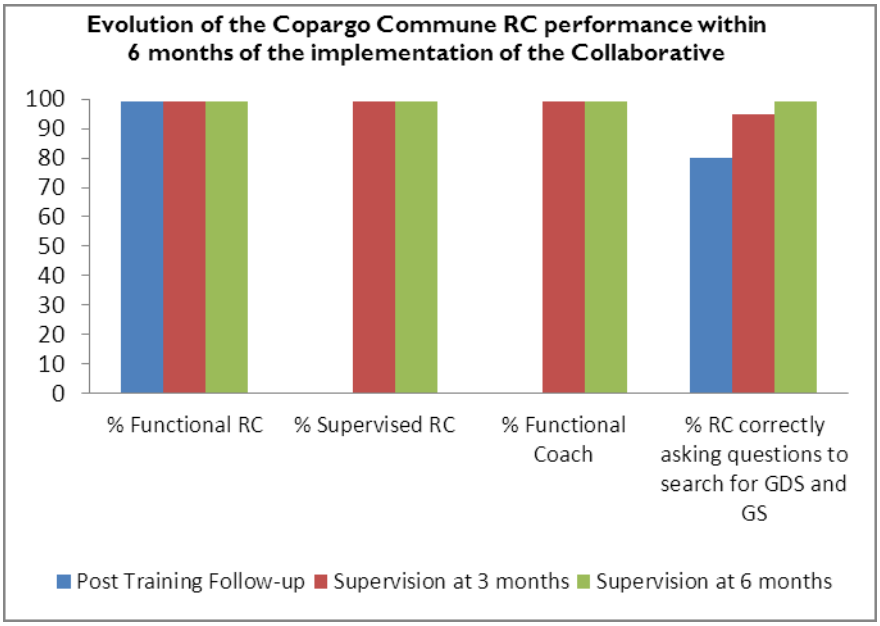
The July 2011 assessment of RC clinical skills found that they were deficient in many areas[3]. As a result of this assessment an innovative, collaborative approach to clinical supervision was developed.

In Copargo this collaborative approach to monitoring and supervision of RC clinical skills was developed. The approach calls for using a standardized form to guide individual coaching of the RC on-site and during their visits to Health Centers. Within each village, local quality teams are established to work with the RC. This approach has enabled the RC to organize his/her own periodic problem solving meetings and stimulated nurses to become more involved and interested. High impact has been achieved through the giving of systematic feedback to RC to improve their performance.

The results after six months follow up are presented in the figures below. Figure 6 shows after six months follow up all RCs have a full range of clinical skills and indeed have improved their skills in asking clinical questions correctly.

Figure 6 illustrates the proportion of RCs, their supervisors and coaches who were are practicing correctly.

Figure 6 Performance of RCs and Supervisors in Clinical Assessment on Follow Up



[3] Prise en Charge Intégrée Des Maladies de l'Enfant. Evaluation Post-formation des RC Communautaires du project USAID/BASICS au Benin. Rapport Final, July 2011

Figure 6 shows that the proportion of RC who ask the correct question in clinical situations has increased from 80 to 100 percent.

Figure 7 Performance of RC Clinical Examination and Treatment Skills for Pneumonia

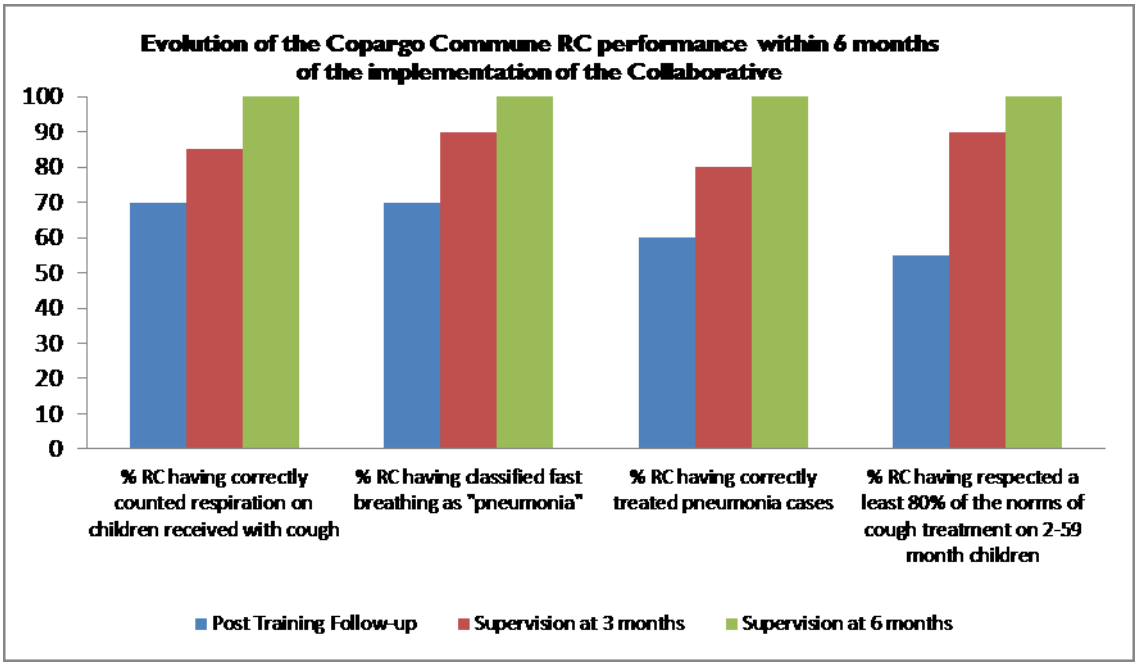


Figure 7 illustrates the improvement in the clinical skills of RCs in diagnosing pneumonia over a six month period. All RCs have learned to count the respiratory rate correctly using a counting device, treat pneumonia correctly and follow iCCM protocols correctly. The BTC, PARZDS-Facilité has learned about the approach and has obtained funding to continue to facilitate it.

It is recommended that this collaborative approach to supervision of RCs be continued to be developed, as PARZDS has been funded to do, and that the feasibility of extending it to other HZs be examined in cooperation with the MOH.

Use of Rapid Diagnostic Test For Malaria

The project implemented a trial of the integration of the Rapid Diagnostic Test for Malaria into iCCM. As Malaria is the most commonly diagnosed and treated presumptive cause of fever with no other signs in Benin, correct diagnosis of Malaria cases has the potential to rationalize the use of many resources at the community level. This is especially of concern since provision of treatment for malaria is not provided free of charge as national policy. The project trained 12 trainers and these in turn trained 200 RCs in the use of the Test.

The trial found that the training of RCs in the use of RDTs was both relevant and practical. 63% of RCs were able to maintain an accuracy of 100% in the use of the RDTs, 22% an accuracy between 90 and 95% and 10% a 75% to 85% accuracy. Children with fever that have negative RDTs were immediately referred to Health Centers. Members of the community were found to readily accept the use of this test by the RCs.

It was found that when well-trained, RCs used the test regularly they developed confidence in accepting the results of the RDT results and, therefore, did not treat all cases as malaria. The major problems were that RDT supplies were not available to continue the on-the-job training of the RCs once they returned to the community. The RCs need to be able to regularly practice the use of the test to maintain their skill level. A system should be integrated into the supervisory protocol to

reinforce the RCs' confidence in their ability to diagnose positive cases with RDTs and to discourage the treatment of malaria when the RDT is negative.

It is recommended that the feasibility of the incorporation of the regular use of RDTs into iCCM be investigated by USAID in cooperation with the MOH and other donor partners to develop a practical, sustainable and affordable approach.

IV. KEY LESSONS LEARNED

This project demonstrated several key lessons for community based projects. These are presented here along with their implications in terms of important factors effecting scale up of iCCM.

Leadership and Governance

The project demonstrated the key role that good collaboration among leaders at all levels plays in project implementation. The project was widely known for adopting a collaborative approach that lead to effective cooperation between local MOH personnel, NGOs and donors. Even informally between meetings, project management was known for this approach which led to mutual support among all involved parties. The project facilitated change in MOH policy that allowed RCs to administer the treatment of ARI as part of iCCM. Further policy development that incorporates RCs within the national health system may also facilitate scale up of iCCM but first the climate for this change needs to be established by educating health staff about the benefits to them and the system as a whole of the expanded role of these RCs. It must be remembered that RCs with a much more limited role existed prior to this project. Health professionals' concept of what RCs can do may be limited because of their experience with these untrained RCs.

During the project RCs were paid through the project initially and, subsequently, by Africare. Currently UNICEF is also taking on this role in its areas of operation. Beginning September 2012, the government policy will be that the paying of RCs be undertaken by local mayors. This decentralized system of payment with elements of local accountability to community leaders needs to be established and developed in a sustainable manner for scale up of iCCM.

Adequate Financing

The project demonstrated that delay in the financing of the RCs's stipend was an issue discouraging the work of some RCs. Similarly in the early stages of the project funding of drug supplies was an issue. For successful scale up, adequate funding must be in place beforehand. Depending on who is funding the scale up prior cooperative planning of finances between the MOH and individual donors obviously needs to take place. Funding of drug supplies for the iCCM needs to be sustained long term and become part of the national system.

Service Delivery and Demand

The project demonstrated that good basic training and tools can be used to establish and maintain quality iCCM with good coverage within poor rural communities using local community members. Our analyses demonstrated that there is now demand for these services. However, a key lesson is that it takes time to assimilate and put into practice the different elements of this package. The rate of progress will very between different areas and the type of facilitation of the process may need to vary accordingly. For example, in some areas IEC to educate and stimulate community participation maybe needed while in others it is not.

Medicines

Projections of needs for ACT, CTM and ORS/Zinc in the implementation of iCCM have been established through the project that can be used to estimate needs for drugs for project scale up to any particular population size.

Human Resources

Systems for local recruitment, definition of roles, initial training and provision of supply kits of RCs have been established by the project. However, the RCs are predominantly male which hinders their role meeting women's health needs. The notion that women can take on the role of RCs is a cultural change. Encouraging women to take on a role outside their household in health matters is an important change that is needed to improve their health. Encouraging women to become involved in women's groups focusing on health is one intermediate way that could provide a step towards more women becoming RCs. Affirmative action to encourage more women to take on the role of RCs should also be undertaken by health projects obviously in a culturally sensitive way.

Information Systems

A good quality practical community-based information system can be set up using the RCs as established by the project. This system monitored cases seen, treated and/or referred, drug management and supply and home visitation and health promotion activities of RCs. This system was entered into a database for analysis at the project office. A local consultant is assisting HZ management establish this computer database and analysis locally in Parakou. This system is such that it could be scaled up for use by other HZs. However, ongoing local use of the system needs to be established first before it can be scaled up for use by other HZs. Consultants will need to be involved in this process.

RC Performance

A supervisory system to maintain RC performance using health personnel from their local health facility was established by the project. The standardized forms established by the project were part of this system. Similarly the project established standardized forms that the RCs used daily in treating and referring patients that helped maintain the quality of care given. However while these forms and systems are of good quality and simplicity to facilitate scale up, the project found that in the area of maintenance of clinical skills they were lacking. Subsequently they develop the effective collaborative approach to supervision, described above. This system needs to be developed further and established more widely if RC performance in the area of clinical skills is to be maintained and scaled up.

NGOs

A key lesson learned was the important role that local NGOs can play in facilitating the establishment of community based health programs. Without these NGOs it would have been much harder for the project to establish links between local health facilities and RCs. As a result of the regular activities of the NGOs, supervision of RCs by their local health facility personnel was facilitated, new RCs received emotional support and limited financial support was provided that enabled sick patients to be accompanied to the facilities by RCs and enabled RCs to attend local health centers for supervision. Especially in more remote areas, it was the NGOs who visited local RCs rather than health center personnel. In terms of scale up, especially in remote areas, and areas where health personnel have no positive experience of trained RCs—remembering that untrained RCs are present in parts of Benin—they can have a key facilitative role.

Bottlenecks

A key bottleneck to scale up of iCCM is that in many areas Health Center staff have had no previous link with trained RCs. We have discussed above how NGOs had a key role in overcoming this in the project. Similarly we mentioned above the need to educate health center staff about what a positive role RCs can have to the benefit of all involved.

New Approaches

Through a pilot program the project demonstrated that RCs could effectively use RDTs for the diagnosis of malaria. However maintaining the skills necessary to use RDTs requires ongoing supervision and the establishment of good quality assurance systems. These systems will require the use of a reasonable number of these kits overtime and so the cost effectiveness of scaling up the use of these tests needs to be clearly established before they are used widely.

The project also demonstrated that a SMS/GSM system can be used effectively by RCs to improve communications between themselves and Health Centers for patient management, referral, program monitoring and maintenance of drug supplies. Maintenance of these systems on a large scale will require ongoing technical support with the provision and maintenance of an affordable wireless network. Affordable, technically sustainable systems need to be developed in the local pilot area over time before they can be considered for wider scaling up.

V. CONCLUSION AND RECOMMENDATIONS

This evaluation has clearly demonstrated that this project competently achieved all its objectives and achieved all project results. The project:

- Established good quality iCCM with good coverage in semi-remote (more than 5 km from the nearest health facility) villages in rural Benin using members of local communities.
- Over the short life of the project over 86,000 clinical contacts took place and children were treated with appropriate, established standard treatments for the common causes of morbidity and mortality.
- Our analyses demonstrated that as a result of the establishment of these services significantly more children were being seen within the first 12 hours of the onset of illness
- Many patients were receiving treatment who previously would not have received any clinical care.
- Established good functional health information systems to monitor cases seen, community based health related activities, and drug supplies that all improved capacity to sustain quality provision of iCCM by the RCs.

The project strengthened the capacity of NGOs and established good teamwork and collaboration between the HZ, Africare, UNICEF and NGOs supporting RCs but there is some doubt about the sustainability of NGO activities post project. Without ongoing funding for NGOs to continue to perform their role as facilitators, RCs may not continue to function at the same level, especially in more remote areas. However, good linkages were established between the local Health Centers, RCs and community members. Our analyses demonstrated that there is good community support for the project RCs and trust in them to competently provide services. The establishment of regular stipend through local mayors with performance bonuses that is due to begin in September should also help sustainability of RC activities.

The project also demonstrated that SMS based information systems can be established at community level and are successful in improving the delivery and supervision of services provided at this level.

And, the project demonstrated that RCs can also be trained to use RDT based diagnosis in managing malaria.

RECOMMENDATIONS

Our recommendations are grouped below under key areas of focus for this evaluation and those who are likely to have a key role in their implementation.

To Maintain and Improve the Coverage and Quality of iCCM By RCs

Ministry of Health and International Donor Partners

> **Recommendation 1:** To encourage more female involvement in health care activities, the involvement of women's groups in promoting community based iCCM and associated activities, especially nutrition, should be part of the design of future community based projects. Culturally appropriate affirmative action to promote women as RCs should also be used. However whether the latter are used initially or subsequently once these groups had been established needs to be determined locally.

Recommendation 2: Sufficient funding should be provided in future health projects to adequately examine underlying cultural beliefs that lead to males being brought for health care more frequently than females. This funding should also be adequate for the testing of definitive small scale behavioral change communication and other interventions to address it.

Recommendation 3: The community based information system established by the project should be maintained in the HZs where it was first established and be extended to other HZs with similar personnel and, ultimately, be incorporated into the national health information system.

At the moment the data collected by this system is reported to local health centers and to the HZ management level. For this information to be added to the national health information system a planning committee could be established at the national level and in each HZ involved. These committees would include representatives of both the MOH concerned with child health and health information systems and HZs involved in the project. Either a WHO expert or a consultant experienced in health information systems at the community level would need to be engaged to advise on the details and costing of the system components that would be need to be established to make this system operational. Initially this system could be established on a trial basis using the HZs involved in the project and then more widely as resources become available.

Recommendation 4: A pilot should be conducted in the project area to test the feasibility of establishing community-based vital events registration using the RCs trained through the project in community-based data collection.

This could be done by applying the same process discussed under the previous recommendation. However the planning committees at each level should also include appropriate representatives of national and local government already engaged in this area so that locally acceptable practical approaches of registration, data storage and management are established. A consultant experienced in these processes in similar developing countries would need to be engaged for this purpose.

Recommendation 5: The feasibility of the incorporation of the regular use of RDTs into iCCM should be investigated to develop a practical sustainable affordable approach. Part of this approach must include regular supervision including the development of a quality assurance system.

To Improve the Capacity and Sustainability of Health Zones, Local NGOs and the Community to Support RCs

Ministry of Health and International Donor Partners

Recommendation 6: The collaborative approach to supervision of RCs be continued to be developed, as PARZDS plans to do, and that the feasibility of extending it to other HZs be examined.

Recommendation 7: That the pilot SMS/GSM project be maintained, as planned by PARZDS, and the feasibility of its possible extension to other HZs studied.

Health Zone Management

Recommendation 8: Education about the advantages of having competent motivated RCs in the communities in the health center's catchment area and supervising and establishing cooperative relationships with them should be included in the ongoing training of Health Center staff.

This could be implemented by MOH developing a training module that incorporates these ideas as part of routine Health Center practice. Workshops sharing the experience of those health personnel who already have good RCs in their area could also be used.

Recommendation 9: HZ teams work with local Health Center OICs, local majors and RCs to develop good local strategies to motivate RCs in addition to basic remuneration.

This could be implemented by HZ teams establishing working groups including members of these groups for this purpose.

Non-Governmental Organizations

Recommendation 10: NGOs should periodically engage some trained health professionals at local health facilities to gain needed skills and establish credibility with this group. These health professionals could support clinical supervision of RCs and behavioral change communication within local communities.

APPENDIX 1: SCOPE OF WORK

Global Health Technical Assistance Bridge Project
GH Tech
Contract No. AID-OAA-C-12-00004

SCOPE OF WORK

I. TITLE: USAID/Benin: Integrated Community Case Management (iCCM) Performance Evaluation

Contract: Global Health Technical Assistance Bridge Project (GH Tech)

II. PERFORMANCE PERIOD

Evaluation preparations should begin on or about (o/a) May 2012 depending on the availability of the selected consultants. Work is to be carried out over a period of approximately 5 weeks, beginning on or about (o/a) May 11, 2012, with field work completed by o/a June 7th, 2012, and a revised, unedited draft report concluded by June 19, 2012. A six-day work week is approved for this assignment.

III. BACKGROUND INFORMATION

1. Project Identification Data

Program: President's Malaria Initiative (PMI) and Child Survival
Project Title: Integrated Community Case Management (iCCM)
Contract No: GHA-I-00-04-00002-00
Award Dates: July 30, 2009 – July 29, 2012
Funding: $ 4,499,973
Implementing Organization: Partnership for Child Health Care, Inc.
Cognizant Officer's Technical Representative (COTR): Dr. Emile Bongo Beni

2. Description of the iCCM

The purpose of this program, as USAID/Benin defined it, is "to support implementation of integrated community case management of childhood illnesses among children under-five for malaria, diarrhea, and pneumonia, and provide immunization and nutrition messages, by community-based organizations and community health workers."

The development hypothesis being tested in this innovative approach is that more capable and more empowered Communities Health Workers (CHW) will significantly improve child treatment of malaria, acute respiratory infection and diarrhea at the community level.

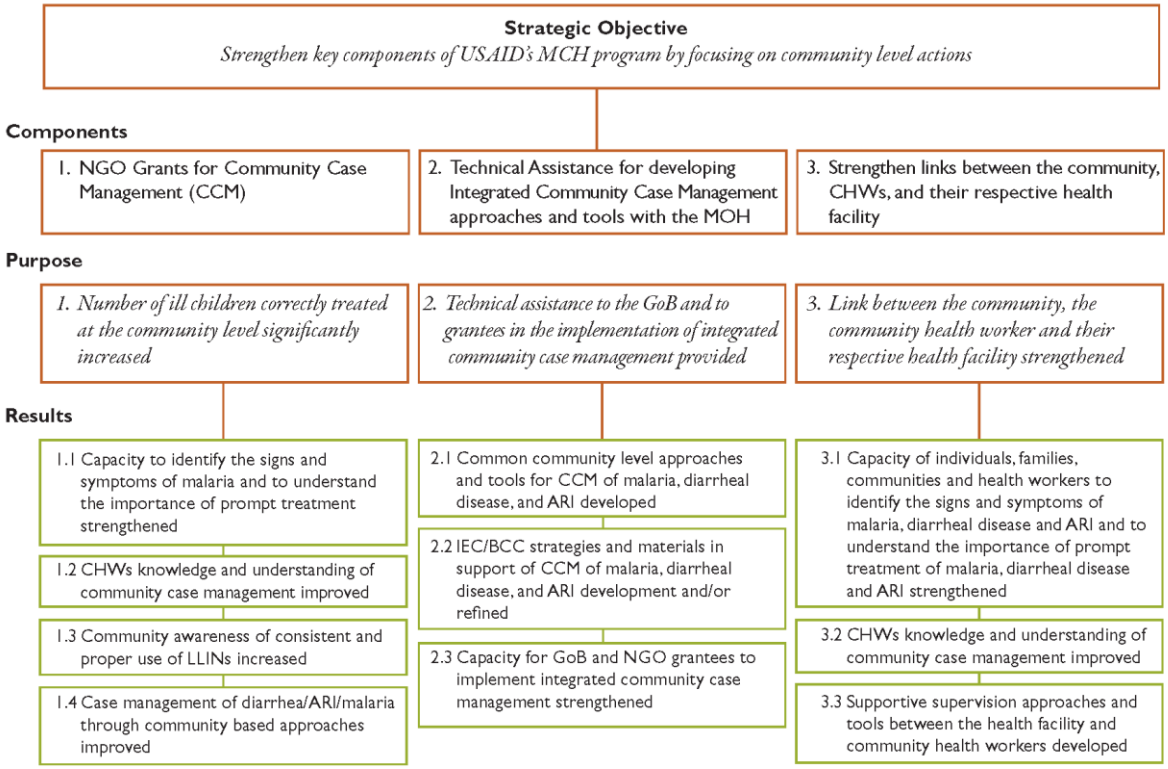
The approach to achieving this end is based on the following implementation hypotheses:

1. Teaming local NGOs with health zone management teams will catalyze improvements in performance (logistics, supervision, etc.) at the community health level.

2. Developing and adopting standard approaches and tools in the implementation of Integrated Community Case Management will lead to improvement in quality service delivery.

The results framework based on the above hypothesis is illustrated below.

Results Framework



Five health zones were selected: Kandi-Ségbana-Gogounou, Banikoara, Djougou-Ouaké-Copargo, Bassila, and Tchaourou. An iCCM strategy with four core elements was designed:

1. Develop, maximize, and sustain the capacity of NGOs and MOH in five health zones to collaborate in ensuring access to high-impact interventions at the community level.

2. In the five health zones, deliver high-impact interventions at the community level through a continuum of care.

3. Advocate for the inclusion of acute respiratory infections (ARI) in the iCCM/Integrated Management of Childhood Illness (IMCI) package.

4. Contribute to the institutionalization of the integrated iCCM/IMCI package at the national level.

In implementing the strategy, USAID envisioned bringing together these important factors affecting child health in Benin: building effective teams of NGOs, MOH staff, and community leaders in five health zones; and a shared commitment to reach the communities and households where crucial health decisions are made. USAID has taken advantage of the widespread resolve within government and civil society to deal with the three diseases – malaria, ARI, and diarrhea – that cause so many deaths among infants and children in Benin. It offered grants to five carefully selected civil society organizations (non-governmental, community-based, and faith-based - NGOs, CBOs, and FBOs) that have status and influence in their communities. The grantees had to collaborate with their zonal MOH

counterparts to train, supervise, support, and motivate community health workers and to mobilize communities for a sustainable iCCM program.

USAID also envisioned enabling the zonal MOH/NGO teams to strengthen their clinical, management, and leadership capabilities so that they would not only implement the grants successfully but will manage all their programs more effectively and provide high-quality, integrated health services to the children within their communities. At the end of three years, this project would leave behind zonal teams that are working together, community health workers who are capable and motivated, and communities that have mobilized in support of their children's health. The project is based in Parakou, Borgou Department.

IV. EVALUATION PURPOSE AND USE

The iCCM/Benin Project is a three-year, USAID-funded project under a contract with the Partnership for Child Health Care, Inc. and implemented by MSH/BASICS. Its focus is on the integrated management of common childhood illnesses, including malaria, diarrhea and pneumonia. It is supported by an information campaign on the importance of immunizations and good nutrition through community-based organizations and community health workers (CHW). The geographic coverage includes the five health zones of Kandi-Segbana-Gogounou, Banikoara, Ouaké-Copargo, Djougou-Bassila and Tchaourou in the Departments of Alibori, Donga and Borgou. It was expected to start in July 2009 and completed in July 2012; however, the project did not effectively start until December 2009. After three years of implementation, an independent assessment must be conducted to ascertain results, document best practices, identify lessons learned and other useful experiences in the services provided by CHWs. The assessment must highlight information that will be used by USAID/Benin, the Ministry of Health and other donors to improve the existing strategy and policies related to community-based health interventions. In order to strengthen the design of this performance evaluation, a comparison of key project outcomes in the health zones supported by USAID with those that were not will be made.

The general objectives of this evaluation are to:

1. Assess the iCCM Project's achievement of objectives and targets
2. Measure coverage and quality of care of community level service delivery and attempt to show attribution of project results by comparing service coverage and quality in USAID focus health zones with those in non-USAID focus health zones
3. Assess the capacity and sustainability of health zones and local NGOs to support community level workers
4. Compile lessons learned for scale-up and challenges encountered

The contractor will conduct an independent evaluation of the Benin iCCM program currently implemented in five health zones of Benin.

The iCCM evaluation will focus on the overall design of the intervention, the coverage and quality of care provided, including the supply chain, and adequacy of MOH support.

The evaluation should provide information that can be useful in determining strengths and weaknesses of the program in its various components and help direct future program activities and provide lessons learned throughout the program implementation area.

V. EVALUATION QUESTIONS

The questions to be addressed by this performance evaluation are the following:

1. What is the coverage and quality of care of community level service delivery (iCCM)?

2. What is the capacity and sustainability of health zones and local NGOs to support community level workers?

3. How well has the MSH/BASICS program achieved its activities and objectives?

4. What are the lessons and good practices:
    a. from this community-focused integrated package of services delivery to children under 5-year that have the potential for scale-up across the health system?
    b. in terms of project management, partnerships/collaborations with the Health facilities, the NGOs and the Community Health Workers and monitoring and evaluation of activities at the community level?

VI. RECOMMENDED EVALUATION DESIGN AND DATA COLLECTION METHODOLOGY

a) Evaluation design

The overall evaluation design will be a non-experimental, post-only design and intends to measure coverage and quality of iCCM services. This is a preliminary design which the evaluators are expected to modify and/or refine, with the final design to be discussed with USAID before the implementation of the evaluation.

To improve the strength of the design, we will use a comparison group of communities/beneficiaries where project interventions were not implemented, but whose socio-economic characteristics are similar to those of communities targeted by the project. The evaluators are required to come up with a valid matching design/methodology in order to produce a statistically valid sample of a comparison group. Using this matching design/methodology, this study will compare the two groups (intervention and comparison) in terms of care-seeking behaviors for caretakers of children under-five. A household survey will be conducted using a multi-stage 30-cluster survey of mothers or caretakers of children under-five with one of the community case management conditions (malaria, diarrhea, ARI). The sample size will have enough statistical power to detect a difference between the treatment and the comparison areas in terms of appropriate and timely treatment of the three CCM conditions. Sample selection will be done with the participation of the Ministry of Health, BASICS and an Independent Evaluation Team in the five USAID supported health zones and five non-USAID supported zones which have no *relais communautaires* doing CCM.

In order to answer the other evaluation questions listed above, qualitative data collection techniques will be used at the Central, Departmental, and Zonal levels. At each level, interviews will be conducted with key informants in the MOH and stakeholders (UNICEF, WHO, PLAN, Africare) about project design and performance in terms of achievement of project objectives.

b) Data Collection Methodologies and Analysis

Answering each of the four evaluation questions will require using various data collection methods and will require the collection and analysis of both quantitative and qualitative data. In addition to the survey data described above data will be collected from interviews and/or focus groups during site visits and from a review of the reported results data from the three years of project implementation. The final data collection and analysis plan will be developed by the team, in collaboration with USAID/Benin, during the team planning meeting.

It is anticipated that the team will conduct site visits in two groups of health zones:

- MSH/BASIC health zones - Kandi-Ségbana-Gogounou, Banikoara, Djougou-Ouaké-Copargo, Bassila, and Tchaourou. A representative sampling of these health zones will be selected for the evaluation; and
- The comparison group will be selected per the criteria described above.

Coverage and quality of community level treatment:

Data collected will focus on household behavior in the case of iCCM conditions (diarrhea, malaria, and pneumonia), including whether or not treatment was sought, the timing of seeking treatment, and clients' perceptions of the *relais communautaires* (competency, accessibility, respectful behavior, etc). Respondents will also be asked about how their health-seeking behavior has changed since the presence of the *relais* in the community.

In order to assess the quality of care delivered by the *relais*, interviews/observations will be conducted to evaluate their knowledge and skills. In case observations are not feasible, simulations will be done. Information will also be collected on drug supply, and various supervision models (group supervision, on-site supervision).

Both household survey results and quality of care data will be disaggregated by gender.

Additionally, focus group discussions will be used with community members to understand perceptions and acceptance of the *relais communautaires*.

Capacity and sustainability of health zone support for community level services:
Key informant interviews will be conducted with the health zone management team and NGO staff, with the Departmental Health office, and with village leaders in all five health zones

Achievement of project objectives*:*
Key informant interviews will additionally be conducted with Ministry of Health, specifically the National Malaria Control Program, the Mother and Child Health Directorate, as well as stakeholders mentioned above. Document review and use of project data and implementation reports will supplement other data collected as part of this evaluation, including *relais'* records on iCCM services delivered which were already entered into a database. Evaluation of the achievement of project objectives will include data collection relative to work to include ARI into the CCM package, increased attention to iCCM within the MOH, the use of SMS for referral/counter-referral, and introduction of rapid diagnostic tests (RDTs) for community-level case management of malaria.

Lessons learned and best practices for scale-up:
Information from key informant interviews and document review will contribute to this objective.

c) Strengths and limitations of the proposed evaluation design and data collection methodologies

This evaluation will not be able to directly measure reductions in morbidity or mortality because:

- The iCCM interventions are mainly targeted to reductions in case fatality for these three CCM conditions
- There is no baseline data on mortality or case fatality in this area to be able to measure against
- The sample size needed to measure direct mortality estimates is beyond the scope of this evaluation.

Therefore, the ultimate impact of the project cannot be measured at this stage.

Also, the lack of population-based baseline data may allow a rigorous and reliable comparison of project's baseline monitoring data and survey data collected during this evaluation.

VII. DELIVERABLES AND PRODUCTS

The contractor deliverables will include:

1. A written work plan that incorporates the final evaluation design and data collection methodologies prepared during the TPM. This will be submitted to the Mission for review and approval before data collection begins.

2. A draft report outline prepared during the TPM.

3. A Mission debrief on progress made on the evaluation, including discussion of issues and challenges that may affect the quality of the evaluation.

4. A Mission and Ministry of Health debrief meeting that will be held before the team's departure and prior to the submission of the draft report.

5. Prior to departing Benin, a draft report addressing key performance findings, conclusions, recommendations and lessons learned will be submitted. The report should conform to USAID Evaluation Policy "Criteria to Ensure the Quality of the Evaluation Report" listed in Annex 1. The report shall not exceed 30 pages, excluding the annexes.

The Mission will have five days following the submission of the draft report to respond and provide written comments and feedback to the Evaluation Team.

6. Upon receiving the Mission's comments on the draft report, the team will have five days to revise the report, and will send the revised report to the mission no later than o/a June 19, 2012 and the Mission will have until June 21, 2012 to approve the technical and factual content of the report.

Since the final draft will not be approved by USAID/Benin prior to May 16, 2012, GH Tech Bridge will not provide a professionally edited, formatted and 508 compliant final report. Working with the GH Tech Bridge Project COR, the project will assist the Mission in identifying a mechanism to finalize the report for public dissemination.

The final report will be professionally edited and formatted in a manner suitable for posting on public website. The final report will be delivered in electronic form and no printed copies will be required.

VIII. TEAM COMPOSITION, SKILLS AND LEVEL OF EFFORT

The team will consist of four team members: two external evaluators and two local members, one of the external members will be designated as the team leader. The team leader will be responsible for the overall management of the evaluation, including coordinating and packaging the deliverables in consultation with other members of the team. The team leader will develop tools for the assessment and a methodology plan and share it with USAID/Benin. The team leader will also be responsible for developing the outline for the draft report and submitting the final report within the agreed upon timeline.

The recommended source for qualified local members is Benin's *Institut Regional de Santé Publique (IRSP)*. The contractor will partner with IRSP to complete the team and to do preparatory work like surveys, interviews and meetings, as necessary.

The members of the evaluation team should represent a mix of skills and experience assuring that the following technical areas are represented:

- Community service delivery
- Child health
- Quality of care including supply chain and logistic

Illustrative Level of Effort and Timeline

Task	Approximate dates	Team Leader	Other team members (days each)
Background Reading and preparation	May 16 – 18	3 days	3 days x 3
Travel to country	May 21 – 22	2 days	2 days x 1
Initial briefing with the Mission	May 23	1 day	1 day x 3
Team finalizes methodology plan and submits to Mission for approval	May 23 – 24	2 days	2 days x 3
Meetings and interviews with MOH (NMCP, DSME) and other key stakeholders (UNICEF, AFRICARE, CRS etc.)	May 25 and another day after the field visits -	1 day	2 days x 3
Field visits	May 28 – June 5	8 days	8 days x 3
Meetings and interviews with MOH (NMCP, DSME) and other key stakeholders (UNICEF, AFRICARE, CRS etc.)	June 6	1 day	
Information analysis and synthesis	June 7 – June 8	2 days	2 days x 3
Drafting report	June 9 – June 12	3 days	3 days x 3
Oral Debriefing with Mission	June 13	1 day	1 day x 3
MOH/Stakeholders presentation	June 14	1 day	1 day x 3
Team submits draft report	June 14 –16	2 days	1 day x 3
Team travels home	June 17 – 18	2 days	2 days x 3
Mission provides feedback on draft report within 4 working days	June 21	---	---
Team revises report based upon mission comments	June 26	4 days	3 days x 3
Total		33 days	31 days x 1 ppl; 29 days X 2 ppl (89 days)

IX. RELATIONSHIPS AND RESPONSIBILITIES (USAID)

Before In-Country Work

1. Consultant Conflict of Interest. To avoid conflicts of interest or the appearance of a COI, review previous employers listed on the CV's for proposed consultants and provide additional information regarding potential COI with the project contractors or NGOs evaluated/assessed and information regarding their affiliates.

2. Documents. Identify and prioritize background materials for the consultants and provide them, preferably in electronic form.

3. Local Consultants. Assist with identification of potential local consultants and provide contact information. (IRSP contact information: Professor Michel MAKOUTODE. E-mail: makoutod@hotmail.com)

4. Site Visit Preparations. Provide a list of site visit locations, key contacts, and suggested length of visit for use in planning in-country travel and accurate estimation of country travel line items costs. Missions can protect scarce budgets by using their in-country knowledge to suggest the travel calendar (i.e. number of in-country travel days required to reach each destination, and number of days allocated to interviews at each site).

5. Lodging and Travel. Provide guidance on recommended secure hotels and methods of in-country travel (i.e., car rental companies and other means of transportation) and identify a person to assist with logistics (i.e., visa letters of invitation, etc.). GH Tech Bridge will submit eCC travel clearance requests for the consultants; approval will be facilitated by USAID/Benin.

6. USAID-Supplied Participants. Provide guidance regarding participation in the assignment by Mission and USAID/W staff (i.e., who will participate, how long, source of funding for their participation).

7. Locally-Established Ceilings and Rates. Provide information as early as possible on ceilings for pay to in-country hires, allowable lodging and per diem rates for government officials, stakeholders and MOH staff that will travel/participate in activities with the team (i.e. what is per diem amount? is TL responsible to pay this? length of time? etc.).

During In-Country Work

8. Mission Point of Contact. Throughout the in-country work, ensure constant availability of the Mission Point of Contact person(s) and provide technical leadership and direction for the team's work.

9. Meeting Space. Provide guidance on the team's selection of a meeting space for interviews and/or focus group discussions (i.e. USAID space if available, or other known office/hotel meeting space).

10. Meeting Arrangements. While local consultants typically will arrange meetings for contacts outside the Mission, support local consultant(s) in coordinating meetings with stakeholders.

11. Formal and Official Meetings. Arrange key appointments with national and local government officials and accompany the team on these introductory interviews (especially important in high-level meetings).

12. Other Meetings. If appropriate, assist in identifying and helping to set up meetings with local professionals relevant to the assignment.

13. Facilitate Contacts with Partners. Introduce the team to project partners, local government officials and other stakeholders, and where applicable and appropriate, prepare and send out an introduction letter for team's arrival and/or anticipated meetings.

After In-Country Work

14. Timely Reviews. Provide timely review of draft/final reports and approval of the deliverables.

X. MISSION CONTACT PERSONS

Scott Stofel, Program Officer
USAID/Benin/OPC
Email: sstofel@usaid.gov
Phone Number: (229) 21 30 05 00 Ext: 2016

Milton Amayun, Family Health Team Leader
USAID/Benin/FHT
Email: mamayun@usaid.gov
Phone Number: (229) 21 30 05 00 Ext: 1106; Mobile: (229) 9595-5622

Ann Busaka, A&A Specialist
USAID/Benin/OAA
Email: abusaka@usaid.gov
Phone Number: (229) 21 30 05 00 Ext: 2115

Emile Bongo, COTR of Project.
USAID/Benin/FHT
Email: ebongo@usaid.gov
Phone Number: (229) 21 30 05 00 Ext:1108; Mobile: (229) 9595-4764

XI. REFERENCES (PROJECT DOCUMENTS)

Background documents for this assignment will include, but not be limited to the following:

- Project work plans and related documents
- Malaria Indicator Survey
- Any other documents or data sources.

XII. COST ESTIMATE

GH Tech will provide a cost estimate for this activity.

Annex 1: USAID Evaluation Policy "Criteria to Ensure the Quality of the Evaluation Report"

- The evaluation report should represent a thoughtful, well-researched and well organized effort to objectively evaluate what worked in the project, what did not and why.

- Evaluation reports shall address all evaluation questions included in the scope of work.
- The evaluation report should include the scope of work as an annex. All modifications to the scope of work, whether in technical requirements, evaluation questions, evaluation team composition, methodology or timeline need to be agreed upon in writing by the technical officer.
- Evaluation methodology shall be explained in detail and all tools used in conducting the evaluation such as questionnaires, checklists and discussion guides will be included in an Annex in the final report.
- Evaluation findings will assess outcomes and impact on males and females.
- Limitations to the evaluation shall be disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall bias, unobservable differences between comparator groups, etc.).
- Evaluation findings should be presented as analyzed facts, evidence and data and not based on anecdotes, hearsay or the compilation of people's opinions. Findings should be specific, concise and supported by strong quantitative or qualitative evidence.
- Sources of information need to be properly identified and listed in an annex.
- Recommendations need to be supported by a specific set of findings.
- Recommendations should be action-oriented, practical and specific, with defined responsibility for the action.

APPENDIX 2: FINALIZED IMPLEMENTED WORKPLAN WITH CONSULTANT MOVEMENT

Task	Dates	Place	People Involved	Number of day
Background reading and preparation	May 16 - 18	USA and Benin	Evaluation team	3 days
Travel USA to Cotonou	May 21-22		Team leader and evaluator	2 days
Initial briefing with the Mission	May 23	USAID office (Cotonou)	Evaluation team, Milton Amayun, Emile Bongo, Marie-Noel	1 day
Finilization of the methodology and workplan and approval from the Mission	May 23-24	USAID office	Evaluation team and Mission team	2 days
Finalization of tools - Master Epi Info 7 - questionnaire - observation form - sample - key informant list - questions for focus groups and interviews - Surveyor training manual	May 25-26	Cotonou	Evaluation team Paul Freeman Gabriel Noel Yolande	2 days
Field visits: - Surveys - Focus groups (mothers, community leaders) - Interviews (MSH, CBO, health facilities team, local government members, head of health zones, head of departments, CHW and NGO) - Observation (CHW)	May 28-June 5	Health zones	Evaluation team and surveyors Paul, Gabriel, Noel to the North. PARAKOU and three project HZones Yolaine to the South. Control group 3 Health Zones Survey. June 5 All return to Cotonou	8 days
Meetings and interviews with MOH (NMCP, DSME,…) and ONG (UNICEF, AFRICARE, CTB, CRS)	June 6 – 13 As interviewees available	Cotonou	Team Leader	At same time as Information analysis/translation
Oral debriefing with Mission	June 8	USAID office	Evaluation team and Mission team	
Information analysis, translation and synthesis	June 7 -12	Cotonou	Evaluation team	5 days
Drafting report	June 14-16	Cotonou	Evaluation team	3 days
USAID presentation & MOH/Stakeholders presentation	June 18		Evaluation team, Mission team and stakeholders	1 day
Team Submits Draft Report	June 18		Team leader and evaluator	
Team Travels Cotonou to USA	June 18/19		Evaluation team	2 days
Mission feedback on the draft report within 4 working days	June 22		Mission team	_____
Revision of the report based on Mission comments	June 25 - 29		Evaluation team	Team Leader 4 days, others 3

APPENDIX 3: PERSONS CONTACTED

USAID MISSION (Cotonou)

Dr Bongo Emile,

Dr Milton Amayun

Marie-Noël MAFFON, Program Office

Kaj Gass, Global Health Volunteer

MINISTRY OF HEALTH

National Director of Maternal and Child Health

Dr Olga Agbohoui, Director

National Program of Fight against Malaria (PNLP)

Dr. Mariam Oke-Sopoh, Coordinator

National Direction of Public Health

Dr Adjein Anicet, Deputy Director

Dr. Marcellin A. Megnanglo Ayi, Head of Community Health Service (SSC)

Ministry of Health Local Services (Project Zones)

Departmental Direction of Health

Dr. Fatioulaye Issa Djibril, Departmental Director of Health Borgou/Alibori

Tchaourou Health Zone

Abou Abdou Gafar, Adminitration and Resources Officer, Tchaourou Health Zone

Demba Diallo Abdoul, Head of Community and Prevention Activities, Kandi Health Zone

Djougou-Ouaké-Copargo Health Zone

Victor Houindo, Head of Djougou 1 Health Center

Kandi-Ségbana-Gogounou Health Zone

Orou Ganni Chabi, Head of Gounarou Health Center

Mrs. ALE B. H. Eugénie Affagnon, Head of Kassakou Health Center

Ministry of Health Local Services (Control Zones)

Dr Jean Kuassi, Coordinator Comè Health Zone

Paul Kpanou, Communication Specialist, Comè Health Zone

Dr Pius Gounadon, Coordinator Ouidah Health Zone

Prosper Agossou, Focal Point Malaria-Alafia Project, Ouidah Health Zone

Kounoudji Paul, Member of Health Committee

BASICS PROJECT

Dr. Stanislas Paul Nebié, Chief of Party

Dr. Lola Gayé Gandaho

UNICEF

National, Cotonou

Dr. Toure Hamadassalia, Head of Service Section and Child Development

Meizou Ange, Head of Community Health Cotonou

Local Office

Bertin Danide, Chief of Parakou Office

Dr. Soliou Badakou, Health Specialist, Parakou Office

AFRICARE

National, Cotonou

Dr. Cossi Athanase Hounnankan, National Project Director

Local Office

Herve Gbegnide, Head of Borgou Alilou Office, Parakou.

Ospice Sagbo, Monitoring and Evaluation Officer, Parakou

Remfait Midete, Accountant, Parakou

Dr. Dekoun Mawutondji, Head of Donga Office

Danius Goussanou, Monitoring and Evaluation Officer, Donga Office

BELGIAN TECHNICAL COOPERATION

Marc Moray, International Technical Assistant PARZDS (in charge Facilité Atacora-Donga), Djougou

NGO PARTNERS

DEDRAS

Agué Chabi, Chief of Administration and Finance, Parakou

Bernadette Akako Bossoufei Pemtim Sam, Field Agent Tchaourou Zone, Parakou

CoVADES

Alyassoum Yorou, Executive Director, Djougou

Mrs. Yerima A. Kaltoumi, Administrative and Finance Officer, Djougou

GRADE ONG

Codjo Vuti, Head of Programs, Parakou

Benin Center for Well Being and Environmental Protection, Parakou

Ahamide Maunia, Executive Director

Koto Simbere, Program Manager

Soutwicou Wahihu, Bookeeper

COMMUNES OF TCHAOUROU, DJOUGOU AND KANDI

Sounon Bio Bouko, Mayor, Commune of Tchaourou

Monra Bio, First Deputy Mayor, Commune of Kandi

Bouraïma Zakary, Second Deputy Mayor, Commune of Kandi

ZAKARI Y. Traoré Nourou Dinou, Head of Social Affairs Service, Commune of Kandi

Sankamao Assoumanou, Head of Social and Cultural Affairs, Commune of Djougou

FOCUS GROUPS

Tchaourou Health Zone

Community Leaders of Gah Baka Dononrou Village

Mothers/Guardians of under 5 years Children, Gah Baka Donourou Village

Relais Communautaires, meeting hold in Gah Baka Donourou Village

Djougou-Ouaké-Copargo Health Zone

Community Leaders of Cana Village, Djougou

Mothers/Guardians of under 5 years Children, Cana Village, Djougou

Relais Communautaires, meeting hold in Cana Village, Djougou

Kandi-Ségbana-Gogounou Health Zone

Community Leaders of Tissarou Village, Kandi
Mothers/Guardians of under 5 years Children Pèdè Village, Kandi I Arrondissement
Relais Communautaires of Gounarou Village, Kandi

APPENDIX 4: ANALYTICAL TOOLS

This evaluation used two key standardized tools: a survey questionnaire and and an observation instrument combined with questionnaire to assess the clinical knowledge, skills and supplied of the RC. These tools are presented here as translated from French.

BENIN ICCM EVALUATION: COMMUNITY SURVEY QUESTIONNAIRE

Household No

Department		Numero Enquetee			
Health Zone	Name: _____	Sex	M	F	
	1. BASICS ☐ 2. Control ☐	Age			
Village		Profession			
		Education Level	1	Never went to school	
Quarter			2	Primary	
			3	Secondary	
			4	University	
			5	Other _____	
Date		Surveyor's Name			
Hour		Supervisor's Name			

CONSENTEMENT

Bonjour. Je m'appelle _____ et je travaille pour l'évaluation du projet **BASICS**. Nous effectuons une enquête de quelques ménages pour voir si les résultats du programme de Prise en Charge Intégré de la Maladie de l'Enfant dans la Communauté en exécution depuis 2009. Nous souhaiterions que vous participiez à cette enquête. L'enquête dure habituellement entre 20 et 25 minutes. Dans le cadre de cette enquête, nous voudrions tout simplement vous poser quelques questions sur les maladies des enfants de moins de 5 ans et le travail des relais communautaires. Toutes les informations que vous nous fournirez resteront strictement confidentielles. La participation à cette enquête est totalement volontaire. S'il arrivait que je pose une question à laquelle vous ne souhaitez pas répondre, dites-le moi et je passerai à la question suivante, ou vous pouvez interrompre l'interview à n'importe quel moment. Nous espérons cependant que vous accepterez de participer à cette enquête car votre opinion est particulièrement importante.

Avez-vous des questions à me poser sur l'enquête ?

Pouvons-nous commencer l'entretien maintenant ?

Signature de l'enquêtrice : _____ Date _____

CHILD ILLNESS TREATMEN	
1- Do you have at least an under 5 year child sick during the last 2 weeks?	1. Yes ☐ 2. No ☐
2- Did the child present one of the three following signs: cough, diarrhea, fever? ***If Yes, CONTINUE.***	1. Yes ☐ 2. No ☐
3- Number of children in your household	☐☐
4- Number of children per age range	1. Under 5 years _____ 2. Plus 5 years _____
5- Sex of the children under 5 years ***If many children have presented one of the three symptoms during the last two weeks, pick one randomly.***	1. Number of boys_____ 2. Number of girls_____
6- Sex of the child	1. Boy ☐ 2. Girl ☐
7- Child age (*in month*)	_____
8- Which of the three signs the child had?	1. Fever ☐ 2. Diarrhea ☐ 3. Cough ☐
9- As of today, when did the first symptoms appear?	1. 0 to 2 days ☐ 2. 2-5 days ☐ 3. More than 5 days ☐
10- Did you seek for treatment as soon as the first symptoms appeared?	1. Yes ☐ 2. No ☐
11- If yes, where did you go in first position?	1. Tradi-pratician ☐

(If the relais communautaire was chosen, go to question 13)	2. Health center ☐ 3. Local shop ☐ 4. Relais commnautaire ☐ 5. Parents/friends ☐ 6. Church/mosque ☐ 7. Other *(specify)* _____
12- If the relais communautaire was not consulted for the treatment, what are the reasons	1. Not available ☐ 2. Distance ☐ 3. Cost of treatment ☐ 4. Lack of products ☐ 5. Is not contacted ☐ 6. I don't know about RC ☐ 7. Not competent ☐ 8. Has not the knowledge ☐ 9. Is not trustworthy ☐ 10. Other *(specify)* _____- _____
13- How long did you wait after the first symptoms before seeking for treatment?	1. Less than 12h ☐ 2. Within 24 h ☐ 3. 24 à 48 hours ☐ 4. Above 48h ☐
14- What treatment was given to your child ?	1. Malaria: ACT ☐ 2. Diarrhea: ORS/Zinc ☐ 3. Cough: CTM ☐
15- How many tablets was recommended to you ?	*Malaria case, if child*:

	1. 6 mths- 2 years : ACT 6 tablets/3 days ☐ 2. 2-5 years: ACT 12 tablets/3 days ☐ *Case of diarrhea, if child:* 3. 6 mths- 2 years : ORS/Zinc ½ tablets/day ☐ 4. 2-5 years: SRO/Zinc 1 tablet/ jour ☐ *Case of cough, if child:* 5. 6 mths - 2 years : CTM 480 g ½ tablets twice a day ☐ 6. 2-5 years: CTM 480 1 tablets 2 times a day ☐
16-: Surveyor's conclusion if the care is right	1. Yes ☐ 2. No ☐
17-Are you satisfied with the treatment given to the child?	1. Yes ☐ 2. No ☐
18-If no, specify why?	
FOLLOW-UP APPOINTMENT	
19-Did he ask you to bring back the child after the treatment?	1. Yes ☐ 2. No ☐
20-If yes, how long after you have been asked to bring back the child?	1. 2 to 3 days after the beginning of treatment ☐ 2. Immediately if the child conditions get worse ☐
21-If the relais communautaire has been consulted for the child treatment, what did he concretely do?	1. Question the mother ☐ 2. Search for danger signs ☐ 3. Treatment ☐ 4. Refer ☐
22-APPRECIATION OF THE RELAIS CONDUCT*(if the child is under 6 months, he should be referred without been*	1. Good ☐

treated)	2. Bad ☐
23- How many times have you used the service of this relais for the care of sick children in your village?	1. First time ☐ 2. 2 to 5 times ☐ 3. More than 5 times ☐
24- Why did you contact the relais *(Check no more than 3 reponses)*	1. Availability ☐ 2. Respect ☐ 3. Competence ☐ 4. Known for the care of sick children in the community ☐ 5. Other *(specify)* - _____ _
25- Before the relais communautaire presence in your village where did you go for the care of your under 5 year child?	1. Health centre/Hospital ☐ 2. Tradipractician ☐ 3. Nowhere/Automedication ☐ 4. Other(specify)- _____

PERCEPTION OF THE RELAIS COMMUNAUTAIRE BY THE MOTHERS

25- How have you been informed of the existence of the relais communautaire in your village?

☐	**1. IEC campaign**	☐	**2. Meeting with relais communautaires**
☐	3. Health centers	☐	4. COGECS
☐	5. CBO	☐	6. NGO
☐	7. Community Radio	☐	8. Parent/friend
☐	9. Community leaders	☐	10. Other*(specify)*_____

26- What do you think of the relais communautaire's work in your village?

☐	**1. Access to care**	☐	**2. Proximity of the relais communautaire**
☐	3. Timeliness of care	☐	4. Competence of the relais communautaire
☐	5. Respectuous relais communautaire	☐	6. Frequent visit of the relais communautaire
☐	7. Availability of drugs	☐	8. Free drugs
☐	9. Other *(specify)*_____		10.

27- What does the relais communautaire's presence bring as notable change with regards to child health?

☐	**1. Knowledge of symptoms of child illness**	☐	**2. Early care seeking**
☐	3. Follow-up of childcare	☐	4. Frequent meetings with the relais communautaire
☐	5. Knowledge of preventive measures	☐	6. Adequate child vaccination coverage
☐	7. Knowledge in nutrition	☐	8. Other_____ __

28- What difficulties did you encounter in your interactions with the relais communautaire?

_____
_____
_____
_____

29- Do you think that the relais communautaire's work has been important and/or useful to you?

1. Yes ☐ 2. No☐

29- If no, what do you propose to improve the performance of the relais communautaires?

_____
_____
_____
_____
_____

OBSERVATION OF RELAIS CLINICAL SKILLS

Simulation. A child aged 1 to 5 years old presenting with fever for two days with no obvious clinical signs. If there is no child like this present, please ask a mother with such a child, not closely related to the relais interviewed, to pretend.

No.	Compétence et standards	Yes	No	Instructions
Welcome				
1	Greets the caregiver			If the RC greets the caregiver, and acts to make the mother and child comfortable tick Yes, otherwise NO.
2	Speaks clearly and uses common words the caregiver understands			If the RC uses common words the mother understands tick Yes, Otherwise No.
Assessment				
3	Asks permission to examine the child			If the RC asks for permission to examine the child tick Yes, otherwise No.
4	Asks the age of the child			If the RC asks the age of the child, tick Yes, otherwise No.
5	Asks whether the child has fever			If the RC asks if the child has fever, tick Yes, otherwise No.
6	Asks whether the child has diarrhea			If the RC asks if the child has diarrhea, tick Yes, otherwise No.
7	Asks whether the child has cough/ difficulty breathing			If the RC asks if the child has cough or breathing trouble, tick Yes, otherwise No.
8	Asks how long the child has had these symptoms			If the RC asks how long the child has had these symptoms, tick Yes, otherwise No.
	Asks and looks for danger signs			
9 (a)				Asks, Not able to drink or breastfeed
(b)				Asks if the child has had convulsions
(c)				Asks if the child has been sleepy or difficult to rouse.
10(a)	Uncovers the childs chest			
(b)	Counts childs breathing rate *using a counting device*			

Source. Adapted from Community based Distributors Quality of Care Assessment IRC 2011

No.	Competency or Standard	Correct	Incorrect	Instructions
Questions to ask RC to check their clinical knowledge				
11	Know cut-off point for pneumonia for child 2-11 months			Ask the RC how many breaths need to be counted per minute to diagnose pneumonia in an infant 2-11 months Correct if 50 or more. No otherwise.
12	Pneumonia for child 1-5 years			Ask the RC how many breaths need to be counted per minute to diagnose pneumonia in an child 1 to 5 years

				Correct if 40 or more. No otherwise.
13	Knowledge of danger signs			Ask the RC which sick children need to be quickly referred to a health center. If the answer includes convulsions Tick correct Otherwise Incorrect
14	Knowledge of danger signs			If the answer includes unconscious/ hard to wake or very drowsy Tick correct Otherwise Incorrect
15	Knowledge of danger signs			If the answer includes not able to drink or breastfeed Tick correct Otherwise Incorrect
16	Knowledge of danger signs			If the answer includes has stiff neck Tick correct Otherwise Incorrect

No.	**Competency**	**Write the response given**	**Instructions**
17	Treatment of pneumonia		Ask the RC what treatment do you give for pneumonia ?
18	Treatment of Malaria		Ask the RC what treatment do you give for malaria ?

Observation of drugs and supplies present

		Yes	No	
	Medications			**Tick Yes if the RC has and No if he does not have for all below**
21	Has at least 1 blister of zinc			
22	Has at least 2 ORS sachets			
23	Has at least 10 tablets of cotrimoxasole (CTM)			
24	Has at least 10 tablets of local artemisin compound (CTA)			
25	Has ALL (21 to 24) above			
	Supplies			**Tick Yes if the RC has and No if he does not for all below**
26	1 functioning timing devices to count respiration			
27	1 set of treatment guides			
28	1 one liter water bottle			
29	1 patient register			
30	1 drug register			
31	1 referral card			
32	3 or more referral cards			
33	1 medicine box with padlock			
34	Tick YES if has ALL (25 to 33)			

Source. Adapted from Community based Distributors Quality of Care Assessment IRC 2011

APPENDIX 5: FINDINGS FROM THE CASE CONTROL STUDY

A total of 609 interviews were conducted as planned. 309 of these were in the 3 Health Zones sampled in intervention areas and 300 in the 3 control Health Zones.

The characteristics of the community level health care provided in the control zones, especially in relationship to RC were derived from Key Informant interviews of senior MoH personnel in these zones included at the end of Annex X Findings from Key Informant Interviews. There is some limited training in iCCM taking place but this is not systematic or widespread. There is virtually so system of reporting from or supervision of RC. The only community based treatment that takes place on a notable scale is of malaria.

Table 1 The demographic characteristics of the persons interviewed

		BASICS	CONTROL	TOTAL	P value
Sex	Female	288 (93.2%)	284 (94.6%)	572 (93.9%)	
	Male	21 (6.8%)	16 (6.1%)	37 (6.1%)	0.45
	n	309 (100%)	300 (100%)	609 (100%)	
Age(yrs)	mean	29.13	27.45	28.29	0.007
	Standard Deviation	7.89	7.26	7.62	
	n	300	300	600	
Employment	Unemployed Outside household	186 (63.48%)	110 (36.67%)	296	P<0.001
	Farmer	65 (22.18%)	59 (19.67%)	124	
	Merchant	7 (2.39%)	77 (25.67%)	84	
	Other	35 (11.95%)	54 (18%)	89	
	N	293	300	593	

Those in the intervention group are significantly older than those in the control group by a small margin. The proportion of the sexes in both groups does not differ significantly. Those in the intervention group are much more likely to not be employed outside the household. Further those

in the intervention group were much more likely to not have received any education 264 (86.4%) than those in the control group 181 (61.5%) P < 0.0001. Those that had received some education had only received primary education. It is also noticable that significantly more interviewees in the control group (P <0.0001) were in the merchant category. This merchant category included anyone who earned any money selling any goods outside the household. Since the main target group for the iCCM intervention is children of poor mothers, often less educated, with low access to health care, these differences between the two groups have been found to not negatively effect the overall findings of our analyses.

Table 2 demonstrates that the children of the mothers and guardians interviewed did not differ significantly by age or sex between intervention and control group.

Table 2 The demographic characteristics of the infants of those interviewed

			CONTROL	TOTAL	P value
Sex	Male	161 (52.6%)	176 (58.6%)	337 (55.6%)	0.13
	Female	145 (47.4%)	124 (41.4%)	269 (44.4%)	
	N	306 (100%)	300 (100%)	606 (100%)	
Age(months)	Mean	24.36	23.67	24.01	P=0.56
	Standard Deviation	14.4	14.89	14.64	
	N	300	300	600	

Table 3 presents the mothers' care seeking behavior for their child.

Table 3 Health Care Seeking Behavior for their child

		BASICS	CONTROL	TOTAL	P value
Main Reason/s for seeking health care (More than one reason per mother is possible)					
Fever		237 (48.1%)	256 (51.9%)	493(100%)	
Diarrhea		56 (66.6%)	28 (33.4%)	84 (100%)	
Cough		46 (39.0%)	72 (61%)	118 (100%)	
	N	310	300	610	
Person Approached for initial care					
Relais		240 (78.7%)	108 (36.2%)	348 (57.7%)	
Health Center		26 (8.5%)	95 (31.9%)	121 (20.0%)	
Local Store		15 (4.9%)	82 (27.5%)	97 (16.0%)	
Traditional Practitioner		4 (1.3%)	9 (3.0%)	13 (2.1%)	
Parent/Friend		2 (0.7%)	2 (0.7%)	4 (0.7%)	
Other		18 (5.9%)	2 (0.7%)	20 (3.3%)	
	N	305 (100%)	298 (100%)	603	
Reasons given for not using Relais					
Nil answer given		15 (23.0%)	32 (16.8%)	47 (18.4%)	
Do not use them		19 (29.2%)	80 (42.1%)	99 (38.8%)	
Absence of information about relais		18 (27.7%)	55 (28.9%)	73 (28.6%)	

They are not available		13 (20%)	23 (12.1%)	26 (10.1%)	
	N	65 (100%)	190 (100%)	255 (100%)	

There were 348 mothers who consulted relais in either the BASICS intervention or control group. Relais are found in many Health Zones in Benin but many have not received iCCM training as is the case for most relais in our control zones as determined by Key Informant Interview of Health Zone MoH staff. (See reports of Heads of Control Zones at the end of Appendix 3 Findings of Key Informant Interviews). The remaining analyses refer to only these mothers.

Table 4 presents the amount of time that mothers waited before seeking health care after the onset of their child's illness in the intervention area and in control areas who had relais not trained in iCCM.

Table 4 Time delay before seeking health care in intervention and control areas with relais

		BASICS	**CONTROL**		
Delay in seeking health care					
Less than 12 hours		117 (49.5%)	11 (10.2%)	128 (37.2%)	
12 to 24 hours		77 (32.6%)	36 (33.3%)	113 (32.8%)	
24 to 48 hours		25 (10.6%)	46 (42.6%)	71 (20.6%)	
More than 48 hours		17 (0.7%)	15 (13.9%)	32 (9.3%)	
	n	236 (100%)	108 (100%)	344	

When those who waited less than 12 hours were compared with those who waited 12 or more hours were compared, the 117 (49.6%) in the intervention group were significantly more likely ($P < 0.0001$) to seek health care early than the 11 (10.2%) in the control group.

Table 5 presents health care seeking behavior of mothers for their child before the presence of relais in their community.

Table 5 Use of health care before the presence of local relais

		BASICS	**CONTROL**	**Total**	
Health Center		147 (61.25%)	86 (79.63%)	223 (66.95%)	P = 0.000
Self-Medication		67 (27.92%)	43 (39.81%)	110 (31.16%)	P = 0.027
Traditional Practitioner		3 (1.25%)	10 (9.265)	13 (3.74%)	P = 0.000

	n	240 (100%)	108 (100%)	348	

Table 5 shows that before the presence of the trained relais in the intervention area 27.9% of people resorted to self-medication. This indicates that an important proportion of those consulting the trained relais are new patients rather than just those who previously attended the Health Center.

Table 6 presents mothers perception of correct management and satisfaction with care given.

Table 6 Mothers perception of correct management and satisfaction with care given

		BASICS	CONTROL	Total	
Mothers perception that treatment given correct					
	YES	217 (90.5%)	76 (70.3%)	293	P < 0.00001
	NO	23 (9.5%)	32 (29.7%)	55	OR 3.95 (2.19 – 7.21)
	n	240 (100%)	108 (100%)	348	
Mothers satisfaction after health care given					
	Yes	232 (97.5%)	94 (87.04%)	326	P < 0.0001
	No	6 (2.5%)	14 (12.96%)	20	OR 5.75 (2.14 – 15.43)
	n	238 (100%)	108 (100%)	346	

Table 6 shows that significantly more mothers, 90.5% perceive that the correct treatment is given by the relais in the intervention areas compared with the control area 70.3%, P <0.0001. Similarly significantly more mothers in the intervention area, 97.5% are satisfied with the health care given by relais than those in the control areas 87% (P < 0.0001)

The principal ways that the mothers found out about the relais was meeting with the relais in 230 (66%), Information campaigns 147 (42.4%) and friends or relatives 86 (24.7%).

Table 7 shows the mothers' perception of the benefits of having relais caring for their children. Each mother could give several answers, the answers mothers gave including the percent of all mothers in their group –either intervention or control is presented below.

Table 7 Mothers perceptions of the benefits of having relais care for their children

		BASICS	CONTROL	Total	
Relais live nearby		193 (80.42%)	76 (70.37%)	269 (77.3%)	P = 0.038

Accessibility to health care	177 (73.75%)	53 (49.07%)	230 (66.09%)	P < 0.0001
Availability of medications	130 (54.17%)	62 (57.41%)	192 (55.17%)	P = 0.57
	240 (100%)	108 (100%)	348	

Table 7 shows that accessibility to health care is significantly valued as a benefit of having relais caring for children in the intervention area.

Interviewees were asked about what they saw as the positive impact of relais on community health knowledge and health seeking behavior. Each mother could give several answers, the answers mothers gave including the percent of all mothers in their group –either intervention or control- is presented below.

Table 8 Mothers' perception of the impact of relais on community health knowledge and health seeking behavior.

		BASICS	CONTROL	TOTAL	
Early seeking of health care		158 (65.83%)	71 (65.74%)	229 (65.8%)	P = 0.98
Knowledge of symptoms		113 (47.08%)	43 (39.81%)	156 (44.83%)	P = 0.20
Follow up of health care		112 (52.08%)	25 (23.15%)	150 (43.10%)	P < 0001
	n	238 (100%)	108 (100%)	346	

Table 8 demonstrates that access to follow up health care is significantly more valued in the intervention that the control group. This may reflect their better access to health care that they perceive as effective.

APPENDIX 6: FINDINGS FROM THE OBSERVATION OF RELAIS CLINICAL SKILLS

There were 119 observations of the clinical skills of Relais using the standardized instrument in Appendix 4. Of these observations 75% were simulations and 25% observations of patients. Of all cases 93, 79.49% were male. Observations of the clinical skills of greeting the mother, asking standard basic clinical questions and examining the baby are presented in table 1 below

Table 1 Observed clinical skills of Relais

Simulation. A child aged 1 to 5 years old presenting with fever for two days. If there is no child like this present, please ask a mother with such a child, not closely related to the relais, to pretend.

No.	Skills and standards	N	n	%	95% CI
1	Greets the caregiver	119	102	85.71	78. 12 – 91.45
2	Speaks clearly and uses common words the caregiver understands	119	117	98.32	94.06 – 99.80
3	Asks permission to examine the child	119	102	85.71	*78.12 -91.45*
4	Asks the age of the child	119	112	94.12	88.26 – 97.60
5	Asks whether the child has fever	119	111	93.28	87.18 – 97.05
6	Asks whether the child has diarrhea	119	97	82.20	74.09 – 88.63
7	Asks whether the child has cough/ difficulty breathing	119	90	75.63	66.91 – 83.03
8	Asks how long the child has had these symptoms	117	110	94.02	88.06 -97.26
	Asks about and looks for danger signs				
9(a)	Not able to drink or breastfeed	118	70	59.23	49.89 – 68.27
(b)	Any convulsions	118	67	56.78	47.34 – 65.87
©	Abnormal sleeping/difficulty to wake	117	36	30.77	22.57 – 39.39.97
10(a)	Uncovers the childs chest	113	56	49.56	40.02 – 59.12
(b)	Counts childs breathing rate *using a counting device*	117	51	43.59	34.45 – 53.07

Source. This Instrument was adapted from the IRC Community Based Distributors Quality of Care Assessment tool

This table shows that the overall clinical skills of the Relais are good asking about the age of the child in 94%, about fever in 93%, about diarrhea in 82%, respiratory symptoms in 75.6% and length of time of symptoms in 94% of cases. When it comes to asking about "danger signs" the Relais skills demonstrated that there may be some deficiency in this area. Only 59% asked about whether the child is not able to drink or breastfeed, 67% about convulsions, and 31% about whether the child has abnormal sleeping or difficulty waking. Note also that only 56% uncovered the child's chest and 51% counted the child's respiratory rate

The results of the questions asked of relais to check aspects of their clinical knowledge are presented in Table 2 below

Table 2 Responses to Questions Concerning Knowledge of Clinical Skills in 1-5 year old

	Clinical Knowledge Question	N	Number correct	%	95% CI interval
Questions to ask *relais* to check their knowledge					
11	Know cut-off point for pneumonia for child 2-11 months Correct if 50 or more	119	112	94.12%	88-26 - 97.60
12	Pneumonia for child 1-5 years Correct if 40 or more	118	107	90.68%	83.93 - 95.25
13	Knowledge of "danger signs" Includes convulsions	119	110	92.44%	86.13 - 96.48
14	includes unconscious/ hard to wake or very drowsy	118	94	79.66%	71.27 - 86.51
15	includes not able to drink or breastfeeding	117	92	78.63%	70.09 – 85.67
16	includes has stiff neck	117	82	70.09%	60.93 – 78.20
17	Treatment for Pneumonia	119	119	100%	
18	Treatment for Malaria Infection	117	117	100%	

The above table shows that Relais knowledge in the area of the cutoff points for pneumonia diagnosis, knowledge of "danger signs" and drugs to use to treat pneumonia and malaria are very good.

Observation was also made of the drugs that the relais had on site. The results of these observations are presented in Table 3 below.

Table 3 Observation of Drug Stock on Site with Relais

Q no	Stock of drugs	N	N	%	95% CI
21	Has at least 1 blister of zinc	119	77	64.71	55.42 – 73.24
22	Has at least 2 ORS sachets	118	78	66.10	56.81 – 74.56
23	Has at least 10 tablets of cotrimoxasole (CTM)	117	102 (87.18%)	87.18	79.74 – 92.64
24	Has at least 10 tablets of local artemisin compound (CTA)	118	103 (87.29)		79.90 – 92.71
25	Has ALL (21 to 24) above	117	81	69.23	60.03 – 77.43

Table 3 shows that 69.23 % of relais had an adequate supply of all the common drugs they use in iCCM. The main deficiency was in the area of zinc blisters, only 64.7% had sufficient supplies of these and ORS sachets, only 66% had at least 2 cachets. These are not large deficits that could be corrected locally from the closest Health Center.

Results of the observations of non drug supplies that the relais had on site are presented in Table 4 below.

Table 4 Observation of Supplies On Site with Relais

Q no	Stock of supplies	N	n	%	95% CI
26	1 functioning timing devices to count respiration	119	111	93.28	87.18 – 97.05
27	1 set of treatment guides	119	113	94.96	89.35 – 98.13
28	1 one liter water bottle	119	103	86.55	79.09 – 92.12

29	1 patient register	119	111	93.28	87.18 – 97.05
30	1 drug register	119	112	94.12	88.26 – 97.60
31	1 referral card	119	109	90.60	85.09 – 95.90
32	3 or more referral cards	119	100	84.03	76.19 – 90.10
33	1 medicine box with padlock	119	90	75.63	66.91 – 93.03
34	Tick YES if has ALL (25 to 33)	112	61	54.46	44.78 – 63.90

Table 4 shows that only 54.5% of the relais had all the basic supplies listed. The main areas of deficit were in having a lockable medicine box (Should have ?) only 75.6% and in having 3 or more referral cards , 84%. However of all these supplies the figure of 86.6% having a one litre water bottle for making ORS could be considered most important.

APPENDIX 7 : DOCUMENTS REVIEWED

Aide-Mémoire Rencontre Africare, BASICS et PARZDS sur Une Collaboration autour des Relais Communautaires dans les ZS de Bassila et Djougou-Copargo-Ouake, 27 Octobre 2011.

BASICS Quarterly Reports The Partnership for Child Health 12 Quarters 2009-2012.

BASICS Annual Workplans Years 1, 2, 3.

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Dossier Technique et Financier Projet d'Appui uu Renforcement des Zones et Departements Sanitaires du Mono-Couffo et de l'Atacora-Donga (PARZDS) 2012.

Directives Nationales pour la Promotion de la Santé au Niveau Communautaire. Direction Nationale de la Protection Sanitaire Ministère de la Santé République du Bénin, mars 2010.

Directives Nationales pour la Promotion de la Santé au Niveau Communautaire, Direction Nationale de la Santé Publique Ministère de la Santé, Aout 2011.

Formations et Supervisions Développées par BASICS, BASICS 2012.

Guide de l'Animateur pour la Formation des Relais Communautaires sur le Paquet Complet d'Interventions au Niveau Communautaire : Prise en Charge Integrée des Maladies de l'Enfant au Niveau Communautaire (PCIME- C). Ministère de la Santé Republique du Bénin, Direction de la Santé de la Mère et de l'Enfant, avril 2011.

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APPENDIX 8: TRAINING CONDUCTED BY THE PROJECT

Date	Training	Participants	Observation
Oct-Dec 2010	Training of trainers in iCCM package	193 trainers	5 HZ coordinator doctors, 17 doctors, 5 C/RAM, 152 health workers, 15 NGO agents, 2 AFRICARE facilitators and 2 participants from PISAF
Oct-Dec 2010	Training of the RC in iCCM package	1048 RC	In Djougou and Bassila, female group members were trained.
Oct-Dec 2010	Training of supervisors on monitoring/supervision of RC	196 supervisors	
Dec 2010 and Aug.2011	Quick Book Training of NGO on planning and Quick Book software	16 NGO agents	2 sessions: 1st session on 20-24 Oct. 2010 and 2nd session on 5-7 July 2011
January 2012	Training of trainers on the utilization of RDT	12 trainers	
January March 2012	Training of the RC on the integration of RDT on CCM	102 RC	
January March 2012	Training of trainers on the utilization of SMS	42 health workes	Health centers and hospital emergency service personnel
January March 2012	Training of RC on the utilization of SMS	254 RC	RC of Tchaourou and Bassila HZ

APPENDIX 9: PROJECT PERSPECTIVES ON ACHIEVEMENT OF PROJECT RESULTS

Component 1: NGO Grants for Community Case Management (CCM)	
Expected Results	**Achievements**
Capacity for NGO grantees to implement integrated community case management strengthened	• 5 local NGOs selected and trained to actively support care provision by RC • A capacity building program on leadership implemented for NGO/health zones teams
Capacity of individuals, families, communities and health workers to identify the signs and symptoms of malaria, diarrheal disease and ARI and to understand the importance of prompt treatment of malaria, diarrheal disease and ARI strengthened	• Grants provided to NGOs to support the iCCM • 1048 RC trained, installed, equipped and supervised • IEC activities conducted
Community awareness of consistent and proper use of LLINS increased	• Home visits • Sensibilization conducted during LLINs distribution sessions
Case management of diarrheal/ARI/malaria through the community based approaches improved	• More than 86,000 cases treated in 3 years • All the RC regularly supervised

Component 2: Technical Assistance for developing Intgrated Community Case Management approaches and tools with the MOH	
Expected Results	**Achievements**
Common community level approaches and tools for CCM of malaria, diarrheal disease, and ARI developed	• Training, supervision and data collection tools developed and validated by the MOH and partners
Capacity for MOH to implement integrated community case management strengthened	• Leadership program conducted for orientation • A database set up • A pilot communication SMS/GSM implemented to improve communication and the referral system • A Monitoring Committee established at the MOH • Active participation of BASICS in the decision making process regarding the community level
IEC/BCC strategies and materials in support of CCM of malaria, diarrheal disease, and ARI developed and/or refined	• Documentary review and revision of IEC materials undertaken by a consultant • A national IEC/BCC strategy conjointly developed with MOH

Component 3: Strengthen links between the community, CHWs, and their respective health facility	
Expected Results	**Achievements**
CHWs knowledge and understanding of community case management improved	• 193 trainers and supervisors trained • 1048 RC trained and supervised • Integrated algorithm of community care developed/revised
Supportive supervision approaches and tools between the health facility and community health worker developed	• Tools of supervision of the RC developed • Tools of collect of community statistics data developed • A trained zones database and statistics developed • A pilot study on the improvement of the RC supervision performance implemented
Case management of diarrhea/ARI/malaria through community based on approaches improved	• More than 86,000 cases treated by the RC • All the RC regularly supervised and data collected and analyzed • Training of 102 RC on the utilization of the Rapid Diagnostic Test (RDT) and results interpretation started

APPENDIX 10: PROJECT SUCCESS STORIES

The project has many success stories; some of the key ones are presented here.

Before & After

USAID/BASICS-Benin connects marginalized groups to a health system they can understand

The Fulani (Peuhl) of Northern Benin have long been a difficult population to reach with child health interventions. Primarily nomadic herdsmen, they are often distrustful of outsiders to their community and struggle to understand modern medicine. USAID/BASICS-Benin has found a successful method of selecting members within the Fulani community to train as *relais communitaires* (community health workers). These *relais communitaires* are able to diagnose and distribute medications for the 3 most common reasons for child mortality in Benin ; malaria, diarrheal disease and respiratory infections.

Many non-Fulani Beninese often say that "Fulani cattle are more important to them than their own children." In accordance with this, Fulani oftentimes will vaccinate their cattle before they ensure their children receive immunizations. The reasons for this are both cultural and financial. The BASICS mission, having trained many Fulani CHWs, have begun to see improvements in how this traditional community has begun to access modern medical interventions for the management of their childrens' health. Treating children at the community level means that cost for treatment is lessened and that treatment is given by someone who speaks the same language and shares the same culture as the patient.

Photo : BASICS Benin

Before: Utilisation of the health system in the Fulani community was often reserved only for emergencies.

After: Fulani women feel comfortable bringing their children to see CHWs who live within their community, speak the same language and share the same culture. This has connected a difficult-to-reach population to modern medical interventions that save the lives of their children.

Orou Assoumanou- A Community Health Worker Changing Attitudes towards Community Medicine in Kpagnaroung, Benin

Orou Assoumanou describing the work within his community of Kpagnaroung to Dr. Lola Gandaho, of BASICS Benin

Djougou, Benin. During the post-training assessment period of rural community health worker (CHW) development, the USAID/BASICS team wished to learn the successes and challenges faced by CHWs within their communities. After interacting with many CHWs within the program, the BASICS team was deeply moved by the story of one particular man who is trying to improve health within his community.

Living in a rural village called Kpagnaroung, Orou Assoumanou is a dedicated health worker who already promoted vaccinations and distributes ivermectin within his community before receiving BASICS' training in community-case management (CCM). He tells the BASICS team that after adding this training he feels a personal satisfaction about the improvements in his ability to offer care. With the comprehensive training he has received, enabling him to treat children within his community, he enjoys being able to alleviate parents' concerns over the health of their children. He stressed that often the treatments he prescribes have immediate effects and parents begin thanking him the next day. With the arrival of a trained CHW, able to prescribe medications, members of his community no longer have to travel long distances to seek medical care for their children. In fact, Orou stated that there was a period where crowds would form at his door and he found it hard to find time for his personal affairs. Despite this success within his community, there were still several people in the village who remained reluctant.

Recounting the story to the BASICS team, Orou began: "The mother of a 15-month old boy brought her son to me because he was suffering from diarrhea. After checking for signs of immediate danger, I reassured the mother that oral rehydration salts (ORS) and zinc therapy would treat her son." Able to offer these kits at low subsidized prices, Orou was surprised that the mother became more uncomfortable by his offer. She told him that she did not have the 125 FCFA (about 25 cents) to pay for the medications. After giving the advice to continue breastfeeding and increase fluid intake, Orou advised the mother to return to her home and ask her husband for the money. She returned several minutes later, saying that her husband was unwilling to give her the money. Orou then accompanied her to see her husband and explained to him the severity of leaving his son untreated and the threat of death from dehydration. However, the father still refused to offer the money needed for the medications, citing that he had a large family and had recently suffered financial loss from two lost cows. The mindset of this cattle rancher, avoiding even the small cost of the offered treatment, is very typical throughout rural villages in Benin. Orou recalls, "I felt ashamed that I had to bear this failure, and I imagined that the child's condition would worsen, as we learned during the training. I was miserable and helpless but I had tried everything and the father would not listen." Despite his personal feelings, in an effort to create project sustainability, Orou must receive payment for distributing these medications, despite the low cost per treatment.

Within a few days, Orou received a surprise visit from the father, who came to apologize for his earlier behavior. He explained further that his child's diarrhea had persisted and that his condition had completely deteriorated. The child became unresponsive and was barely able to breathe. Realizing his child's life was in danger, the father was forced to take him to the nearest city hospital, about 30 miles away, where he was obliged to spend 25,000 FCFA (about $50 USD) for treatment.

Since this unfortunate event, the father's attitude towards seeking community-case management has changed along with many others within the village of Kpangnaroung. Within his community, Orou demonstrated the future value that community liaisons, trained in CCM, can have on several levels of a family's health, including financially. He now uses this lesson as an argument for beginning immediate care of sick children within his community.

Community liaisons, such as Orou Assoumanou, are showing every day how their services have immediate effects on the health of children and allow families to spend less on health care costs. Additionally, his story shows that inlets are being made into changing the mindsets of even the most rural populations of this West African nation. Indeed, the implementation of BASICS community-case management strategy offers the hope of reducing morbidity and mortality among children under five in the near future, throughout Benin.

Success Stories
Story from Mrs. Bangame Thérèse from Gah Baka Dononrou village

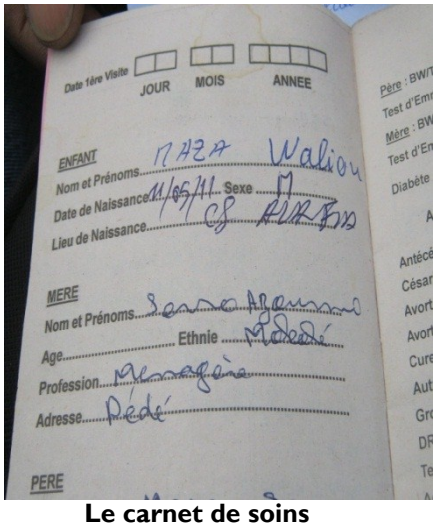
My two years old boy suffered from malaria and I brought him several times to Tchaourou health center without satisfaction. I have been informed by my neighbor in the village of the presence of a RC with the assurance that he provides quality services for children from 0 to 5 years. I oriented myself to the RC with my child after another unsuccessful attempt at Tékparou health center. After 5 months of repeated failed treatments at the health centers with just one month of treatment with the RC, it is now one year that my child hasn't experienced any relapse with the cost of treatment of FCFA 1500 with the RC while I spent more than F CFA 25000 at the two health centers.

Story from Mrs. Kamahana Léa from Gah Baka Dononrou village
My four years old daughter had a strong and frightening fever at 4:00 AM. My husband and I brought her to the RC at this late hour of the night. The RC spontaneously woke up and expressly examined my sick child. He wrapped her with a wet towel for several minutes, gave her some medication and observed her until the morning before referring us to Tchaourou health center.
At the health center, the nurse who welcomed and consulted us revealed that the first care provided by the RC saved our child who was infected.

Story from Mrs. Lactè Madeleine from Gah Baka Dononrou village
It was about my two years old boy who had malaria and was treated at Guinérou and Tèkparou health centers. I unsuccessfully spent about FCFA 5500 for the care for a week. But the treatment provided by the RC cost only FCFA 500 and my child recovered well. It has been three months now and my child has no more any health problems.

SUCCESS STORY

MAZA Waliou est né le 11 mai 2011 à la maternité du Centre Communal de Santé de Gansosso à Kandi. Ses parents vivent à Pèdè, un village situé à 07 kilomètres de kandi, sur la route de Malanville.



Le carnet de soins

MAZA Waliou le 14 avril 2012 à Pèdè

Le 10 mars 2012, les parents de Waliou accourent chez BIO TAMOU Elie, un des deux relais communautaires du village de Pèdè, avec leur bébé Waliou.

Selon le témoignage du père, Le petit Waliou souffrait depuis environ un mois de fièvre, de maux de ventre, de diarrhée et de vomissements par intermittence. Contre tous ces maux, ils ont utilisé des remèdes traditionnels qui sont demeurés inopérants. Le jour où ils l'ont emmené chez le relais communautaire, ils étaient désespérés car le bébé avait eu une convulsion et comme le relais communautaire BIO TAMOU Elie est un parent ils ont eu le courage de se présenter à lui.

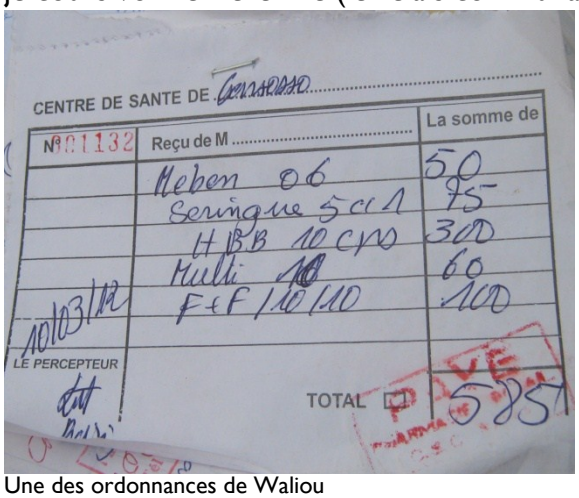
De la relation des faits par notre relais communautaire, il ressort ce qui suit : Le bébé était léthargique, il présentait tous les signes de gravité, son périmètre brachial était dans le rouge en plus de la fièvre. Comme traitement, le RC a fait un enveloppement humide, administré du paracétamol et donné aux parents du CTA à n'utiliser qu'au cas où les agents de santé le prescriraient. Il a enfin référé l'enfant en urgence au centre de santé de Gansosso et veillé personnellement à leur départ.

Au centre de santé de Gansosso à Kandi, l'enfant a été pris en charge en urgence et il a été sauvé de justesse. Aujourd'hui il se trouve encore sous plumpy-nut et a recouvré largement sa santé.

De gauche à droite, le RC BIO TAMOU Elie et le père de Waliou

Waliou en train de téter

Le témoignage que la mère de waliou m'a fait ce samedi 14 avril 2012, a été succinct mais émouvant. " J'ai vu mon enfant à un doigt de la mort. Mais grâce à Dieu, le frère Elie me l'a sauvé. Je connais maintenant tous les signes de danger et de gravité et au moindre signe je cours voir le frère Elie (le relais communautaire) "



Une des ordonnances de Waliou

Waliou donnant son carnet de soins au relais communautaire

RECIT RECUEILLI PAR LE CP HANDICAP-PLUS KANDI
Hyacinthe EZIN- WOTA

Rapport de la célébration du 20ème anniversaire de l'agence américaine pour le développement International (USAID) au Bénin

Dans le cadre de la célébration du vingtième anniversaire de l'assistance de l'USAID au Bénin, SE James Knight, Ambassadeur des Etats-Unis d'Amérique près le Bénin a présidé le jeudi 06Octobre 2011 à l'hôtel Soleil d'Afrique à Parakou, aux côtés du directeur de cabinet du Ministre des Enseignements Maternel et Primaire, du Préfet des départements du Borgou et de l'Alibori, à la cérémonie officielle marquant cet anniversaire, en présence du 1er adjoint au Maire de Parakou et de Monsieur Kevin Armstrong, Directeur résident de l'USAID.

Il faut souligner que l'USAID/Bénin a investi plus de 124 millions de dollars US dans les domaines de la santé maternelle et infantile, le paludisme, la planification familiale et le VIH/SIDA. Ces interventions ont profité principalement aux enfants de moins de cinq ans, aux nouveaux –nés et à leurs mères.

Cette célébration a eu lieu en présence des directeurs techniques des secteurs de l'éducation, des services sociaux et de la santé, de nombreux partenaires techniques et financiers (Coopération Suisse, UNICEF, UNFPA …), des agences d'exécution (World éducation, PISAF, MSH….), des représentants ONGs Locales et de quelques bénéficiaires.

MSH partenaire privilégié de l'USAID dans le secteur de la santé a participé activement à l'organisation de cet anniversaire à travers le projet BASICS. Ainsi, des photos résumant les activités de BASICS sur le terrain ont orné la salle de conférence où a eu lieu les festivités. BASICS a exécuté un sketch dans lequel deux relais communautaires provenant de la zone sanitaire de Tchaourou ont simulé la prise en charge d'un enfant malade au cours de la cérémonie.

BASICS a eu également l'honneur de recevoir en son siège, quartier Ladjifarani, la visite de l'ambassadeur des Etats-Unis, le directeur de l'USAID et quelques membres du staff de l'USAID le vendredi 07 octobre 2011. Une brève présentation des membres de l'équipe et du projet a été faite en présence des autorités locales de Parakou.

L'ambassadeur des Etats-Unis et sa délégation ont voulu ainsi exprimé le grand intérêt porté aux réalisations du projet BASICS. Il a chaleureusement remercié et encouragé chaque membre l'équipe de BASICS pour sa contribution. Pour lui BASICS contribue manifestement à soutenir l'action de l'USAID dans le secteur de la santé au Bénin.

APPENDIX 11: PROJECT MANAGEMENT

Human Resources and Staff Management

While the morale, cohesion and working relationships of the grantee were good in the latter two years of the project, they was a major problem in the first year of the project delaying effective implementation of project activities. Apparently a constant state of tension existed between senior management during the first year of the project. We do not have any objective evidence as to the cause of this tension. Apparently the family of the Chief of Party was based in Cotonou and he regularly commuted between there and the Project Office in Parakou, 6 hours drive away each week. Whatever the underlying causality all the original senior management, Chief of Party, Financial, Grants and Office Managers resigned within the first year of the project. Only when the current Chief of Party was engaged did project activities proceed smoothly and to the same extent as originally planned. Overall all planned project activities were achieved as per project indicator table and reports but without this high staff turnover in the early months of the project more may have been able to be achieved.

Once the original managers left and their replacements engaged, there was no important staff turnover and working relations were good and productive for the remainder of the project. There was no transitional plan for local staff, although all had good skills and should be able to find work locally if available.

Planning

Annual planning took place in 2011 and 2012 based on an evaluation of the project achievements from the previous year and project objectives. The plans were revised on the basis of the available budget and activities adjusted accordingly. Partners and NGOs were consulted to get input into the definitive activities for a particular year. Ongoing planning with MOH and NGOs was characterized by the collaborative consultative strategy used by the COP, as commented on in many Key Informant interviews. Informal consultation by phone was a regular feature. As a result of these approaches operational planning presented limited problems.

Supervision of Project Staff

The supervision system worked well in the latter two years of the project. The Chief of Party supervised Technical Advisors and the Financial Manager. The Financial Manager supervised the Grant and Office Managers. The Chief of Party was widely known for his collaborative approach to planning and supervision and so all benefitted from this. There is no project planned to directly follow on from this one and no plan to institutionalize supervisory processes.

Financial Management

No operational shortage of funds occurred as planned activities were adjusted according to funds available. The original budget had to be adjusted to account for the new COP being an expatriate as opposed to the original one- someone originally from Benin returning from overseas. Grantees, the five NGOs were trained in budgeting and forecasting such that they could manage their own funds.

Logistics

The main logistical problem for the project was that project vehicles could not be used for the first 5 months and so vehicles had to be rented for that period. The reason for this problem was that originally the vehicles had US government registration plates that prevented the vehicles from being used in Benin. No drugs were supplied through the project so logistical problems to be dealt with were mainly in relation to training and provision of written materials.

Monitoring & Evaluation, Information Management

The project had a good information system that monitored all project activities. As described in the main body of the report, the project developed, and spread to all its 1048 trained RCs, a good standardized community based system that regularly notified all cases of malaria, pneumonia and diarrheal diseases seen by RCs, their health promotion activities, home visits and drug usage and needs. This system linked the RCs to their local health center, the MOH Health Zone managers and the BASICS project office. This system provided good ongoing reporting of daily RC activities. The need to include this system in the national health information system is mentioned in the main report. As is also the need to include the project's computerized database in the local Health Zones system as the project has planned to do. In addition all 5 NGOs working with the project provided monthly reports. The project itself reported to USAID Benin on a quarterly basis and annually describing all activities and progress against project objectives. All project facilitated training was also reported and evaluated. As described above under planning, the findings of all the above were evaluated in and ongoing manner and incorporated into operational and annual planning.

Every three months the project met will all partners and NGOs in each Health Zone to coordinate and plan activities for the next period and to report back on achievements and needs identified during the past period. The personnel of all 4 NGOs interviewed, that of Africare and HZ management in two zones, all remarked on the ongoing benefit of this cooperation and feedback. An example of the ongoing benefit of this, as described by GRADE personnel, was that, after the need was raised by a NGO representative at a quarterly meeting, a road was repaired through MOH influence, to allow RC, EPI and community mobilization activities to take place.

Through the above collaboration and from the results of the focus group interviews and key informant interviews we conducted, there is clear appreciation of the achievements of the project. However, at the community level, much of the interaction was through local NGOs and so the link to the project was not always appreciated by community members.

Several special investigations and reports were conducted through the project. We have mentioned the trial of SMS, use of RDT of malaria and collaborative approach to supervision in the main report. Through the NGO GRADE, the project conducted a small qualitative study to address the question of why male children are apparently brought to RCs more often than female children. This study was inconclusive. The project also performed a follow up investigation of the clinical skills of the RC. This investigation, a survey plus observation of clinical skills, provided the evidence that demonstrated the need to improve clinical skill supervision as embodied in the collaborative approach to supervision described in the report under Best Practices.

Technical and Administrative Support

The project received a range of external technical support covering project management and planning and pilot projects through MSH. All assistance was provided as needed. External support received is listed with dates in the table below.

Table 1 External Technical Support Received by Purpose and dates 2011, 2012

Dates	Purpose of Technical Assistance
July 20 – August 5 2011	Project Development Training
August 1 – 12 2011	Project Supervision Work plan III development
May 15-26 2011	Progress and team cohesion
May 2-15 2011	Communication
24 Oct – 10 Nov 2011	Internal Audit
Jun – 26 July 2011	Collaborative Pilot
15 Jan-5Feb 2012	SMS Pilot Study
Sept 11 – Jan 2012	Rapid Diagnostic Test Pilot

Management Lessons Learned

The lessons learned listed in the body of the report are of course also relevant to project management and will not be relisted here. The key additional lesson learned is the need to interview in-depth key project personnel, especially the Chief of Party, before their appointment.

APPENDIX 12: REFERENCES

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