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FINAL EVALUATION FOR NEHNWAA CHILD SURVIVAL PROJECT

**CENSUS-BASED IMPACT-ORIENTED METHODOLOGY FOR
COMMUNITY-BASED PRIMARY HEALTH CARE IN NIMBA COUNTY,
LIBERIA**

December 2013



Cooperative Agreement No. GHN-A-00-08-00011-00

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ACRONYMNS AND ABBREVIATIONS

ACT	Artusenate Combination Therapy
ANC	Ante-Natal Care
ARI	Acute Respiratory Infections
ART	Anti-Retroviral Therapy
BCC	Behavior Change Communication
BCG	Bacillus Calmette–Guérin (Tuberculosis)
BF/EBF	Breastfeeding/Exclusive Breastfeeding
BLSS	Basic Life Saving Skills
BPHS	Basic Package of Health Services
CBFPI	Community-Based Family Planning Initiative
CBIO	Census Based Impact-Oriented
CCM	Community Case Management
CDC/CHC	Community Development Committee/Community Health Committee
CGV	Care Group Volunteer
CHO	County Health Officer
CHT/NCHT	County Health Team/Nimba County Health Team
CHW	Community Health Worker
CSHGP	Child Survival and Health Grants Program
DHS	Demographic and Health Survey
DIP	Detailed Implementation Plan
DPT	Diphtheria-Pertussis-Tetanus Vaccine
EOP	End of Project
EPI	Expanded Program on Immunization
FGD	Focus Group Discussion
FP	Family Planning
gCHV	General Community Health Volunteer
GUMH	Ganta United Methodist Hospital
HBLSS	Home Based Life Saving Skills
HF	Health Facility
HIS/HMIS	Health Information Systems/Health Management Information Systems
HIV	Human Immunodeficiency Virus
IMCI	Integrated Management of Childhood Illness
IPT	Intermittent Presumptive Treatment
ITN/LLIN	Insecticide Treated Net/Long Life Insecticide-Treated Net
KPC	Knowledge Practice and Coverage Survey
LDHS	Liberia Demographic and Health Survey
LOE	Level of Effort
LQAS	Lot Quality Assurance Sampling
LMIS	Liberia Malaria Indicator Survey
LSC	Life Saving Club
MNC	Maternal and Newborn Care
MNCH	Maternal, Neonatal and Child Health
MOHSW	Ministry of Health and Social Welfare
MTE	Midterm Evaluation
NACP	National AIDS Control Program
NCSP	Nehnwaa Child Survival Project
NDS	National Drug Supply
NGO	Non-Governmental Organization

NHP	National Health Plan
NMCP	National Malaria Control Program
ORT	Oral Rehydration Therapy
PHC	Primary Health Care
PMI	President's Malaria Initiative
PMTCT	Prevention of Mother to Child Transmission
PPC	Post-Partum Care
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
POU	Point of Use
SBC	Social and Behavioral Change (Communication)
TTM	Trained Traditional Midwife
UNFPA	United Nations Population Fund
UNICEF	United Nations Fund for Children
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WAT/SAN	Water and Sanitation
WHO	World Health Organization
WRA	Women of Reproductive Age



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Photo courtesy of Jean Capps

NCSP Staff conducting focus group discussion with Trained Traditional Midwives

Key Findings:

- Increase in skilled delivery from 23% to 82%;
- Increase in four or more ANC visits from 25% to 75%;
- Increase in children receiving ORT for diarrhea from 48% to 83%; POU water treatment and zinc treatments increased but did not reach targets
- Increase in children under 2 sleeping under a LLIN the night before from 46% to 99%;
- Increase in use of modern methods of family planning from 2% to 60%; and
- Households reported appropriate hand washing behavior from 0.3% to 82.7%
-

FINAL EVALUATION FOR NEHNWAA CHILD SURVIVAL PROJECT – EXECUTIVE SUMMARY

This project was funded by the U.S. Agency for International Development through the Child Survival and Health Grants Program.

The Curamericas Child Survival Project “Nehnwaa” in the New Grant category was implemented in Bain, Garr, Gbein Clans (subdistricts) and the town of Ganta in northwest Nimba County, in the north-central region of Liberia. Table I below includes project beneficiary estimates for the first and last year of the project.

Ganta United Methodist Hospital (GUMH), a provider of curative and community health services in Nimba County since 1922, was the major project partner and was responsible for most of the on-site project implementation, including hiring and supervision of all field staff; in-country monitoring and fiscal management; and coordination with the Ministry of Health and Social Welfare (MOHSW), Nimba County Health Team (CHT), and other key stakeholders. “Nehnwaa” means “struggling on behalf of children” in the local Mano language and signified the partnership of Curamericas, GUMH, CHT and the communities themselves. The Nehnwaa Project Final Evaluation took place in August and September 2013 and used mixed quantitative and qualitative methods including a 30 –cluster randomized cluster survey of beneficiary mothers of children under 2 years of age, key informant interviews, community Focus Group Discussions (FGDs) and review of project and relevant other documents. The purpose of the Nehnwaa Child Survival Project (NCSP) is to reduce infant, child and maternal mortality and morbidity by increasing coverage of evidence-based interventions in Maternal/Newborn care (MNC), Immunizations

(EPI), Integrated Management of Childhood Illnesses (IMCI) (includes diarrhea, pneumonia, malaria and child feeding), HIV, and Water and Sanitation (WatSan).

Table I: Total and Direct Beneficiary Populations of Nehnwaa Child Survival Project

	Total Population	WRA (15-49)	Under five Children	Under 12 Months	12-23 Months	24-59 Months	Total Beneficiaries
2009	149,322	34,344	25,385	5,973	5,525	13,887	59,727
2013	137,005	39,472	28,124	4,803	5,536	17,785	67,596

Ganta United Methodist Hospital was the major implementer of project interventions supported with capacity building, technical assistance, commodities and financial support from Curamericas Global and the Nimba County Health Team (NCHT). Additional complimentary activities in Family Planning (FP), Community Case Management (CCM), and WatSan infrastructure were supported through other donor programs.

Project strategies were designed to increase access to the Ministry of Health and Social Welfare's (MOHSW) Basic Package of Health Services (BPHS) and strengthen links with health facilities (HF) using four mobile Primary Health Care (PHC) teams that provided community-based health services to 120 underserved communities within Ganta Hospital catchment area communities and non-GUMH communities. Access to care for life-threatening conditions was to be enhanced with community-financed transport plans via "Life Saving Clubs" (LSCs) and strengthening communication links for emergency transport by providing cell phones to General Community Health Volunteers (gCHVs), especially for use in obstetrical emergencies. Increased equity was supported using the Census-Based Impact-Oriented (CBIO) methodology with mapping and community registers to ensure every beneficiary was identified and included in the project's Health Information System (HIS) to monitor individuals and ensure they received key health behaviors and services. The CBIO also tracked key events and provided data for participatory surveillance of vital events including births and deaths. Verbal autopsies followed up on circumstances leading to maternal and child deaths for analysis and feedback to communities. Demand for health services was supported through multi-media and multi-messenger Behavior Change Communication (BCC) messages targeting both genders, strengthening community structures (gCHVs, Trained Traditional Midwives (TTMs), Community Development Committees and Community Health Committees (CDC/CHCs)) and extending reach to all households through volunteers (Care Groups, Water Committees, etc.). BCC activities corresponded to findings in the Barrier Analysis used for formative research following findings from the baseline survey. Additional support from USAID's Flexible Fund via World Learning supported integration of Family Planning (FP) services into the NCSP through a fixed-site clinic at GUMH and community based services in the Community Based Family Planning Initiative (CBFPI) from 2011 to 2012 that was sustained until 2013 by integrating FP with Expanded Program on Immunizations (EPI) and FP services in the program. Radio messages supported through the NCSP, Government of Liberia and other programs were linked to and reinforced by BCC activities in the community.

Measures to sustain improved behaviors and maintain coverage were primarily taken through developing social capital and human resources by training and providing supervision to gCHVs, TTMs, adapting the Care Group Model and using a cascade structure of Care Group Volunteers (CGVs). Activities were linked with the existing community political structure (CHC, Town Chiefs) as a way to include men and engage influential community members to support improved behaviors.

The purpose of the evaluation is to determine the extent to which the NCSP met its coverage targets in key child survival and maternal health indicators determine which elements of the program contributed to achieving results, and determine best practices and lessons learned to guide future programs in Liberia and in other areas with poor and disadvantaged populations. The evaluation used a participatory methodology that included mixed quantitative and qualitative methods and participatory consensus-building analytical methods followed by stakeholder debriefings with discussion at the project site and in Monrovia. The evaluation fieldwork followed the 30-cluster randomized Knowledge, Practice, and Coverage (KPC) survey of 300 beneficiary mothers of children under the age of 2 years and was led by an external evaluator with extensive experience evaluating similar programs. Findings are largely from self-

report but were triangulated by data from key informant interviews, Focus Group Discussions (FGDs), health facility and gCHV service statistics, and data from other surveys and reports.

Evaluation Questions

1. *To what extent did the Nehnwaa Child Survival Project accomplish and/or contribute to the following goals and objectives, as stated in the DIP?*
2. *Did the project's innovations decrease barriers to accessing health services?*
3. *How did the project further the goals of the MOHSW in its rebuilding of the Liberian health system? Particularly:*
 - a. *What impact did the project's innovations and key outcomes have on policy changes within the Liberian health system?*
 - b. *Which elements of the project have been or are likely to be sustained or expanded (through institutionalization, policies, etc.)?*

Findings

In all 120 targeted communities the project:

- Conducted community census and established community registers
- Established or updated skills of gCHVs and TTMs
- Established Care Groups of 10 volunteers
- Assisted the County Health Team's outreach for immunization, family planning and Maternal, Newborn and Child Health (MNCH) services.
- Developed Emergency Obstetrical Care referral and transport system with mechanisms for sustainable support after the project.
- Leveraged the NCSP to secure additional funding from USAID's Flex Fund to strengthen family planning services both in the community and a new fixed site at GUMH
- Secured donor support and community support for well and latrine building some communities

The final KPC survey found the project had met, and in some cases significantly exceeded project targets. Selected achievements included:

Increase in skilled delivery from 23% to 82%;

Increase in four or more ANC visits from 25% to 75%;

Increase in three essential newborn care elements from 34% to 86%;

Increase in children under 2 with fever receiving ACT within 24 hours from 2% to 86%;

Increase in children under 2 sleeping under a LLIN the night before from 46% to 99%;

Increase in use of modern methods of family planning from 2% to 60%;

Increase in appropriate pneumonia care seeking from 43% to 97%;

Increase in measles vaccination coverage from 45% to 97%;

Increase in children receiving Zinc for diarrhea from 6% to 31%;

Increase in children receiving ORT for diarrhea from 48% to 83%.

By the end of the project there were 120 General Community Health Volunteers (gCHVs), 128 Trained Traditional Midwives (TTMs), and over 1,700 Care Group Volunteers (CGVs) in 120 communities that all had modes of communication for transport in case of obstetric emergencies and access to Life Saving Clubs (LSCs) with funds to support care seeking for high risk health conditions.

Conclusions

The NCSP was successful in significantly increasing coverage in multiple evidence-based child survival and maternal care interventions and also demonstrated that family planning can be successfully integrated into community-based MNCH programs. Behavior Change Communications targeting the key health behavior determinants found in Barrier Analysis supported health promotion and community-based health care implementation by community agents (gCHVs, TTMs and CGVs).

The project intended to accomplish a 60% reduction in the U5 mortality rate over baseline by the end of project (EOP) by addressing the major causes of death - obstetric complications, neonatal conditions, malaria, pneumonia, diarrheal disease, measles, and HIV by increasing the coverage of key high-impact evidenced-based interventions needed to attain those impacts. The Lives Saved Calculator was used to project the impact of increases in specific proven behaviors for an estimated cost of \$3.70 per beneficiary per year.

EVALUATION METHODOLOGY AND QUESTIONS

EVALUATION METHODOLOGY

Quantitative

The new Curamericas Technical Backstop and Nehnwaa Project staff led a randomized 30-cluster survey of 300 mothers of children under 2 years in the project catchment area. The results are provided in the KPC Report in Annex XX and summarized in the report findings. Survey results were tabulated and inserted in a table comparing results from the 2009 baseline and 2011 Midterm Evaluation surveys that used the same methodology. Quantitative assessments of a survey of Women of Reproductive Age (WRA) conducted at the baseline of the Community Based Family Planning Initiative (CBFPI) were used to triangulate the trend of contraceptive use with KPC findings. A limitation of this comparison was the KPC includes only mothers of children under 2 years of age and the CBFPI used all WRA in the denominator. Another limitation in both calculations is women currently pregnant or *who wish to become pregnant* are not excluded from the denominator; however, other surveys (such as the DHS) do not exclude them in their calculations either.

Qualitative

Project managers provided the team leader with an extensive list of field sites representing, from the perspective of the project team leaders, communities that represented high, low and “typical” performance and results during the project. The information included population and distance to closest health facilities. From the list, the team leader independently selected 12 communities, most located more than the distance considered to have geographic “access” (generally considered to be within 5 km) to health facilities but included two communities near GUMH because of the challenges of implementing community-based programs in more “urban” environments. Four teams of 4-5 members with at least one member not employed by Curamericas or GUMH were formed and made visits over a three-day period. In each community, the chief or chief’s representative was contacted and he/she provided the entry point for field interviews and Focus Group Discussions (FGDs). FGDs were conducted with mothers of children under 2 years of age, Care Group Volunteers (CGVs), Community Health Committees (CHCs) and/or Community Development Committees (CDCs). Individual or group interviews were conducted with gCHVs and Trained Traditional Midwives (TTMs). Each interview or FGD used the same group of questionnaires that were compiled and piloted in a sample community prior to the field visits. Questionnaires were designed to triangulate findings from the KPC and FP surveys and elicit feedback on the factors that led to the changes measured in the quantitative methods.

Findings from the Midterm Evaluation (MTE) Report were of limited use to interpret the progress towards achieving program targets during the lifetime of the project. The CSP headquarters backstop did not participate in the evaluation. On the other hand, there were

only a few indicators measured at the MTE that were not consistent with a trend towards the results measured in the Final Evaluation. There were concerns about sampling and data collection methods

Project HMIS and Reports

Community Registers were reviewed during project visits, as were gCHV reports submitted to the project office and data compiled by team leaders of each intervention. In addition, project records on community-based human resources in which community health volunteers were active were assessed. Tabulations from 35 Verbal Autopsies were also reviewed. Family planning service register statistics from individual FP clients by age, gender and method selected provided evidence of FP service uptake at the GUMH static site. Additional information was obtained from commodity order forms.

Document Review

The 2009 Baseline Report (with KPC report), Annual Reports, Midterm Evaluation Report, Barrier Analysis, CBFPI report, the EPI-Family Planning Integration Report, Proposal for Community Case Management support to a private donor, and other relevant project documents were reviewed..

Comparison with Available Data

Relevant data for comparison was limited. The most recent DHS was conducted in 2007, prior to the beginning of the project. Data collection from the 2012-2013 DHS had been completed but not yet released. Relevant findings from the 2010 and 2012 Presidential Malaria Initiative (PMI) Malaria Indicator Surveys and FY2012 and FY2013 PMI Malaria Operational Reports were used.

Data Quality

Overall, with a few exceptions, tabulations from the three KPCs were consistent and the results were comparable. For a few indicators, radical (and probably unrealistic) trends from baseline to midterm were not analyzed and the extremely high level of Weight for Age (WFA) malnutrition at baseline that vastly exceeded levels even in the 2007 DHS when conditions were presumably worse were not explained in the documents and project staff working during that time had left the project. Verbal autopsies, along with their analysis, are a key component of the CBIO methodology and project staff could not produce more than a few reports (35), far fewer than the anticipated number of deaths over the lifetime of the project and were unable to provide adequate interpretation of them to ensure confidence that they were done correctly. While not necessarily a data quality issue, data from earlier surveys (2009 and 2011) were not archived adequately to allow the final evaluation team to access that data for secondary analysis or verify findings in earlier reports reflect the actual data. The Liberia MOHSW HIS data is not up to date, is facility-based, and not easily accessible for decision-making. GUMH data is used when appropriate for facility-based information but only referral information and FP service data from the clinics is available for project-related data.

Participatory Planning, Analysis and Dissemination

The evaluation team included several members of project staff and managers, stakeholders, headquarters staff, and external consultant team leaders. Participatory planning methods were

used in community selection, creation of data collection tools, interpretation of quantitative findings and consensus findings, conclusions and recommendations. Final results were shared in stakeholder debriefs at the project site in Ganta and in Monrovia.

Limitations of Evaluation Methodology

Qualitative methods rely on self-reported behavior, however the use of multiple informants and triangulation with quantitative findings balance possible subjectivity and limit participants from “providing the answers the interviewer want to hear.” Including at least one external member on each team encourages confidence in transparency. Although field visit time was limited, selecting diverse sites across the project catchment area and sending teams to sites located apart from each other discouraged teams or individual members from influencing each other. Splitting teams into pairs encouraged accurate translation.

EVALUATION QUESTIONS

The major questions from the Evaluation Statement of Work are listed below. Within each question additional questions related to specific project interventions were included related to the major question. For the entire list, including the sub-elements of each question, along with methods used, sample size and limitation see the table in Annex IX.

1. *To what extent did the Nehnwaa Child Survival Project accomplish and/or contribute to the following goals and objectives, as stated in the DIP, e.g increasing access to the Basic Package of Health Services (BPHS), increasing equity with the Census-Based Impact-Oriented (CBIO) methodology and increasing demand for health behaviors and services with multi-media multi-messenger BCC?*
2. *Did the project’s innovations described in the DIP decrease barriers to accessing health services? How were results achieved? What role did complementary projects play in enabling high coverage?*
3. *How did the project further the goals of the MOHSW in its rebuilding of the Liberian health system? What impact did the training of Trained Traditional Midwives (TTMs), promotion of home-based life-saving skills, and ANC/PPC service provision have on rebuilding the Liberian health system?*
4. *What were the key strategies and factors, including management issues, that contributed to what worked or did not work? What were the contextual factors such as socioeconomic factors, gender, demographic factors, environmental characteristics, baseline health conditions, health services characteristics, etc. that affected implementation and outcomes? What capacities were built, and how?*
5. *Which elements of the project have been or are likely to be sustained or expanded (through institutionalization, policies, etc.) What role did key beneficiaries and agents of change have on sustainability of the project?*
6. *Analyze the elements of scaling up and types of scaling up that have occurred or could likely occur. Analyze the costs and resources associated with implementation relevant for replication or expansion as well as estimated cost per beneficiary.*

Annex IX presents a table that includes Final Evaluation Methods, Sources of Information, Sample Sizes and Methods.

PROJECT BACKGROUND

The NCSP interventions and Level of Effort (LOE) were: Maternal/Newborn Care (MNC) - 30%; Malaria – 20%; Control of Diarrheal Disease – 15%; Pneumonia Case Management – 10%; HIV -15%; Immunization – 10%. Additional LOE for Family Planning (integrated into MNC) was added in 2011.

Ganta United Methodist Hospital (GUMH) was the implementing partner and provided on-site project implementation, including supervision of all field staff; in-country monitoring and fiscal management; and coordination with the Ministry of Health and Social Welfare, Nimba County Health Team, and other key stakeholders. The project was known locally as the Nehnwaa Project. “Nehnwaa” means “struggling on behalf of children” in the local Mano language.

Ganta United Methodist Hospital (GUMH) is a missionary hospital in operation since the 1920’s and the only fully-functioning hospital in Nimba County. Its community primary health care program offers immunizations; health education on the prevention and treatment of disease; distribution of ITNs; training of Community Health Volunteers, TTM’s, and HIV peer educators; and a Water-Sanitation project for wells, pumps, and latrines. The GUMH dispensary doubles as a supply point for The Global Fund (GFATM) ARV drug and ITN distribution in partnership with the National AIDS Control Program (NACP) and for the PMI-Liberia in partnership with the National Malaria Control Program (NMCP) for ACT, ITNs, and SP/Fansidar. GUMH also receives periodic volunteers and donations from abroad to support their programs. The MOHSW was represented in the project area through the Nimba County Health Team (NCHT). At the time the project was designed, the NCHT had relied heavily on several international NGOs to operate its health facilities since the war began almost two decades earlier. The nature of NGO support has changed over time from direct service delivery during the war to current performance-based contracts managed by the MOHSW. Some NGOs have recently ceased operations and turned over the clinics that they were operating to Africare and International Rescue Committee. Other NGOs, such as PLAN International also worked in Nimba Country during the lifetime of the project. PLAN distributed Global Fund-supported ITNs in 2012. The Final Evaluation team acknowledged that several project results were possible because of the clinical services and commodities provided by the NCHT and other NGOs.

The NCSP team collaborated extensively with the USAID mission and presented at a meeting organized by MCHIP and USAID early in 2013. At the time of the evaluation, USAID mission staff that had worked with the project over a long period of time had left Liberia and the maternal health advisor was out of the country on leave so they were unavailable for comment on the project. MCHIP also trained project staff as Trainers of Trainers for inserting contraceptive implants. The NCSP combination of interventions supports USAID Liberia’s Health Offices contributions to Liberian national MDG4 and 5, PMI and Roll Back Malaria (RBM) targets and PEPFAR targets, especially related to Prevention of Mother to Child Transmission (PMTCT).

Major strategies to achieve coverage were: 1) increase access to the Basic Package of Health Services by a) deploying four mobile Primary Health Care Teams to bring health services into the communities; b) by helping communities devise community transport plans financed by community financial clubs via LSCs; and c) deploying an obstetric emergency response system utilizing cell phones and renewable energy cell-phone chargers; 2) increase equity using the Census-Based Impact-Oriented (CBIO) Methodology, that includes community mapping, census, and participatory surveillance of vital events and health services with Community Registers, to ensure those most in need are reached; 3) increase demand for health behaviors and services with multi-media multi-messenger BCC utilizing the BEHAVE framework (now called Designing for Behavior Change) and Barrier Analysis to identify key behavior determinants; 4) ensure quality with the systematic application of continuous quality improvement practices; and 5) ensure sustainability by developing community social capital and human resources that included Community Health Volunteers (CHVs), Trained Traditional Midwives (TTMs), and approximately 10 Care Group Volunteers (CGVs) in each community.

Behavior Change Communication (BCC) approaches were based on Barrier Analysis (BA) conducted after the Knowledge, Practices and Coverage (KPC) baseline survey at the beginning of the project that found the following major barriers to key health behaviors: 1) Access to health services, particularly at local clinics; 2) Action Efficacy, or not believing that the health behavior/action could prevent or treat the disease or condition; 3) Social Acceptability such as resistance from peers and family within the local culture; 4) (Perceived) Disadvantages of adopting a new behavior (such as conveniences and costs in time, money, and effort required to practice the behavior, and 5) Divine Will or the belief that the disease or condition was divinely willed and **should** be accepted. Project Behavior Change Communication approaches (BCC) corresponded to address these barriers.

Key Activities

Major project activities included:

- Conducted baseline, midterm and final quantitative surveys. Baseline findings informed formative research for Barrier Analysis to design BCC Strategies.
- Train and deploy health workers, including four Primary Health Care Teams plus one Trained Traditional Midwife (TTM), one Community Health Volunteer (gCHV), and 10 Care Group Volunteers (CGVs) in each Community
- Establish a Health Information System (HIS) using CBIO methodology, linking the communities with GUMH and GUMH with the MOHSW
- Establish an emergency communication/transportation network via cell phones and radios with solar/hand-crank chargers and all-terrain vehicles sustained through Live Saving Clubs (LSCs)
- Increasing demand for health behaviors and services with multi-media multi-messenger BCC via Care Groups made of Peer Mother Educators
- Install wells and latrines in selected communities and towns (with matching resources from communities and private donors.)
- Develop and implement a set of Behavior Change Communication (BCC) tools and methods related to the project's goals and objectives and Primary Health Care intervention teams.

- Implementation of additional community-based and fixed site family planning services to men and women of reproductive age from 2011 to 2012, followed by FP-EPI integration to sustain achievements afterwards.

Key determinates that emerged from the Barrier Analysis conducted after the baseline survey are included in the first column of the table below. In context of the NCSP, these determinants are defined in the following list. Other determinants/key factors related to health behaviors are also included in the table along with corresponding NCSP activities intended to address them.

- Access to health services, particularly at local clinics;
- Action Efficacy, or not believing that the health behavior/action could prevent or treat the disease or condition;
- Social Acceptability such as resistance from peers and family within the local culture;
- (Perceived) Disadvantages of adopting a new behavior (such as conveniences and costs in time, money, and effort required to practice the behavior), and
- Divine Will or the belief that the disease or condition was divinely willed and should be accepted. Project Behavior Change Communication approaches (BCC) corresponded to address these barriers.

Table 2: Key Determinants and Project Activities Based on Barrier Analysis

DETERMINANT BARRIER	KEY OBJECTIVE	NEHNWAA PROJECT ACTIVITIES
Access	Increase <i>access</i> (to service, treatment, or commodity)	Distributed commodities (e.g., ITNs) PHC service delivery to communities Established “Life Saving (financial) Clubs” to mobilize financial resources for emergency transport Improved transportation Strengthened referrals to local health facilities
Self-Efficacy	Increase <i>skills</i> (ability to perform a preventive behavior or problem-solve difficulties)	Skills Building: taught and provide opportunities to practice problem-solving skills, to overcome barriers
Cues for Action	Increase <i>ability to remember</i> steps of the behavior	<u>Reminders</u> : Posters, pictures, songs, dramas, radio shows, checklists
Perceived Risk/Susceptibility	Increase knowledge (of the risk of contracting the illness)	Health education from PHC Team, CHVs, and CGVs all using appropriate media (village talks, home visits, posters, pictures, songs, dramas, radio shows, flip-charts, etc.). Problem-solving with PHC Team, CHVs, and CGVs to overcome disadvantages, improve skills, and achieve social_acceptability.
Perceived Severity	Increase knowledge (of the severity of the illness)	gCHV, TTM, CGV and CHC training for community health education on danger signs for child illness and pregnancy
Perceived Disadvantages	Increase knowledge (of the benefits of the health behavior)	Community BCC on overcoming barriers to access and adopting practices. LSC to address economic stress of health expenses.

		BCC and counseling on FP side effects.
Action Efficacy	Increase knowledge (of the effectiveness of the health behavior to prevent the illness)	BCC through community structures about causes of key health conditions and relationship between individual/household uptake of behaviors and desired outcomes.
Social Acceptability	Increase knowledge of the entire community of the benefits of the health behavior (or harmfulness of traditional practices)	Inclusion of all sectors of community, especially men as key influencers within the household and community leaders that influence attitudes about change. Senior women included as TTMs and CGVs.
Divine Will	Increase belief that God wants us to live and prevent disease	Directly addressed perceived influence of witchcraft as cause of illness with education about causes of major illnesses and maternal/newborn complication and actions to prevent/cure illness/complications

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The Curamericas NCSP DIP included a calculation from the Lives Saved Calculator that projected over a 60% reduction in child mortality if coverage targets in key health behaviors were achieved. Those calculations did not include the significantly increased contraceptive prevalence rate ultimately achieved. Activities to achieve those increases were introduced in 2011 with additional funding. The table below and the KPC report in Annex VI document that almost all DIP project indicator targets were met or exceeded. For those indicators where the target was not achieved, significant increases were measured. A few commodity-dependent indicators (Point of Use (POU) water and zinc) increased, but were limited by supplies and possibly perceived risk. Those factors merit additional investigation. The table below provides major Inputs, Activities, and Outputs that contributed to Key Outcomes and compares final coverage measurements against project targets.

Table 3: Summary of Major Project Accomplishments

Objective #1.1: Increase access to antenatal care				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
Referral system ANC materials IEC and BCC Materials	Refer pregnant women for ANC at Health Facility Conduct ANC in community Conduct BCC presentation on the importance of ANC and Warning in Pregnancy	1,269 women referred to Health Facility and received four ANC visits. 1,739 pregnant women who received at least 4 ANC visits 5,630 total ANC provided 1,490 ANC BCC presentation provided 1,491 BCC presentations on warning signs in pregnancy	Increase in percentage of mothers of children 0-23 months who had four or more antenatal visits with a skilled provider and were adequately counseled when they were pregnant with the youngest child. (from 24.7% to 49.0% at Midterm to 73.9% at final)	65% (Exceeded)
Objective #1.2: Increase access to skilled birth attendants				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
Birth plan system	Develop birth plan with pregnant women Promote Health Facility delivery during ANC	5,524 birth planning sessions held; 1,843 health facility deliveries; 1,840 by Skilled Birth Attendants; 3 by TTMs 1,051 home deliveries attended by TTM 0 home deliveries attended by SBA only	Increase in percentage of children age 0-23 months whose births were attended by skilled personnel. (from 22.7% to 26.6% at Midterm to 82.5% at final)	60% (Exceeded)
Objective #1.3: Increase access to safe, clean births				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
IEC and BCC Materials Trainers Delivery kits	BCC on Neonatal Warning signs BCC on Exclusive Breast Feeding (EBF) Train TTMs and provide delivery kits Observe/verify TTMs who using delivery kits	855 BCC presentations on neonatal warning signs; 1,161 EBF BCC presentations; 196 TTMs trained and received delivery kits; 862 births TTMs reported using their delivery kits during delivery	Increase in who received all three elements of essential newborn care: thermal protection,, clean cord care, and immediate and exclusive breastfeeding. (from 34.0% to 64.5% at Midterm to 85.9% at final)	60% (Exceeded)
Objective #1.5: Increase access to post-partum care				

Project Inputs	Activities	Outputs	Outcome	Target (Result)
IEC and BCC materials PPC Materials	Conduct BCC presentation on PPC Provide Postpartum Care within 2 days	1,366 PPC BCC presentations provided 2,613 PPC provided within 2-3 days 43 women referred for PPC within 2-3 days	Increase in percentage of mothers who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child. (from 9.3% to 17.2% at Midterm to 58.1% at final)	60% (Not Met)
Objective #2.1 Increase access to malaria treatment for children				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
ACT supply Referral system RDT supply	Provide appropriate Malaria treatment (ACT) in 24 hour CHV refer malaria cases to Health Facility to be appropriately treated	4,777 appropriate malaria treatment within 24 hours of fever; 4,381 RDT tests for malaria; 3,858 positive RDT tests for malaria; 513 negative RDT tests referred to hospital for microscopy; 6,547 total malaria episodes recorded; 375 CHV referrals to health facility within 24 hours of fever onset	Increase in percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with ACTs within 24 hours after the fever began. (from 2.4% to 22.1% at Midterm to 86.1% at final)	60% (Exceeded)
Objective #2.2 Increase access to and use of ITNs by U5 children				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
ITNs	Distribute ITN (limited) Verify/observe children 0-60 mos. are sleeping under ITN the previous night	179 ITNs distributed to U5 children by Nehnwaa; 18,918 mothers who report their children 0-60 months slept under ITN previous night	Increase in percentage of children age 0-23 months that slept under an insecticide-treated bed net the previous night. (from 46.0% to 79.0% at Midterm to 98.6% at final)	85% (Exceeded)
Objective #2.3: Increase access and use of ITNs by pregnant women				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
ITN Supply	Distribute ITNs Verify pregnant women slept under ITN previous night	1,180 ITNs distributed by Nehnwaa to pregnant women 4,953 pregnant women reporting sleeping under ITN previous night	Significant increase in percentage of pregnant women who sleep under ITN (37.7% at baseline to 65% at midterm to 98.3% at final).	N/A
Objective #2.4: Increase access to IPT for pregnant women				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
IPT supply IEC and BCC materials	Provide IPT to Pregnant women GCHVs refer Pregnant women for IPT during ANC BCC on Malaria to Pregnant women	2,527 IPT (first does only provided during pregnancy) 1,615 IPT (1 st and 2 nd doses) provided during pregnancy 1,355 ANC/IPT (1 st and 2 nd dose) provided during pregnancy 3,475 Malaria prevention BCC (CGVs and PHC team)	Increase in percent of mothers of children age 0-23 months who took an effective antimalarial during the pregnancy with the youngest child. (19.0% to 23.9% at Midterm to 96.3% at final)	60% (Exceeded)
Objective #3.1: Increase access to and practice of ORT and use of zinc supplements for diarrhea				
Project Inputs	Activities	Outputs	Outcome	Target (Result)

ORT supply Zinc supply IEC and BCC materials	Treat Diarrhea with ORT Distribute ORT Treat Diarrhea with zinc (PHC Team) Distribute Zinc BCC on Diarrhea and the importance of ZINC	2,526 proper diarrhea treatment provided with ORT; 3,192 episodes of diarrhea; 4,317 ORT distributed; 2,232 proper diarrhea treatment provided with Zinc; 26,046 Zinc distributed; 1,975 prevention BCC presentation	Significant increase in percentage of children age with diarrhea in the last two weeks who received ORS and/or recommended home fluids. (from 47.9% to 48% at Midterm to 82.7% at final)	85% (Not Met)
			Significant increase in percent of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements. (5.6% to 5.4% at Midterm to 30.9%)	50% (Significant Increase, but not met)
Objective #3.2.1 & #3.2.2: Increase practice of proper water treatment and storage				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
Chlorine/Other water treatment supplies IEC and BCC materials	Train household of children 0-59 how to treat water effectively Train household of children 0-23 how to store Water safely Conduct BCC presentation on water Conduct BCC on Water handling and storage treatment	4,537 households trained how to treat water 6,172 households trained how to store water 1,308 BCC sessions on water treatment provided 815 BCC and water handling and storage provided	Slight decrease in percentage of households that treat water effectively. (from 13.0% to 30.9% at midterm to 26.01% at final); Overall significant increase	60% (Significant Increase, but Target Not Met)
			Significant increase in percent of households storing drinking water safely. (11.7% to 30.9% at Midterm to 74.9% at final).	60% (Exceeded)
Objective #3.2.3: Increase practice of proper hand washing				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
IEC and BCC materials Trainers	Conducted BCC presentations and trained caretakers on hand washing with soap/ashes/fern	1,142 BCC on proper hand washing techniques provided 7,265 households that used soap/ashes/fern to wash hands	Significant increase in percentage of households w/caretaker appropriate hand washing behavior, from .3% to 65% at MTE to 82.7% at final)	60% (Exceeded)
Objective #3.2.4: Increase practice of proper feces disposal				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
Materials for latrine construction and rehabilitation Material for garbage pit construction Trainers	Construct and rehabilitate Latrines Establish Garbage pit BCC on waste and garbage disposal Observe/ verify safe feces disposal; Train children caretaker, WRA on safe feces disposal	269 latrines constructed & rehabilitated 412 garbage pit constructed 8,289 households of children 0-23 who reported practicing safe feces disposal	Increase in percentage of HH that disposed of the youngest child's feces appropriately the last time from 4.3% to 33.9% at MTE to 96.9% at final).	60% (Exceeded)
Objective #4.1: Increase access to HIV testing for pregnant women				
Project Inputs	Activities	Outputs	Outcome	Target (Result)

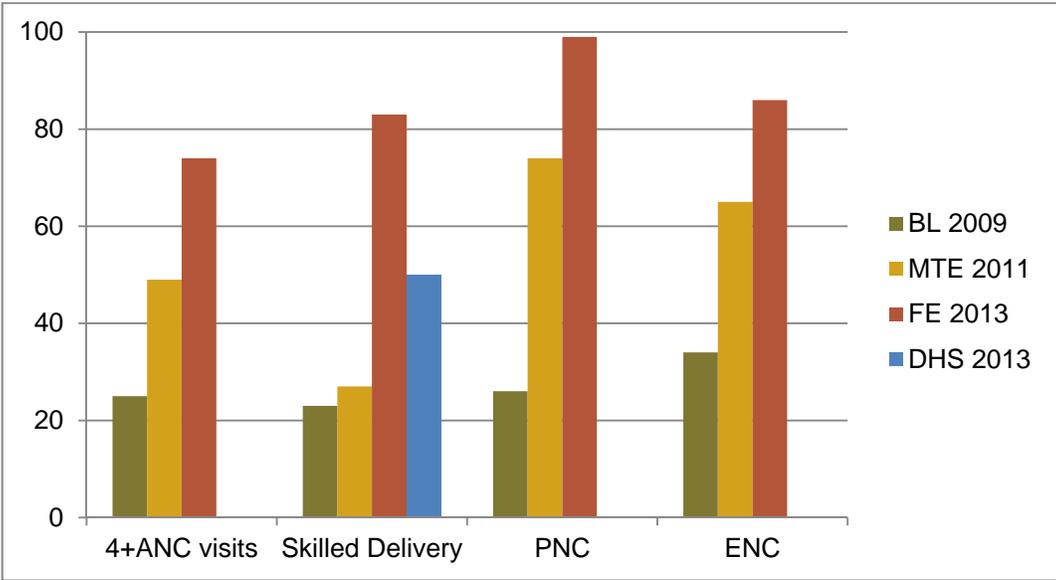
HIV testing kits IEC and BCC materials	TTMs refer pregnant women for VCT Perform HIV test to pregnant women during ANC visit Test women for HIV Provide BCC on HIV	2,901 pregnant women referred for VCT by gCHVs/TTMs in HF 2,876 pregnant women referred for VCT by gCHVs/TTMs with PHC team; 5,358 pregnant women tested for HIV 2,756 HIV test kits used for pregnant women	Significant increase in percentage of mothers counseled about HIV during the pregnancy with their youngest child tested, and received their results (from 20.3% to 68.1% at Midterm to 96.9% at final).	75% (Exceeded)
Objective #4.2: Increase access to PMTCT ARVs				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
HIV testing kits IEC and BCC materials Referrals for PMTCT	Enroll PW in PMTCT Refer to HF for PMTCT Provide PMTCT and HIV BCC	40 HIV positive pregnant women; 39 HIV positive pregnant women enrolled in PMTCT 1,628 HIV and PMTCT BCC conducted	Increase in the percentage of pregnant women with increased access to PMTCT (39 out of 40 HIV-positive pregnant women enrolled in PMTCT)	75% (Exceeded)
Objective #5.1: Increase proper care-seeking for pneumonia				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
Pneumonia treatment supplies IEC and BCC materials	Refer children to other clinic for treatment Provide proper pneumonia treatment (PHC Team) Conduct BCC presentation on ARI	5,307 episodes of pneumonia in children 0-59 mos; 98 children referred for treatment to H/F; 4,100 children treated for pneumonia by PHC team 2,017 ARI BCC presentations provided	Significant increase in percentage of children chest-related cough and fast and/or difficult breathing in past two weeks taken to an appropriate health provider. (42.8% to 66.0% at MTE to 96.6% at final).	70% (Exceeded)
Objective #6.1: Increase access to childhood immunizations				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
Penta, Yellow Fever, TT, BCG and OPV supply IEC and BCC materials	Provide measles, PENTA, Yellow Fever, TT, BCG, OPV vaccinations to children 12-23 months. Conduct BCC presentation on immunization	2,361 Measles doses ; 5,696 PENTA doses; 1,982 received Measles and PENTA 3; 1,853 Children received BCG, YF, and OPV, 1,209 BCG doses, 4,792 TT doses, 7,378 OPV doses, 2,332 Yellow Fever doses 1,661 immunization BCC sessions provided	Increase in percent of children aged 12-23 months who received measles vaccine according to the vaccination card or mother's recall by the time of the survey. 45.3% to 75.7% to 97% at final).	75% (Exceeded)
			Significant increase in percent of children aged 12-23 months who received DTPI according to the vaccination card or mother's recall by the time of the survey. (from 40.1% to 45.8% at MTE to 100% at final).	75% (Exceeded)
Objective #7.1: Increase community social capital for sustainable behavior change				
Project Inputs	Activities	Outputs	Outcome	Target (Result)
Trainers Training materials	Community GCHV's, CGV's, Establish Community TTM's;	120 gCHVs recruited, trained and deployed 120 communities with	Increase in number of communities with active gCHVs, CGVs, TTMs,	75% (Exceeded)

	CGV visits to pregnant women, WRA, and U-5 mothers' households for health education Mobilize, train, establish Wash Committees; Establish Community financial Club (LSC) Establish Community Transport Schemes	trained CGVs; 120 communities with TTM 98 communities with WaSH committee mobilized, trained, and activated; 120 communities with Community Financial Clubs activated; 120 communities with Community Transport Schemes Established	WaSH committees, Financial Clubs and Transport Schemes. (from 0 to 120 ¹ at EOP).	
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Anticipating the synergistic benefit of the combined package of NCSP interventions with the revised population and beneficiary estimates provided in the revised (September 2009) DIP revealed the cost per beneficiary was \$3.70 per beneficiary per year excluding MOHSW and UNFPA costs for drugs and supplies and additional inputs for a CCM pilot and Wat/San activities supported through private donors in a limited number of project communities.

Maternal and Newborn Care

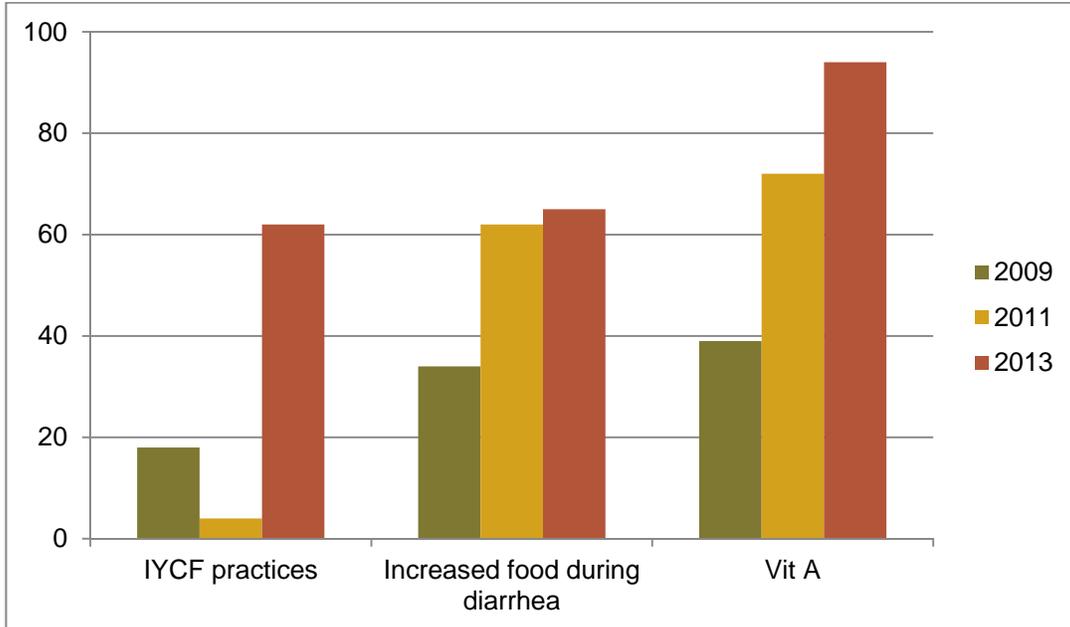
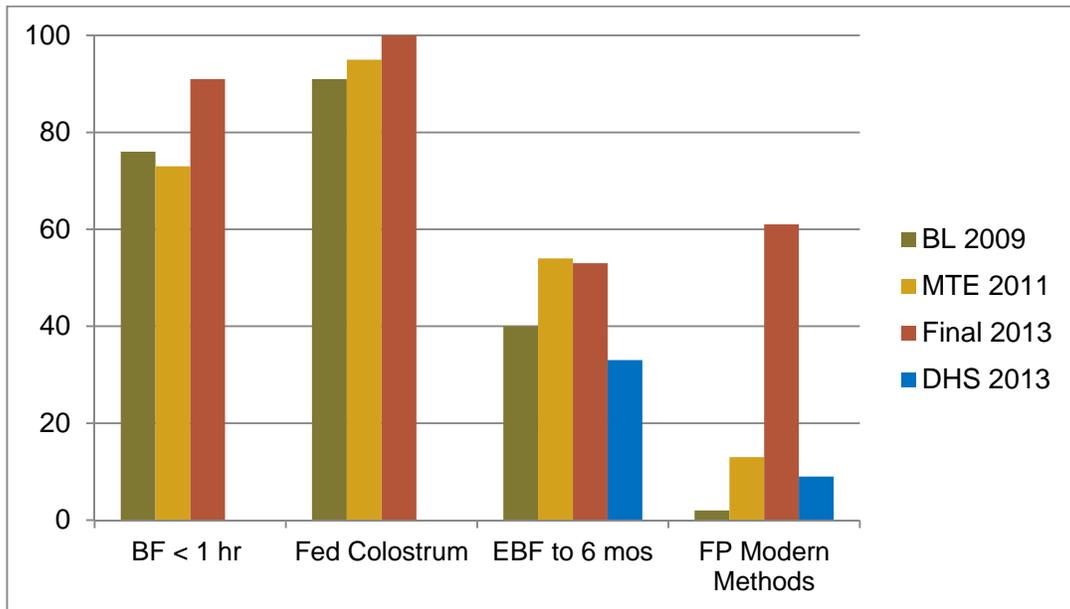
Coverage significantly increased in areas known to contribute to mortality and morbidity reduction in both mother and baby and contribute to national MDG4 and MDG5 targets. Because NCSP conducted zero skilled deliveries, findings suggest that availability of skilled delivery services in HF also increased over the life of the project. The ratio of TTM (home) deliveries relative to skilled deliveries (HF) as a percentage of all deliveries decreased over time: Year 2: 79%; Year 3: 50%; Year 4: 50%; Year 5: 21%². This also likely reflects roll out of multiple NCSP community-based MNCH interventions. Similar to findings from other CSHGP projects, mobilization that successfully increases skilled delivery supported increases in multiple key maternal and child survival including early initiation of breastfeeding, postpartum checks within 6 hours, and essential newborn care.



¹ Note: Target beneficiary population was reached at 120, even though target number of communities was 130.

² Source: NCSP HIS.

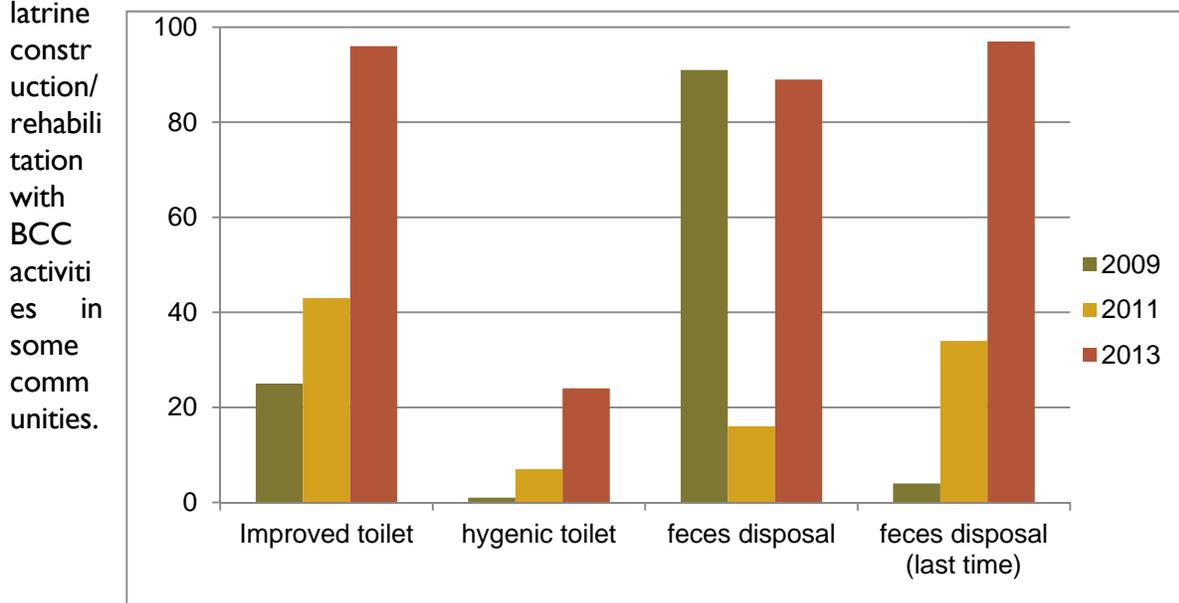
Breastfeeding and Family Planning are both known to contribute to mortality reduction for both mother and baby and improved nutritional status of the infant. Breastfeeding behavior improved, with the greatest percentage increase in immediate breastfeeding. The high urban population surrounding Ganta makes breastfeeding support particularly challenging since so many mothers leave the home to work and do not take their infants. This indicates a need for more SBC and provider training on ways to maintain breastfeeding for working mothers in future programs.



Nutrition was not a separate intervention area but was included in other child health interventions. Like most African countries, chronic malnutrition measured by stunting is the primary challenge for child growth and development as well as decreased mortality. The NCSP addressed multiple factors known to contribute to stunting, including diarrhea case management,

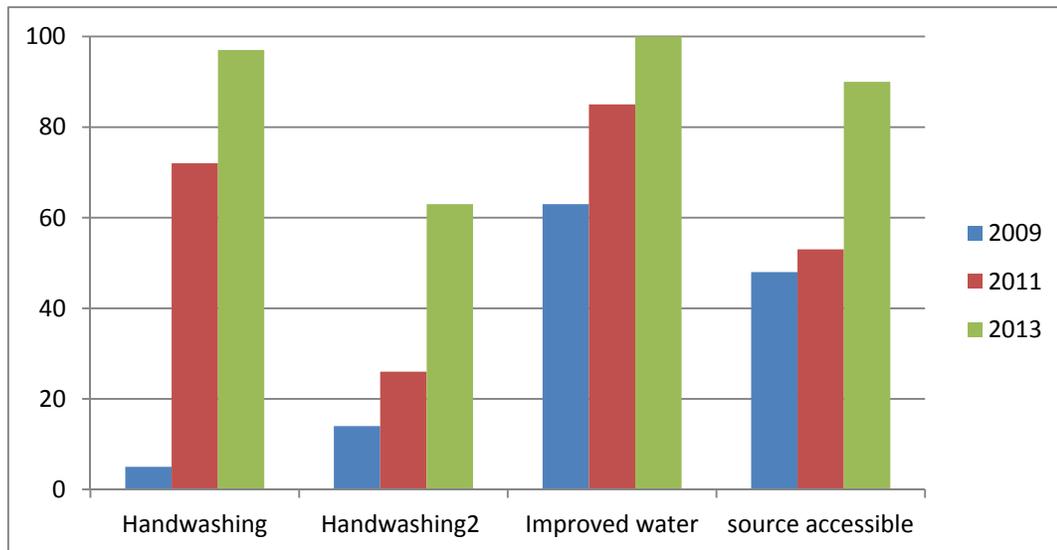
feeding during illness and other IYCF practices. Vitamin A status is emphasized for both nutrition promotion and support for the immune system. All three indicators improved significantly.

Because the baseline survey took place in the dry season and the final survey took place in the rainy season, diarrhea prevalence was not comparable. In the two weeks prior to the final survey diarrhea prevalence was 30% compared to 24% at baseline. But the baseline was conducted in the dry season and the final survey was done in the rainy season. The prevalence rates are not comparable. On the other hand, focus group discussions (FGDs) revealed a perception amongst communities that overall incidence of diarrhea had gone down and improvements in key diarrhea prevention and treatment practices increased. Point of Use (POU) water treatment improved significantly, but did not meet targets. Reasons given in FGDs were perceptions that improved water sources made treatment unnecessary and access to water products such as Waterguard™ was limited. Further formative research and Barrier Analysis may yield additional insights about barriers to POU treatment to design actions to improve this behavior. Feces disposal was analyzed in two ways: assessment of reports of how child feces were disposed and further assessment of how it was disposed “the last time.” The second query yielded lower results indicating inconsistent compliance with the practice. The first behavior did not change over the life of the project (the 2011 result was assumed to be a data error) but the second (and desirable behavior) was very low initially but increased significantly. This is assumed to be related the strong BCC efforts from the project as well as the supplemental Wat/San activities that included latrine

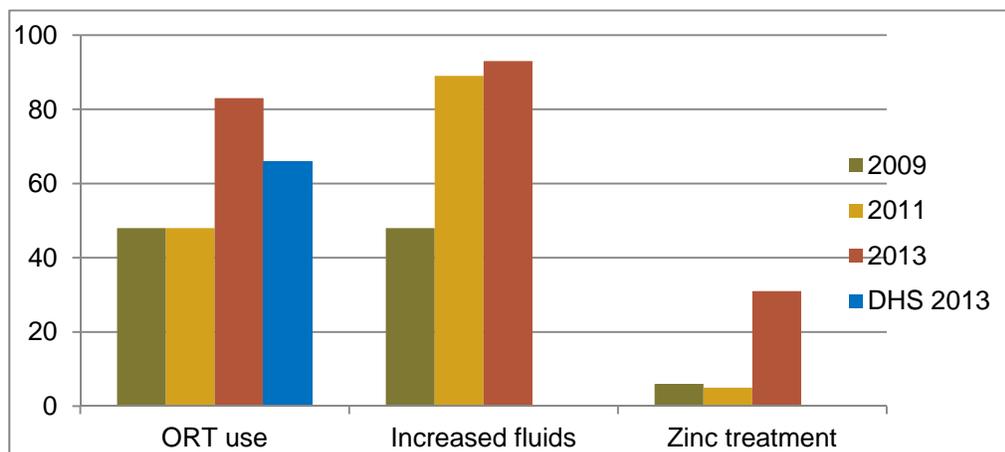


Integrated Management of Childhood Illness

Diarrhea

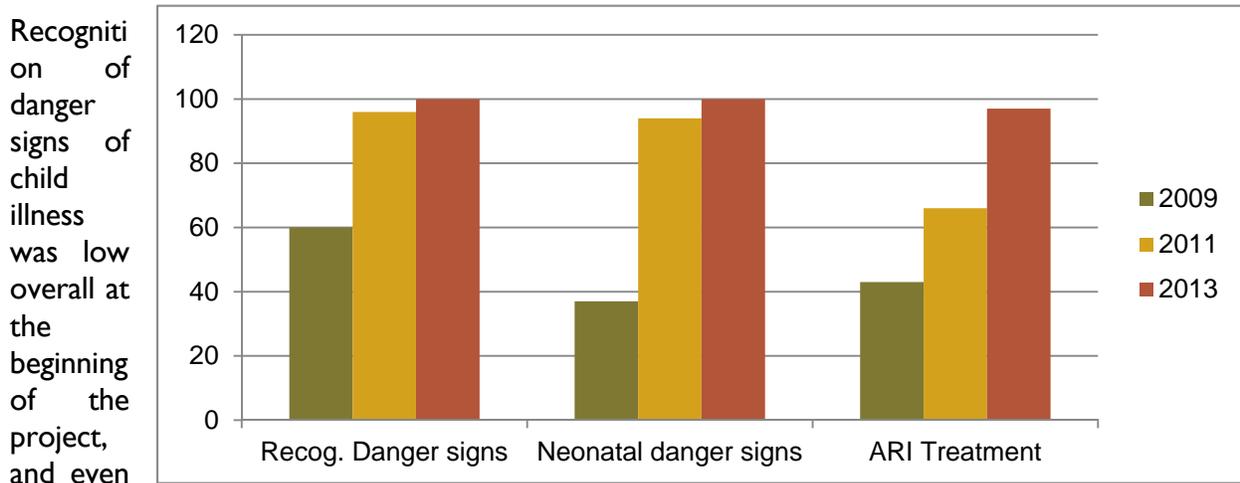


treatment in the NCSP was included in the IMCI approach to child illness, which also includes pneumonia and fever care seeking as well as case management. The KPC measures each illness separately. Community Case Management (CCM) provides treatment in the community for mild cases with referral to health facilities for serious cases. CCM is supported by MOHSW policy and is being introduced slowly into Nimba Country. NCHT has not yet involved GUMH in roll out plans. NCSP began to pilot CCM activities (matching funds provided by a private donor) in a limited number of communities during the last two years and will continue until early 2014. .



ORT increases at the end of the project were attributed to improved supply to gCHVs and (possibly) the introduction of Community Case Management (CCM) in selected communities. Increased fluids improved before the Midterm KPC indicating influence of SBC efforts in the communities. Zinc treatment improved, but lagged below targets largely due to inadequate

supplies of zinc tablets provided by the NCHT. This may improve if commodities to support CCM are increased through the NCHT.

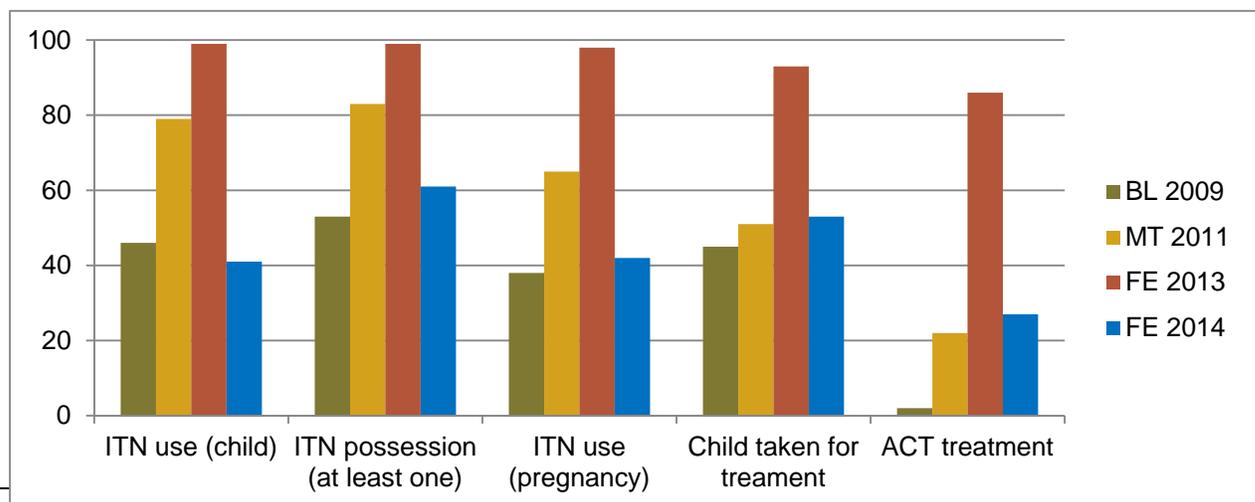


lower for newborns than for older children. By the end of the project, knowledge of at least some danger signs in both groups was almost universal. Taking children for treatment of danger signs of pneumonia improved over the life of the project. CCM in selected communities allows treatment for simple pneumonia.

Malaria

Nimba County is a PMI focus area, but the most recent LLIN distribution was done by PLAN International with nets provided through the Global Fund in 2012. In Liberia, net utilization tracks closely with household possession.³ Household net possession changed dramatically over the life of the program. NCSP impacted very little on net possession but focused heavily on appropriate utilization by children and pregnant women. The evaluation took place at the height of the rainy season when malaria prevalence was high and barriers to use (such as heat) were low. Feedback from fathers interviewed in the community indicated they noticed a distinct increase in their daily “pocket” money from decreased need to buy medicines for malaria indicating a positive

perceived association between net use and improved household income. The percentage of



³ 2009 MIS and Capps, J. MTI Liberia CSHGP Final Evaluation Report, 2010.

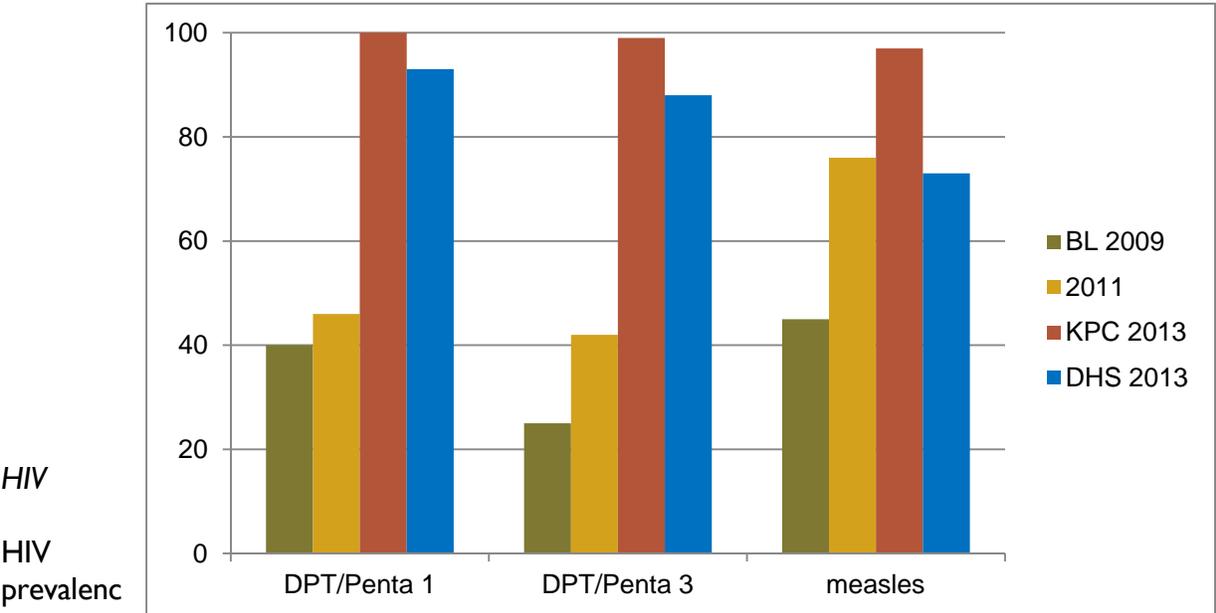
mothers that took two or more doses of IPTp increased significantly over the life of the project. In early 2013, WHO changed IPTp-SP dose recommendations to be a dose every ANC visit at least one month apart after the beginning of the second trimester through delivery.⁴ Although not totally comparable the table below compares IPTp coverage by dose between the NCSP project final KPC and recent quantitative studies in Liberia.

⁴ WHO, Reproductive Health, Maternal, Newborn, Child and Adolescent Health, April 2013.

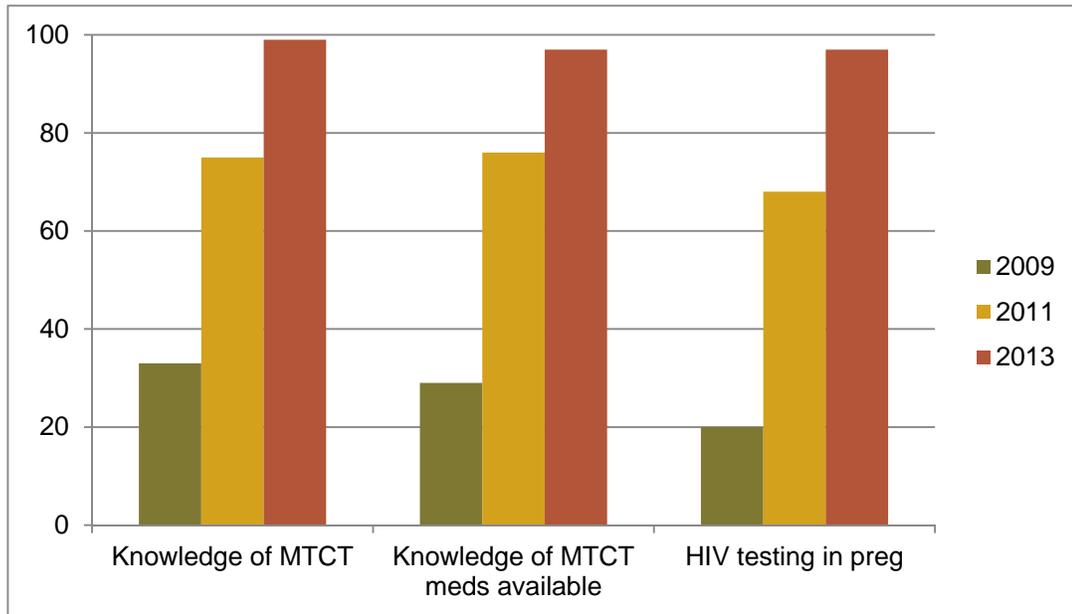
Malaria in Pregnancy IPTp-SP Uptake in Last Pregnancy				
	One Dose	Two Doses	Three or more Doses	Took Any IPTp-SP
NCSP Final KPC 2013	2%	76%	23%	99%
LDHS 2013 Preliminary (rural)		42.5% (2 or more doses)		59%
MIS 2011 (North Central Region)		59% (2 or more doses)		70%

Expanded Program on Immunizations (EPI)

Immunization services and coverage were very weak at the beginning of the project. Expanded Program on Immunization (EPI) activities were a major focus of the project and experienced immunizers were hired as part of the team. During the lifetime of the project, the PENTA vaccine that included additional antigens to DPT were added. NCSP contributed greatly to increased coverage by bringing vaccines to communities from health facilities where they were kept and BCC promoting immunization was part of the program. In addition, BCC activities with message saturation and CBIO through community registers helped track immunizations for every child. Mothers gave feedback in FGDs indicating they now have a “culture of immunization” (an objective of the program) and indicated they intend to take their children to facilities now that the project was ending. They added they did not understand the importance of vaccinations before the project started. Project staff reported vaccine stock-outs were very rare and children were not refused vaccinations when they were taken to health facilities. NCSP staff also indicated collaboration with NCHT for vaccinations was very good.



e in north central Liberia is not as high as is found in many other African countries. Knowledge of HIV and how it is transmitted is high. At the beginning of the project, however, knowledge of maternal to child transmission (MTCT) was low and the availability of drugs that can prevent transmission was also low. Awareness of both of these MTCT issues increased. Improved ANC services, along with community-based testing conducted by the NCSP team achieved almost universal HIV testing in pregnancy and referrals to PMTCT services at health facilities increased.



Organizational Capacity Building

Curamericas' DIP for a New Grant included provisions for organizational capacity building, which was directed at GUMH, not Curamericas Global. Curamericas used an organizational assessment tool to lead GUMH in a self-assessment to identify areas to focus assistance. This self-assessment was repeated at the end of the project. The results are provided in Annex XIX. Most areas that scored low in the baseline assessment had improved to the highest score, but a few areas related to grant writing, supervision and resource mobilization still need improvement. Support to GUMH was intended to come from the Curamericas Global country office in Monrovia and some additional funds/support have been mobilized to support GUMH community-based programs in CCM and Wat/San but these programs will end in a few months and start-up challenges, delays in NGO registration and national staff capacity have limited the extent additional organizational capacity building could be provided directly from the office in Monrovia. Curamericas' headquarters office continues to assist GUMH to request funds from international donors.

Conclusions

The mobile team approach along with using CBIO for reaching everyone, supported by effective BCC strategies based on key behavior determinant is effective in increasing coverage and achieving results cost-effectively.

Quantitative results indicate that the NCSP met, and in many cases significantly exceeded targets for project key indicators. Analysis of components of project strategies designed to achieve objectives determined that the project:

Increased access to the Basic Package of Health Services

Four mobile Primary Health Care Teams were organized to bring health services into the communities. They trained community agents and provided some direct service delivery, especially immunizations and family planning. They helped communities devise community transport plans financed by community “financial clubs” (LSCs). They rolled out the obstetric emergency response system by providing cell phones and renewable energy cell-phone chargers and trained gCHVs on their use. Evaluators found activities were implemented as planned.

Increased equity using the Census-Based Impact-Oriented (CBIO) Methodology

Evaluators found that, with the exception of consistent verbal autopsies, activities were implemented as planned. Community mapping and census took place in all communities, although the last 15 communities were completed during the last year of the project. These communities were phased in last as they were within walking distance to the hospital and already active in seeking services. Participatory surveillance of vital events and health services, however, was uneven. Evaluators found Community Registers in place in all communities, but several were not completely filled out and beneficiaries who had left the community were not removed. Vital events were entered into the project database but not easily retrievable for analysis. Some verbal autopsies were done but only 35 verbal autopsy reports were available at the time of the evaluation, a much lower number than the anticipated number of child deaths that should have occurred over the life of the project. For the reports that were available, cause of death was provided and project staff said findings were discussed in planning meetings. Extensive analysis of mortality trends or gaps in service and/or behavioral causes was not evident in discussions or project reports and evaluators could not draw conclusions about the number or likely cause of deaths that had occurred.

Increased demand for health behaviors and services with multi-media multi-messenger BCC utilizing the BEHAVE framework and Barrier Analysis;

Feedback from beneficiaries, community agents (gCHV, CGVs and TTMs) and community leaders indicate the BCC approach, based on key determinants identified in the Barrier Analysis indicated that the multi-media multi-messenger delivery strategy reinforced by community agents achieved message saturation and contributed to the strong improvements in multiple areas.

Ensured quality with the systematic application of continuous quality improvement practices

CBIO provides the community HIS that facilitates monitoring uptake of services over time and makes it possible to identify when certain services are not used (examples: ANC and EPI). Staff supervisors were responsible for technical interventions (EPI, MNC, and IMCI) and monitored quality of care in the community. GUMH took measures to improve quality with compassionate labor training provided separately by Curamericas, significantly increased facility-based family planning services (assisted by the USAID Flex Fund grant) and strengthened linkages with communities, especially for emergency obstetrical care. GUMH maintains a Community Health Department, but level of activities varies according to types and amount of resources available. Evaluators acknowledged that improved facility health services throughout the project area over the life of the project were attributable to implementation of the BPHS in those facilities that provided key components (e.g. vaccines, cold chain, skilled delivery, ANC services) that made achievements in those areas possible.

Ensured *sustainability* by developing community social capital and human resources that include trained and active Community Health Volunteers, Trained Traditional Midwives, and Care Group Volunteers in each community.

gCHVs and TTM were present in several communities prior to the NCSP; many had been trained by several different NGOs using a variety of curricula, training methods, and volunteer incentives. By the beginning of the project, many were inactive. NCSP reactivated them and trained a sufficient number of new volunteers to ensure at least one is now available in each community. Interviews and FGDs in communities with gCHVs and TTMs indicate they will continue their improved practices and link with health facilities for continued services. Commodities must be supplied by the NCHT for the non-Ganta communities and GUMH will continue to request drugs, supplies, and FP commodities directly from the MOHSW through the NCHT.

Based on DIP LIST calculations at least a 63% reduction in Child Mortality can be estimated based on project results. The table below includes the original estimates of child deaths to be averted by the end of the project. Diseases marked with asterisk (*) were met, and in many cases significantly exceeded original targets.

Table 4: DIP LIST Calculations and Lives Saved

Disease or condition	Number of baseline under-five deaths	Percent of total under-five deaths at baseline	Lives Saved by Cause of Death		
			Number lives saved for that cause IN LAST YEAR	Number of Lives Saved LIFE OF PROJECT	Percent of baseline deaths saved for that cause
Diarrhea ⁵	110	18%	77	194	70%
Pneumonia*	112	18%	115	287	102%
Measles*	2	0.3%	1	2	55%
Malaria*	159	26%	113	281	71%
HIV/AIDS*	36	6%	0	0	0%
Neonatal*	193	32%	81	201	42%
TOTAL	613	100%	386	968	63%

Findings suggest that mortality reduction may have actually exceeded the original estimates because coverage exceeded targets in several key indicators and family planning coverage increased sharply over the baseline. But calculations would need to be repeated with the final figures inserted to make that determination. Mortality data could be measured if all deaths were collected and recorded the HIS database but evaluators were unable to retrieve all of the data necessary to determine the actual number of deaths over the life of the project. This was a missed opportunity. While CBIO is a proven and valuable strategy, management lessons learned include strong supervision is needed to ensure the verbal autopsy and data compilation from the HMIS is consistently done and analyzed throughout the program. This supports observations that the NCSP would have benefited by additional management staff to assist the Project Manager

⁵ Some indicators significantly exceeded, but POU water treatment and zinc administration not met.

with staff and M&E supervision. Staff interviews indicated that results from staff follow-ups after deaths were used in staff meetings and for planning but this was not reflected in project reports.

Analysis of factors that led to large coverage increases in the majority of project indicators during the final evaluation concluded that the census-based mapping that serves as the foundation of community mobilization and tracks the implementation and results of interventions strongly contributed to both coverage results and equity through the sense that “everyone was reached.” BCC multi-channel and multiple reinforcing messages undoubtedly supported the results. In spite of challenges to programming collaboration, access to MOHSW commodities and support from CHT Wat/San program made a large portion of the results possible. Capacity building to GUMH by the NCSP, including providing a platform that encouraged compassionate obstetric care, linking community referrals to hospital services and establishment of a stand-alone Family Planning clinic have significantly contributed to improved quality of health services at the major referral facility in the project. In addition, MOHSW support to other clinics through the performance-based payments have ensured adequate staff and equipment were available to provide services for community clients referred to them (e.g. ANC, EPI, skilled delivery).

Direct service delivery through mobile teams and increased capacity of gCHVs to provide clinical services (including immunizations and FP) in the community undoubtedly contributed to high coverage achievements. Focus groups discussions with beneficiaries revealed they believe they have developed a “culture of immunization,” and now “plan to have our babies at GUMH or the health center” while other informants indicated they will now seek their preventive health services at health facilities. This could have been tested had a detailed exit strategy with timetable been in place well before the end of the project. In most child survival projects, exit plans are addressed in detail with partners after a midterm evaluation has assessed progress towards objectives and targets. In spite of the lack of a systematic exit from communities, strengthening and mobilizing inactive community agents and providing the additional support of Care Group Volunteers, coupled with strong BCC in all project interventions, will likely support sustaining many behaviors in the future. Community informants said they do not intend to revert to pre-project behaviors because of their increased awareness of positive preventive and care-seeking behaviors. They also said that they have much better means to access services (e.g. through the emergency obstetric communication support and the Life Saving Clubs) for serious conditions.

Aside from some clinical services (primarily preventive) provided by the NCSP mobile teams, most direct service delivery was not provided by the NCSP and results were dependent on competent delivery of quality services in health facilities (health centers, health posts and GUMH). Some NGOs have recently ceased operations and turned over the clinics that they were operating to Africare and International Rescue Committee. Other NGOs, such as PLAN International also worked in Nimba Country during the lifetime of the project. PLAN distributed Global Fund-supported ITNs in 2012. The Final Evaluation team acknowledged that several project results were only possible because of the clinical services and commodities provided by the NCHT and other NGOs. On the other hand, demand creation, improved household and community health behaviors and overcoming barriers to access that linked these health providers with their target populations were major contributions of the program. It is the combination of these factors that made the difference.

Lessons learned

CBIO is a very valuable community mobilization and public health package but it is, however, labor intensive. Given the lack of full time in-country child survival management from Curamericas, the NCSP could have benefitted from another tier of management between the (partner) Project Manager and the field staff to maintain oversight of the ongoing CBIO information requirements and work directly with the GUMH monitoring and evaluation staff.

Community-based MNCH services can rapidly increase coverage of key behaviors and uptake of health services. This is maximized when accompanied by improved availability of MNCH, HIV, and FP services offered in health facilities.

Even though the project did not use a traditional “Care Group” model with promoters and Care Group Leaders, the addition of groups of additional community volunteers in this “cascade” model approach certainly extended the effectiveness of gCHVs and TTMs into households and with beneficiary mothers.

The NCSP structure lent itself extremely favorably to MNCH-FP integration in a program that also integrated FP with nutrition and provides a “real world” example where this has been done successfully. The CBFPI, extended by the project by linking to their EPI staff reveals several possible opportunities to address unmet need for family planning, including providing adolescent reproductive health services. Factors to be considered for integration are discussed in Annex I: Project Learning Brief.

Curamericas was blindsided in some management issues, most likely due to unfamiliarity with the very challenging operational environment and weak legal system in Liberia, especially since the war. They could have benefited from advice to become familiar with Liberian laws and practices prior to finalizing the DIP.

Program management would have been easier if the relationship between Curamericas and GUMH had been structured with a subcontract and fixed budget. In that type of scenario, the tasks and expenses for the partner are fixed and provided directly to the subcontractor and responsibilities are described in a Memorandum of Understanding and/or formal contract at the beginning of the project. That would have relieved Curamericas’ HQ managers’ need to be involved in disbursing and tracking funds to the partner throughout the life of the project.

Recommendations

GUMH should be proactive to share the NCSP results and lessons learned with USAID and MOHSW as much as possible. They should use the NCSP accomplishments and seek ways to engage the NCHT for stronger collaboration and support for sustaining achievements and strategize how successful strategies might be scaled-up to additional Nimba County communities. This discussion should be framed in terms of how this will support national MDG and other health targets such as malaria, HIV/AIDS, nutrition and MNCH. USAID Liberia should encourage their other partners (particularly their bilateral health and nutrition programs, Africare, IRC and PCI that are working in the area in MNCH, Wat/San, and nutrition) to collaborate with GUMH for opportunities to scale up successful strategies implemented by the NCSP. The NCHT may need additional capacity building on how to engage and collaborate with partners to achieve public health objectives. In some areas, (such as WatSan) this is already working well.

The family planning service delivery initiated with the Flex Fund-supported CBFPI and continued through the EPI-FP integration achieved FP coverage far in excess of the county as a whole (60% vs 10%⁶) has resulted in exploding demand for FP services but GUMH lacks funds to continue beyond the end of the project, especially for the stand-alone clinic site that provides privacy and services to adolescents that they cannot receive elsewhere. There is an immediate need to seek funding and program support to avoid breaks in service for existing users and leave new (potential) users stranded. At the time of the FE, Curamericas was assisting GUMH to obtain short-term assistance to ensure smoother transition out of project communities.

Curamericas should not commit to additional direct drug importation and increase efforts to advocate with MOHSW, USAID, UNICEF, UNICEF and other donors to ensure sustained commodities to support community-based services and key MNCH services (including FP) at GUMH that achieved the results measured in the program.

Currently Curamericas Global Liberia is beginning the transitions process from a branch office of the US PVO to a local NGO. Though this process may take a substantial amount of time, Curamericas Global should make clear plans for activities in Liberia if those plans extend beyond serving as channel for foreign donations to GUMH. Plans should be clearly communicated to GUMH and in-country partners as uncertainty makes their planning very difficult. If Curamericas continues to be operational in Liberia, it would benefit the organization to ask the U.S. Embassy for briefings on national labor laws and NGO regulations that may be different from those they are familiar with in Latin America. Legal challenges related to labor disputes are common and even with representation are often not decided in favor of the foreign NGO.

Table 5: Final Evaluation Findings, Recommendations, and Action Steps

Finding	Conclusions	Recommendations	Action	Responsible person/organ
Almost all project targets met or exceeded	NCSP methodology successful	Results should be shared for scale-up collaboration	Schedule meetings with key program managers in Liberia (USAID, NMCP, MOHSW, UN Agencies)	GUMH Community Health Managers, Curamericas staff
Modern methods of FP achieved 60% coverage from baseline of 2%	CBFPI and EPI-FP Integration strategies within NCSP framework successful. Potential for scale-up to other areas and extend to adolescent reproductive health services.	Seek support to continue and scale up FP in Nimba using lessons learned	Seek additional donor support to continue/expand FP intervention. Share implementation lessons learned with MOHSW/NCHT Compile service statistics from FP clinic related to client characteristics, preferred FP methods	GUMH Health Managers Curamericas staff
Commodity procurement	NCHT has not been responsive to	Curamericas to transfer	GUMH to assume responsibility for drug	GUMH Health and Administration

⁶ Liberia DHS 2013 preliminary findings, December 2013.

<p>challenges are a barrier to sustainable Curamericas-initiated activities (does not include FP commodities)</p>	<p>programmatic collaboration in some areas (e.g. CCM) but collaborates well in other areas (FP commodities and wat/san</p>	<p>responsibility for continued drug procurement to local partners (GUMH and MOHSW/NCHT)</p>	<p>supplies in collaboration with MOHSW with continued advocacy for cooperation/collaboration from NCHT and should seek assistance from central MOHSW if needed. GUMH should link NCSP achievements contribute to rebuilding Liberian health services including meeting national health objectives and targets, esp. in MDG 4 and 5.</p>	<p>managers. Curamericas to discontinue responsibility for drug and supply procurements after orders are delivered.</p>
<p>Diarrhea prevalence remains high in children under 2 years; POU treatment remains low</p>	<p>Link between diarrhea prevention measures and prevalence in small children requires more study</p>	<p>GUMH through their health and Wat/San staff to investigate barriers to diarrhea prevention behaviors with communities</p>	<p>Incorporate FGDs with caregivers of young children and identify gaps and behavioral barriers</p>	<p>GUMH Community Health and Wat/San staff and NCHT Wat/San partners.</p>

Annex 1: Learning Brief

Successful Integration of Family Planning into Community Based MNCH Program in Liberia

The Nehnwaa Child Survival Project in Nimba County Liberia's (2008-2013) baseline KPC found use of modern methods of family planning by mothers of children under 2 years of age was only 2%. Family planning was already included in multiple messages related to MNCH and limited FP services were available in Ganta United Methodist Hospital's outpatient clinics. After two years of NCSP implementation, the Contraceptive Prevalence Rate (CPR) among all WRA had only risen to 15%. Project staff and technical advisors recognized that birth spacing and limiting unwanted pregnancies was an important intervention that needed additional level of effort, staffing, and resources to increase the CPR enough to be effective in meeting MNCH objectives and contribute to MDG4 and MDG5 national outcomes. Curamericas successfully applied for support through USAID's Flex Fund and implemented the Community Based Family Planning Initiative (CBFPI) within the NCSP program for 15 months ending in July 2012 where CPR rose to 60%. To sustain this achievement after the CBFPI program ended, the NCSP integrated family planning services into EPI activities and continued operation of the fixed site FP clinic located on the grounds of GUMH.

Target Population

Activities specific to family planning were conducted in 105 communities and targeted 28,694 women of reproductive age (WRA, age 15-49), and 32,329 men (age 15-59), including 12,442 female youth and 19,401 male youth age 15-24.

Methodology

To identify the key determinants of maternal and child health behaviors at the beginning of the NCSP, formative research using Barrier Analysis¹ was done to find the key determinants of MNCH behaviors related to project interventions. FP-specific formative research was expanded in the CBFPI in 2011 and discovered 1) overall poor knowledge of FP benefits for health of mother and child; 2) little knowledge of types and effectiveness of contraceptive methods; 3) misconceptions about FP side effects and permanency; 4) men were major barriers to acceptance and use and involving them was essential for introduction of FP into households; and 5) strong cultural factors against using FP. The following determinants were used to design BCC activities: 1) Low overall knowledge about FP and high levels of misconceptions led to low FP demand and low uptake. 2) Poor access to FP education and methods as well as poor quality services also contributed to low demand.

Given the foundation of the existing community-based NCSP in the catchment area the Curamericas-GUMH partnership was well-positioned to implement the Community Based Family Planning Intervention (CBFPI). Strong relationships with communities and leaders contributed to an enabling environment for acceptance of new information and services.

¹ Barrier Analysis Reference

a. Capacity Building of Staff and Community Health Volunteers

All NCSP staff (38 members), including CBFPI staff (5 members) were trained in family planning at various levels including Community Based Family Planning Basics training conducted by a consultant in June 2011. Topics covered included importance of family planning, an overview of the family planning situation in Liberia and Nimba County, orientation to family planning methods and counseling techniques and objectives and activities of the CBFPI. Activities included training of trainers of gCHVs to be community based distributors (CBD) (described below). In addition three CBFPI staff were trained as trainers (ToT) by USAID’s Maternal Child Health Integrated Program (MCHIP) specifically for Implant Administration. Implants are in high demand in Liberia. After the training CBFPI staff met MOHSW standards to insert implants and GUMH was able to obtain implants through the National Drug Supply (NDS). Although USAID policy supports it, Liberia MOHSW family planning policy does not yet support community administration of Depo Provera, so it was not included in the community method mix but was offered at the GUMH FP clinic.

By July 2012, the CBFPI had trained gCHVs, Trained Traditional Midwives (TTMs) and over 900 Care Group Volunteers (CGVs) in 105 project communities on family planning including birth spacing and LAM and best times to provide counseling during ANC and PNC. Training included content on the importance of family planning, commodities available to the community, the gCHV role in the CBFPI (including support of CGVs, health promotion and supplying commodities) and commodity distribution, use, and tracking.

Behavior Change Communication Approach

The CBFPI implemented a multifaceted BCC approach that reached all 105 communities and involved several different actors, community entry points and tools that also included one on one and couples counseling. The CBFPI team conducted BCC activity in communities on a daily basis. By the end of the project, the CBFPI was visiting 105 communities on a regular basis. Community based messaging needed to be reinforced to a wider audience through radio messages and posters provided to gCHVs in order to overcome myths and strong influential cultural factors.

Results

<u>Key Result: Increased Use of Family Planning and Improved FP/RH Practices</u>				
Key Result Objectives	Baseline (June 2011)	Mid Term (January 2012)	Final (July 2012)	Goal (July 2012)
<i>Objective One:</i> Increase the percentage of Couple Years Protection (CYP) among WRA (pregnant and not-pregnant) in the NCSP catchment by 2012.	--	184.42	585.41	--
<i>Objective Two:</i> Increase the Contraceptive Prevalence Rate among WRA (pregnant and not-pregnant) in the NCSP catchment by 2012.	15.20%	39.59%	61%	--
<i>Objective Three:</i> Decrease the percentage of Unmet Need among WRA (pregnant and not-pregnant) from	67.90%	55%	22%	40%

67.90% to 40% in the NCSP catchment by 2012.				
Result One: Increased Knowledge and Interest in FP Services Through PVO/NGO Involvement				
Result One Objectives	Baseline (June 2011)	Mid Term (January 2012)	Final (July 2012)	Goal (July 2012)
<i>Objective One:</i> Increase the number of WRA (pregnant and not-pregnant) who are new users in the NCSP catchment by 2012	11	55	142	--
<i>Objective Two:</i> Increase the percentage of WRA (pregnant and not-pregnant) who have heard about at least three methods of Family Planning from 10% to 35% in the NCSP catchment by 2012.	10%	92%	98%	35%
<i>Objective Three:</i> Increase the percentage of WRA (pregnant and not-pregnant) who receive birth spacing counseling from 18.75% to 30% in the NCSP catchment by 2012.	18.75%	71%	89%	30%
<i>Objective Four:</i> Increase the percentage of WRA (pregnant and not-pregnant) who discuss family planning with their spouse or sexual partner in the past 12 months from 19.44% to 35% in the NCSP catchment by 2012.	19.44%	49%	71%	35%
Result Three: Increased Access of Communities to FP Services				
Result Three Objectives	Baseline (June 2011)	Mid Term (January 2012)	Final (July 2012)	Goal (July 2012)
<i>Objective One:</i> Increase the percentage of WRA (pregnant and not-pregnant) who report discussing family planning with a health or family planning worker or promoter in the past 12 months from 25.33% to 50% in the NCSP catchment by 2012.	25.33%	88%	97%	50%

Conclusions and Lessons Learned

Strong collaboration with the MOHSW and the United Nations Population Fund (UNFPA) in Liberia provided consistent access to commodities and participation in family planning technical working groups provided access to influence policy decision making. Stock FP commodity requests were quickly approved by NCHT and the MOHSW enabling direct access to contraceptive stocks at the National Drug Supply (NDS).

In response to formative research that found that men are the most influential members in the family and community that the project needed to influence in order to increase acceptability of family planning, they were specifically targeted for extensive BCC interventions. But both men and women and men were openly invited to discuss family planning during BCC activities or privately with a FP officer. During the CBFPI, men regularly attended family planning counseling with their partners and also and also came to the FP office for refills. They also accompanied their wives as returning users.

Tracking individual family planning clients for follow-up through community registers, team ledgers and daily output records was found to be insufficient to follow up with clients and ensure continued use. As popularity of the CBFPI grew, this became unmanageable as the number of new and returning users increased. CBFPI introduced individual family planning cards to serve as a reminder for clients to return for supplies.

Integrating FP and EPI services

Because EPI services are highly utilized in the project area, integrating FP and EPI services addressed two important program needs simultaneously, saving time and resources for both the program and the client. Experience integrating FP with existing EPI services yielded several lessons. They require significant amounts of time and resources, including staffing, management, monitoring, financing, and supplies and attempting integration should either be built on a program with successful EPI coverage and/or a strong foundation in FP service provision.^{2*} FP/EPI integration can also occur at multiple levels: the health facility, the community, and/or the home. FP/EPI integration can also be combined with service provision, where both FP and EPI education and services are available in one location (i.e. same day service).

Stakeholder support, especially from EPI staff, is important because integrating services will increase their workload. FP can be integrated into comprehensive MNCH programs but reliable supply chain and time management skills are essential to avoid staff becoming overwhelmed with too many responsibilities and client demands. There may be multiple stakeholders that must be involved in the FP/EPI integration process and they all have to be consulted to coordinate logistics for both health education and service provision. These needs include supplies, resources, technical assistance, and commodities.

Community health volunteers (in Liberia, gCHVs and TTMs) have established relationships with potential and returning clients and volunteers can provide both services and referrals. They provided follow-up after BCC messaging and also provided a limited number of services and referrals for both EPI and FP. Community members played a vital role in supporting the integration, overcoming barriers to FP and promoting FP acceptability and uptake.

² Wallace A, Ryman T, Dietz V. Experience's integrating delivery of maternal and child health services with childhood immunization programs: systematic review update. *J Infect Dis.* 2012a; 205 Suppl 1:S6-S19; FHI 360/PROGRESS. Postpartum Family Planning: New Research Findings and Program Implications. 2012b. <http://www.fhi360.org/en/Research/Projects/Progress/GTL/Mtgs/PPFPmeetingJuly2012.htm>

ANNEX II. LIST OF PUBLICATIONS AND PRESENTATIONS RELATED TO THE PROJECT

Presented at the 2010 American Public Health Association Annual Meeting in Denver, Colorado.



Curamericas Global, Inc
Nehnwaa Child Survival Project

**Contribution of Trained Traditional Midwives
(TTM) in Reducing Rural Maternal and
Neonatal Mortality and Morbidity in Liberia**

**Jaime Carrillo, MD, MPH
Curamericas Global**



Curamericas Global, Inc
Nehnwaa Child Survival Project

Maternal Mortality in Liberia: 994 x 100,000





Curamericas Global, Inc Nehnwaa Child Survival Project

Nehnwaa Project

- Ganta United Methodist Hospital
- 60 villages (130 villages by the end of the project - Sep 2013)
- Target: 60, 000 WRA and Under-5 Children
- IMCI, HIV Education and Testing, Maternal Neonatal Care, Wat-San, Health Promotion, Community Support (CGV, gCHV)



Curamericas Global, Inc Nehnwaa Child Survival Project

The Ministry of Health and Social Welfare Training of Trainers

- 4 Maternal Neonatal Care Officers trained
- MNC officer trained TBA to become TTMs
 - TBA selected for training by the community
 - 2-week training based on American College of Nurse Midwives
 - "Five cleans," neonatal resuscitation, and danger sign recognition and response.
 - 120 TTM in Nehnwaa Project area. (They all receive a safe birth kit)



**Curamericas Global, Inc
Nehnwaa Child Survival Project**



**Curamericas Global, Inc
Nehnwaa Child Survival Project**





Curamericas Global, Inc Nehnwaa Child Survival Project

Indicator	PY2 (Sep 09 – Oct 10)
Number of pregnancies 100% assisted to develop birth plans	591
High-risk pregnancies	26
Number of live births	311
Still births	3
Abortions	5
Under-5 deaths	19
Maternal deaths	0



Curamericas Global, Inc Nehnwaa Child Survival Project

Indicator	PY2 (Sep 09 – Oct 10)
Number of women who received at least 4 ANC visits* 6% received ANC at HF (23 women)	357
Number of live births attended by SBA at HF 23% were high-risk deliveries	66 (21%)
Number of home deliveries attended by TTM	245 (79%)
Number of Obstetric Emergency Responses 100% had positive outcomes	33
Number of women who received PPC within 2-3 days*	228 (73%)

* Mothers of children 0-23 months



Curamericas Global, Inc Nehnwaa Child Survival Project

IMPORTANT OUTCOMES:

1. TTMs acceptance of training
2. TTM accepted and respected by communities
3. TTM working with CGV and gCHV
4. TTM as promoters of health facility deliveries
5. TTM support to mother who opt to have a health facility delivery
6. Focus groups revealed that although women prefer to deliver at home, they will go to a HF as directed by TTM

Annex III. Project Management Evaluation

Curamericas designed the structure of the program, study methods and strategies and brought significant training and capacity building technical assistance through periodic visits to Liberia. But Curamericas had no in-country presence until the last years of the project when they established an office in Monrovia. The first Liberian Country Director came to the position with significant reproductive health experience that supported FP interventions in two locations that were both successful. But she left Curamericas eight months before the project ended and the Program Officer assumed her position in an interim capacity. He also had responsibility for managing a subcontract in a national-level GAVI civil society advocacy program implemented by Catholic Relief Services. Observations for the interim CD performance during the FE, including interactions with NCSF management and Curamericas HQ staff indicated he does not have the technical or management skills to provide sufficient support to GUMH health programs or develop new programs independently.

GUMH was responsible for implementing the bulk of activities in the project. All evidence supports that project field activities were well organized and managed along project intervention lines, e.g. IMCI, EPI, MNC, etc. Data management and HIS were managed by two monitoring and evaluation (M&E) staff. The original M&E manager who developed the system left five months before the project ended. He was replaced by another M&E staff member who had worked with the program for two years but was not responsible for establishing the HIS database at the beginning of the program. The bulk of the management of the program fell on the GUMH project manager who was responsible for all management responsibilities, including communication with Curamericas HQ. After the opening of the Curamericas Global Liberia Head Office, there were no project specific administrative or financial staff at the project site. Some of the more challenging technical components of the program, especially consistent verbal autopsies to follow up on child deaths needed consistent supervision and management oversight, including retrieving important data from the HIS that would have been unrealistic to expect from the only manager with so many other responsibilities no matter how qualified he or she might be.

Evaluators were unable to interview the HQ backstops who were working for the project for the majority of the time. So they could not provide information about some decisions that were made during the early stages of the program. Although she had worked with the project as an intern during her MPH program, the new HQ backstop had only been in her position for less than three months at the time of the FE. She conducted the KPC, organized the FE, managed financial and administrative issues and successfully negotiated delicate issues (see below) that threatened successful completion of the FE (and hence the USAID grant). Most of the issues that she faced were related to expectations that Curamericas be much more directly operational than is usually the case in partner-implemented CSHGP programs. From all indications, a subgrant with full budget to GUMH would have prevented many of these problems. GUMH would have been responsible for including all staff costs (including benefits and severance) in the subgrant budget for approval by USAID as part of the DIP.

NCSP staff threatened to strike and not complete the KPC over the issue of severance. This was resolved by GUMH, as staff were their employees. Several foreign NGOs, especially those that worked in emergency programs in Liberia have had bad experiences when they unaware of some of the detrimental precedents they established (e.g. paying government officials to attend meetings) that must be overcome to build national capacity to strengthen the Liberian national health system. This especially true if the ultimate goal is a system that is to be sustained under national management and using locally available resources. Labor laws in Liberia, especially are very employee-friendly and it is common for an employee to secure representation, litigate, (and win) for infractions, even if they were unintentional. NGOs, including Curamericas Global have had unfortunate experience even with employees that were terminated for cause that have successfully sued employers and received large settlements. This has happened in USAID and other USG programs in many countries in the past. Since Curamericas was new to Liberia, they would have benefitted from advice to consult the US Embassy in Liberia for a briefing on how to avoid some of the unfamiliar labor practices and better understand the working environment in the country. These types of negative experiences can poison PVO motivation to continue working in some of the more challenging poor high-mortality countries.

At the time of the FE, the only employees at Curamericas HQ in the US were a full-time Operations Manager (recently promoted from Program Associate and the (qualified) HQ health backstop working under short-term contract. The US HQ office lacked administrative and financial management staff found in most PVO headquarters. Accounting services are contracted to a company specializing in financial systems, but other administrative duties are carried out by the remaining two employees. Curamericas has another CSHGP grant, in Guatemala. The HQ backstop duties are performed by a health specialist with familiarity with CSHGP based in Seattle, Washington. Due to her short-term tenure in her position, the HQ health backstop was unable to represent Curamericas about their plans for future programs. She was involved in discussions related to securing funding to support some GUMH programs and explore a new program in another African country. After the NCSP ends, there are some remaining activities in CCM that will end in February 2014.

The FE did not find that management challenges hindered achievement of program results and the project has to be determined as successful. But the organizational capacity to build on the experiences and lessons learned going forward is uncertain at this time and does not seem to be in place for the short term. On the other hand, GUMH has capacity to implement many community and first line health facility interventions, including FP through their existing structure. GUMH has existing administrative capacity and there are multiple areas, especially in community mobilization, community based services and linking community beneficiaries with GUMH facility services that could be well managed.

If Curamericas Global wishes to remain implementers of MNCH and Community Health development programs, more administrative staff support and clear multi-year strategic planning will be needed at headquarters. In country, experienced public health managers with strong administrative and reporting skills will be necessary for each development activity. Some of the partnership and collaboration challenges experienced by the project were out of the Nehnwa partnership's (Curamericas and GUMH) control. Invitations to the NCHT and other NGOs working in the area to attend briefings, presentations and consultations that are designed for optimum

impact on important national health priorities frequently result in no representation from the NCHT management. Evaluators observed this to be the case when, in spite of written and telephone invitations that were accepted, key stakeholder representatives did not attend the final evaluation debriefings in Ganta and Monrovia. In contrast, partnerships with stakeholders in the Community Based Family Planning Initiative were key to the successful outcomes of that program (see Annex I Learning Brief). Water and Sanitation staff said they enjoy a very positive collaboration with their corresponding department of the NCHT.

ANNEX IV. WORK PLAN TABLE

GUMH= Ganta United Methodist Hospital; SPS = Senior Program Specialist , Curamericas Global; HA- Hospital Administrator PM= Project Manager; ES= Education Supervisor; HIS= Health Information Supervisor; MNC –Maternal Newborn Care; PHC = Primary Health Care; CHV= Community Health Volunteer; CGV= Care Group Volunteers FHRM=Fetal Heart Rate Monitor

RESULT	ACTIVITY	RESPONSIBLE PERSONNEL	COMPLETED (Y/N)
Cross-cutting	Recruitment and selection of project staff	HA; Project Manager; Senior Program Specialist	Y
Cross-cutting	Develop and test financial requesting/reporting forms and procedures; implement funds transfers	HA; Project Manager; Senior Program Specialist; Junior Accountant	Y
Cross-cutting	Waiver for vehicle purchase; purchase of vehicle; purchase of project equipment (computers, desks, electronic gear, etc); setting up project work space	Senior Program Specialist; Project Manager	Y
Cross-cutting	DIP training for GUMH staff	Senior Program Specialist	Y
Cross-cutting	Training in CBIO Approach, Mapping and Census, Care Group Methodology; Designing for Behavior Change/Barrier Analysis; Qualitative Research techniques	Senior Program Specialist	Y
Increase social capital	Establish HIS system and training on computerized health information; field test HIS system	HA; Project Manager; Senior Program Specialist; HIS	Y
Cross-cutting	Consult with key stakeholders on project objectives, coordination, reporting requirements, technical assistance: USAID; NCHT; NACP, NMCP, UNICEF, Division of Family Health Services, Division of Community Health Services	Senior Program Specialist; Project Manager	Y
Cross-cutting	Develop and sign MOUs between Curamericas, GUMH, Nimba County Health Team, NGO collaborators	Legal Representatives of Curamericas Global, GUMH, Nimba County Health Team, NGOs	Y – MOU with GUMH
Cross-cutting	Selection of 8 pilot villages: Community assemblies to present PHC program; conduct community mobilization, mapping & census in pilot villages	Project Manager; PHC Teams	Y
Cross-cutting	Barrier Analyses	Project Manager; PHC Teams	Y
Cross-cutting	Training on KPC Survey and analysis	KPC consultant	Y
Cross-cutting	Conduct baseline KPC Survey; complete KPC report	KPC Consultant; Project Manager; PHC Teams	Y
Cross-cutting	DIP planning workshop	Senior Program Specialist	Y
Increase social capital	Evaluation of organizational capacity of GUMH	Senior Program Specialist; HA	Y
Cross-cutting	Writing & submission of the DIP	Senior Program Specialist	Y

RESULT	ACTIVITY	RESPONSIBLE PERSONNEL	COMPLETED (Y/N)
Increasing access to MNC	Procurement of cell phones, renewable energy chargers, and FHRM prototype from Free Play Energy; partnerships formalized with Free Play Energy, Lonestar, Cellcom; training of GUMH staff, CHVs, TTMs in ERS protocols, procedures, Response System equipment care/use	Senior Program Specialist; Project Manager	Y
Increasing access to MNC	Pilot of Emergency Response System in 30 villages	HA; Project Manager; MNC Supervisor	Y
Increasing access to MNC	Quarterly reporting to Free Play Energy on field testing of renewable energy phone charging equipment & FHRM	Senior Program Specialist	Y
Cross cutting	Development of education/BCC materials for use by PHC teams, CHVs, TTMs, and CGVs utilizing Barrier Analysis data; ongoing formative research and material development	Health Education Supervisor	Y
Cross cutting	Recruitment and hiring of Sehyi/Gbein Clan and Ganta Town PHC teams	HA; Project Manager	Y
Cross cutting	First Annual Data Review; PY1 Annual Report; Annual Retreat ; PY2 Annual Implementation Plan	Senior Program Specialist; Project Manager; HA; Health Information Supervisor	Y
Increasing access to all interventions; increasing social capital	Pre-Service Training for Sehyi/Gbein and Ganta Town Teams: CBIO Approach, Mapping and Census, Care Group Methodology; Designing for Behavior Change/Barrier Analysis; Qualitative Research techniques; Quality Assurance/CQI; Adult learning principles; Conflict Resolution; Performance-based management	Senior Program Specialist; Project Manager	Y
Increasing access to all interventions; increasing social capital	Mentoring of new teams by Bain and Garr teams	Project Manager; PHC Teams	Y
Increasing access to all interventions; increasing social capital	Roll out of project to 30 more villages in Bain, Garr, Sehyi, and Gbein Clans: community mobilization; CDC strengthening; mapping and census; create community registers; obtain baseline vital events data-calculate baseline U5MR; mobilize CDCs; select & train CHVs; establish Care Groups; provide intervention services; initiate HF referral system	Project Manager; Bain and Gbannah Teams	Y
Cross cutting	Quarterly mini-KPC Surveys to assess intervention outcome indicator coverage	Project Manager; Health Information Supervisor	Y
Increasing access to MNC	Assessment of Emergency Response System; changes in procedures, equipment mix, protocols, as needed	Senior Program Specialist; A; Project Manager; MNC Team	Y
Increasing access to malaria prevention & treatment; diarrhea treatment; ARI/pneumonia treatment	IMCI protocol training and refreshers (IMCI Team)	MOHSW-approved trainer	Y
Increasing access to PMTCT	PMTCT protocol training and refreshers (HIV Team)	MOHSW-approved trainer	Y

Increasing access to diarrhea prevention	Wat-San Guidelines training and refreshers (Wat-San Team)	MOHSW-approved trainer	Y
Increasing access to MNC	TTM/HBLSS Training of Trainers (MNC Team)	MOHSW-approved trainer (ACNM)	Y
Cross cutting	Quarterly supervisory reviews of project staff	Project Manager; Intervention Supervisors	Y
Cross cutting	Quarterly Staff Training Refreshers	Intervention Supervisors	Y – as needed
Increasing access to all interventions; increasing social capital	Roll out of project to 30 villages in Bain, Garr, and Gbein Clans: mapping and census create community registers; obtain baseline vital events data- calculate baseline U5MR; mobilize CDCs; select & train CHVs; establish Care Groups; provide intervention services; initiate HF referral system	Project Manager; PHC Teams	Y
Increasing social capital	Quarterly training of CHVs	Community Support Team	Y – as needed
Increasing access to MNC; increasing social capital	Bi-annual training of TTMs	MNC Team	Y
Increasing social capital; increasing access to MNC	Quarterly supervisory reviews of CHVs and TTMs	Community Support Team	Y
Increasing access to MNC	Roll out of Emergency Response System to communities as they are added to project; quarterly assessment of system	Project Manager; MNC Supervisor; Community Support Supervisor	Y
Cross-cutting	Bi-Annual Doer/NonDoer Analyses	Health Education Supervisor	Y
Increasing social capital	Organization groundwork with political leadership in Ganta	Project Manager	Y
Cross cutting	Annual training of Project Manager in US	Senior Program Specialist	Y
Cross cutting	Annual data review; Annual Retreat; Writing the PY2 Annual Report/PY3 Annual Implementation Plan	Senior Program Specialist	Y
Increasing access to all interventions; increasing social capital	Roll out of project to 15 more villages in Bain, Garr, Sehyi, and Gbein Clans: community mobilization; CDC strengthening; mapping and census; create community registers; obtain baseline vital events data- calculate baseline U5MR; mobilize CDCs; select & train CHVs; establish Care Groups; provide intervention services; initiate HF referral system	Project Manager; PHC Teams	Y
Increasing access to all interventions; increasing social capital	Roll out of project to 2 Zones (8-12 quarters) of Ganta Town: community mobilization; CDC strengthening; mapping and census; create community registers; obtain baseline vital events data- calculate baseline U5MR; select & train CHVs; establish Care Groups; provide intervention services; initiate HF referral system; test Ganta adaptations of CBIO	Project Manager; Ganta PHC Team	Y – total of 120 communities
Cross cutting	Mid-term KPC	Senior Program Specialist; Project Manager; KPC consultant	Y

Cross cutting	Annual data review; Mid-Term Evaluation and Report	Health Information Supervisor	Y
Cross cutting	Mid-Term Evaluation and Report	USAID-approved consultant	Y
Cross cutting	Annual Retreat/Midterm Review-	Senior Program Specialist; HA; Project Manager	Y
Cross cutting	Mid-term meetings with stakeholders to analyze project progress and challenges, do project improvements	Senior Program Specialist; HA; Project Manager	Y

Annex V: Nehnwaa Child Survival Project
Rapid CATCH & Project Indicators

Rapid CATCH Indicators

Indicator	Baseline	Midterm	Final
Exclusive breastfeeding (0-5 months): Percent of infants aged 0-5 months who were given breast milk only in the 24 hours preceding survey.	39.4%	54.0%	52.9%*
IYCF practice indicator (6-23 months): Percent of infants and young children aged 6-23 months fed according to a minimum of appropriate feeding practices.	17.9%	3.7%	61.9%*
Underweight: Percentage of children age 0-23 months who are underweight (-SD for the median weight for age, according to WHO/NCHS reference population).	67.0%	8.6%	23.4%*
ORT Use: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution and/or recommended home fluids.	47.9%	48.0%	82.7%*
Appropriate Care Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider.	42.8%	66.0%	96.6%*
Treatment of Fever with ACTs in Malarious Zones: Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with ACTs within 24 hours after the fever began.	2.4%	22.1%	86.1%*
ITN Use: Percentage of children age 0-23 months who slept under an insecticide-treated bed net the previous night.	46.0%	79.0%	98.6%*
Point of Use Water Treatment: Percentage of households of children age 0-23 months that treat water effectively.	13.0%	30.9%	26.01%*
Appropriate Hand Washing Practices: Percentage of mothers of children age 0-23 months who live in households with soap at the place for hand washing.	14.0%	26.0%	63.2%*
Current Contraceptive Use Among Mothers of Young Children: Percentage of mothers of children age 0-23 months who are using a modern contraceptive method.	2.0%	13.3%	61.4%*
Quality Antenatal Care: Percentage of mothers of children age 0-23 months who had four or more antenatal visits with a skilled provider and were adequately counseled when they were pregnant with the youngest child.	24.7%	49.0%	73.9%*
Tetanus Toxoid: Percentage of mothers with children age 0-23 months who received at least 2 tetanus toxoid vaccinations before the birth of their youngest child.	57.3%	96.0%	82.4%*
Skilled Birth Attendant: Percentage of children age 0-23 months whose births were attended by skilled personnel.	22.7%	26.6%	82.5%*

Post-Natal Visit to Check on the Newborn: Percentage of children age 0-23 months who received a post-natal visit from an appropriate trained health worker within two days after birth.	26.3%	74.4%	99.2%*
Vitamin A Supplementation: Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall.	38.8%	72.1%	94.4%*
Measles Vaccination Coverage: Percent of children aged 12-23 months who received measles vaccine according to the vaccination card or mother's recall by the time of the survey.	45.3%	75.7%	97.0%*
Access to Immunization Services (DTP1): Percent of children aged 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey.	40.1%	45.8%	100%*
Health Systems Performance Regarding Immunization Services (DTP3): Percent of children age 12-23 months who received a DTP 3 according to the vaccination card or mother's recall by the time of the survey	24.5%	42.0%	99.0%*

Key Project Indicators

Indicator	Baseline	Midterm	Final
Immediate breastfeeding of newborns: Percentage of children age 0-23 months who were put to the breast within one hour of delivery.	76.2%	73.0%	91.3%*
Feeding Colostrum: Percentage of children age 0-23 months, who were fed colostrum after birth.	90.7%	95.0%	100%*
Increased fluid intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness.	47.9%	89.0%	92.9%*
Increased food intake during a diarrheal episode: Percent of children 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness.	33.8%	61.6%	65.1%*
Zinc Treatment for Diarrhea: Percent of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements.	5.6%	5.4%	30.9%*
Maternal competency in ORS preparation: Percent of mother who can correctly prepare ORS.	49.3%	78.4%	100%*
Maternal hand washing before food preparation: Percent of mothers who usually wash their hands with soap before food preparation, before feeding children, after	4.7%	72.4%	97.3%*

defecation, and after attending to a child who has defecated.			
Percent of households of children age 0-23 months that own at least one insecticide-treated bed net.	52.5%	83.3%	98.9%*
Percent of children age 0-23 month with a febrile episode during the last two weeks who were taken to an appropriate place for treatment.	44.6%	50.9%	93.4%*
IPT: Percent of mothers of children age 0-23 months who took effective antimalarials during the pregnancy with the youngest child.	19.0%	23.9%	96.3%*
Mosquito net Use During Pregnancy: Percent of mothers of children age 0-23 months who reported that they slept under a mosquito net all of the time or most of the time during their most recent pregnancy.	37.7%	65.0%	98.3%*
Percent of households with an improved source for drinking water.	63.3%	85.0%	99.7%*
Percent of households with an improved source for drinking water within acceptable reach and available daily.	48.3%	53.1%	89.7%*
Percent of households using an improved toilet facility.	24.7%	42.5%	95.6%*
Percent of households using an improved, accessible and hygienic toilet facility.	1.2%	7.3%	24.03%*
Percentage of households where the caretaker of the youngest child 0-23 months reported appropriate handwashing behavior, which is defined as using soap for washing hands during 24 hours recall at 2 critical times or more (after defecation and two of the following 4: after cleaning a young child, before preparing food, before eating, before feeding a child).	0.3%	65.0%	82.7%*
Percent of households that apply effective water treatment regularly.	0.3%	9.6%	21.3%*
Percent of households storing drinking water that store water safely.	11.7%	30.9%	74.9%*
Percentage of households that disposed of the youngest child's feces safely the last time s/he passed stool.	90.7%	16.2%	88.6%
Percentage of households that disposed of the youngest child's feces appropriately the last time s/he passed stool.	4.3%	33.9%	96.9%*
Knowledge of Danger Signs during Pregnancy: Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy.	55.7%	91.3%	98.9%*
Knowledge of Maternal Danger Signs During Delivery: Percentage of mothers of children 0-23 months who know at least two danger signs during delivery.	35.7%	29.9%	98.6%*
Essential Newborn Care: Percentage of children age 0-23 who received all three elements of essential newborn care: thermal protection immediately after birth, clean cord care, and immediate and exclusive breastfeeding.	34.0%	64.5%	85.9%*

Iron Tablets for Pregnant Women: Percentage of mothers of children age 0-23 months who took iron tablets or syrup before the birth of their youngest child.	0.67%	16.6%	65.3%*
Knowledge of Post-partum Danger Signs: Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs.	47.7%	87.0%	98.3%*
Post-Partum Visit for the Mother: Percentage of mothers of children age 0-23 who received a post-partum visit from an appropriate trained health worker within two days after the birth of the youngest child.	9.3%	17.2%	58.1%*
Knowledge of Neonatal Danger Signs: Percentage of mothers of children age 0-23 who know at least two neonatal danger signs.	37.3%	93.7%	100%*
Maternal Knowledge of Child Danger Signs: Percent of mothers of children aged 0-23 months who know at least two signs of childhood illness that indicate the need for treatment.	60.3%	96.0%	99.7%*
Knowledge of MTCT of HIV: Percentage of mothers of children age 0-23 months who know that HIV can be transmitted from an HIV-positive mother to her unborn child during pregnancy, during delivery, and through breastfeeding.	32.7%	75.4%	98.6%*
Knowledge of PMTCT of HIV: Percentage mothers of children age 0-23 months who know that there are special medications that can be given to a pregnant woman infected with HIV to reduce the risk of mother-to-child transmission.	28.7%	75.7%	96.9%*
HIV Testing During Pregnancy: Percentage of mothers of children 0-23 months who were counseled about HIV during the pregnancy, accepted an offer of testing, and received their test results when they were pregnant with their youngest child.	20.3%	68.1%	96.9%*

Nehnwaa Child Survival Project

October 2008 – September 2013



Final Knowledge, Practice and Coverage (KPC) Survey Report September 2013



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Acronyms

ANC	Ante-Natal Care
ARI	Acute Respiratory Infections
ART	Anti-Retroviral Therapy
BCC	Behavior Change Communication
BLSS	Basic Life Saving Skills
BPHS	Basic Package of Health Services
CBIO	Census Based Impact-Oriented
CDC	Community Development Committee
CGV	Care Group Volunteer
CHO	County Health Officer
CHT	County Health Team
CHW	Community Health Worker
CSHGP	Child Survival and Health Grants Program
CSSP	Child Survival Support Project
CSTS	Child Survival Technical Support
EPI	Expanded Program on Immunization
GUMH	Ganta United Methodist Hospital
HBLSS	Home Based Life Saving Skills
HIS	Health Information Systems
HIV	Human Immunodeficiency Virus
IMCI	Integrated Management of Childhood Illnesses
IPT	Intermittent Presumptive Treatment
ITN	Insecticide Treated Net
KPC	Knowledge Practice and Coverage
LDHS	Liberia Demographic and Health Survey
LOE	Level of Effort
MOHSW	Ministry of Health and Social Welfare
NCHT	Nimba County Health Team
NDS	National Drug Service
NGO	Non-Governmental Organization
NHP	National Health Plan
NMCP	National Malaria Control Program
ORS	Oral Rehydration Solution
PHC	Primary Health Care
PMTCT	Prevention of Mother to Child Transmission
POU	Point of Use
TBA	Traditional Birth Attendant
TTM	Trained Traditional Midwife
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WATSAN	Water and Sanitation
WHO	World Health Organization

Executive Summary

Background

In 2008, Curamericas Global, Inc., in partnership with the Ganta United Methodist Hospital, was awarded a 5-year, \$1.25 million grant from the United States Agency for International Development (USAID) Child Survival and Health Grants Program (CSHGP) to reduce neonatal, infant, child, and maternal morbidity and mortality in three Clans, the sub-districts of Garr, Gbein, and Bain Clans, of northern Nimba County, Liberia. Titled the Nehnwaa Child Survival Project, the project is housed in Ganta, Nimba County.

Serving over 137,000 community members and over 71,000 project beneficiaries, the Nehnwaa project aims to reduce child and maternal mortality in Northwest Nimba County, Liberia. The outcome objectives seek to address the six major causes of child and maternal mortality, including neonatal conditions, obstetric complications, malaria, pneumonia, diarrhea, and HIV.

The KPC Survey was conducted in August of 2013. The objectives of the survey were to:

- To collect data on the project's intervention areas to compare to the Baseline survey conducted in 2009 and Midterm survey conducted in 2011;
- To collect final data to be utilized in the final evaluation and contribute to determining the project's impact;
- To provide refresher capacity building to project staff in planning, organizing and implementing KPC Surveys, as well as data entry and cleaning for the M&E staff; and
- To reaffirm community participation and conduct community feedback sessions on the accomplishments of the project.

Methodology

The Nehnwaa Child Survival Project KPC Survey questionnaire consisted of 97 questions and surveyed mothers of children between the ages 0 – 23 months. The questionnaire was an updated version of the 2011 KPC which had questions taken from the standardized generic questionnaire format originally developed by the PVO Child Survival Support Project (CSSP) and modified and expanded by the Child Survival Technical Support (CSTS). The questionnaire collected information on all of the Rapid CATCH and project indicators, with all of the KPC questions covering the following intervention areas:

- Breastfeeding and Child Nutrition
- Childhood Immunization and Supplementation
- Anthropometric
- Sick Child
- Diarrhea Case Management
- Acute Respiratory Infections
- Malaria Management and Prevention
- Water and Sanitation

- Maternal and Newborn Care
- HIV

300 mothers of children under 24 months of age were surveyed from 30 project communities. These communities were selected using the 30-cluster sampling methodology.

Key Findings

The Final KPC Survey overall had positive results. The key findings include:

- 52.9% of children under six months are exclusively breastfed (measured as only fed breastmilk in the 24 hours preceding the survey) (CI: 42.8% - 62.9%).
- 23.4% of children surveyed were underweight (CI: 18.5% - 28.8%).
- 61.9% of children between 6-23 months are fed according to feeding guidelines (diversity, quantity, and frequency of food) (CI: 54.3% - 69.3%).
- 82.7% of children with diarrhea in the two weeks prior to the survey were treated with ORS (CI: 72.7% - 90.2%) and 30.9% of children with diarrhea were treated with zinc (CI: 21.1% - 42.1%).
- 96.6% of children with coughing and fast breathing in the two weeks prior to the survey were taken to an appropriate skilled provider for treatment (CI: 90.4% - 99.3%).
- 86.1% of children with a fever in the two weeks prior to the survey were treated with ACT within 24 hours of the onset of fever (CI: 78.9% - 91.5%).
- 99% of households surveyed own at least one insecticide-treated net (ITN) (CI: 97.1% - 99.8%), and 98.9% of children surveyed slept under a net the night prior to the survey (CI: 97.1% - 99.8%). Similarly, 98.3% of mothers reporting sleeping under an ITN at least most of the time while they were pregnant (CI: 96.1% - 99.5%).
- 26% of households are currently treating their water effectively (CI: 21.1% - 31.4%) but 99.7% are using an improved drinking source for water, some of which are pre-treated (CI: 98.2% - 99.9%).
- 95.6% of households are using an improved toilet facility (CI: 92.6% - 97.7%), but only 24% of households are using an improved toilet facility that is also accessible and hygienic (CI: 19.2% - 29.4%).
- 82.7% of households reported appropriate handwashing behaviors at at least 2 critical times (CI: 77.9% - 86.9%).
- 61.4% of mothers surveyed are using a modern method of contraception to space or prevent births (CI: 55.5% - 66.9%).
- 73.9% of mothers received at least four antenatal care (ANC) visits from a skilled provider during their pregnancy with their youngest child (CI: 68.6% - 78.9%).
- 82.5% of mothers surveyed delivered their babies in the attendance of skilled personnel (CI: 77.7% - 86.6%).
- 99.2% of children received a visit from an appropriate health worker within two days of their birth (CI: 97.3% - 99.9%).
- 96.9% of mothers surveyed were offered an HIV test while pregnant, accepted the test, and received their results (CI: 94.13% - 98.6%).

- 97% of children ages 12-23 months had received their measles vaccination (CI: 91.48% - 99.4%).
- 100% of children aged 12-23 months who were surveyed had received the PENTA 1 vaccine; 97% of children received both PENTA 1 and 3 (CI: 94.7% - 99.6%).

Introduction

In 2008, Curamericas Global, Inc., in partnership with the Ganta United Methodist Hospital, was awarded a 5-year, \$1.25 million grant from the United States Agency for International Development (USAID) Child Survival and Health Grants Program (CSHGP) to reduce neonatal, infant, child, and maternal morbidity and mortality in three Clans, the sub-districts of Garr, Gbein, and Bain Clans, of northern Nimba County, Liberia. Titled the Nehnwaa Child Survival Project, the project is housed in Ganta, Nimba County. Figure 1 shows the project catchment area

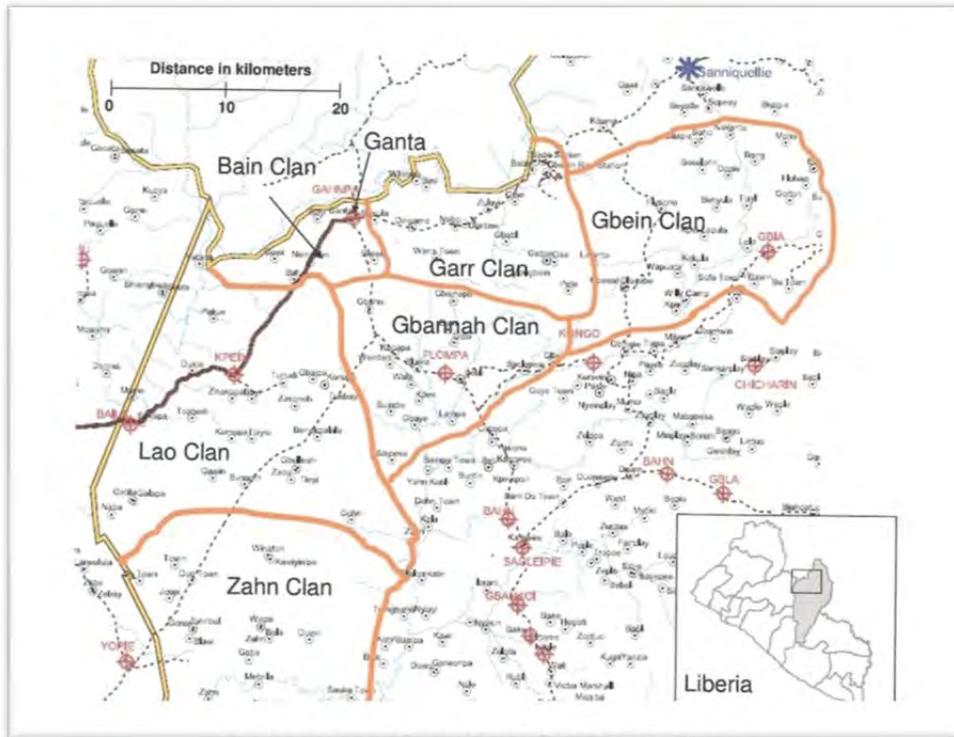


Figure 1: Map of project Area in Nimba County, Liberia

Project Overview

The project catchment area includes a total of approximately 130 communities of the Garr, Gbein, and Bain Clans and Ganta City . According to the Nehnwaa Project database, there are over 137,000 people in Nehnwaa communities, totaling over 71,000 beneficiaries (women of reproductive age (WRA), pregnant women, and children under-five). Table 1 summarizes the breakdown of the project’s population by clan.

Table1: Population Breakdown by Districts and Clans, September 2013

Clan	Total estimated population	Women 15-49 (23%)	Children 0-11 months (4%)	Children 12-23 months (3.7%)	Children 24-59 months (9.3%)	Children 0-59 months (17%)	Total beneficiaries
Bain	51,445	11,648	1,877	3,094	7,091	12,062	24,447

Gbein	99,232	26,720	3,164	1,149	7,413	11,726	40,199
Garr	47,920	10,806	1,801	3,004	6,625	11,430	22,948
Ganta	108,560	33,413	3,746	3,203	13,905	20,854	57,510
TOTAL	307,157	31,096	5,408	5,002	12,573	22,983	54,079

Project Goals & Objectives

The overarching goal of the project is to reduce child and maternal mortality in Northwest Nimba County, Liberia.

The outcome objectives seek to address the six major causes of child and maternal mortality, including neonatal conditions, obstetric complications, malaria, pneumonia, diarrhea, and HIV:

- Increase the demand for and use of antenatal care services, with 65% of women receiving at least 4 antenatal care visits
- Increase the demand for and use of skilled birth attendants who practice clean safe birthing techniques and proper newborn care, with 60% of births attended by a skilled attendant (at least Trained Traditional Midwife level)
- Increase access to emergency obstetric care, with 60% of obstetric emergencies treated in a health facility in a timely manner
- Increase demand for and use of postpartum care services, with 60% of mothers receiving postpartum care within 3 days
- Increase demand for and use of malaria prevention practices and detection and treatment services, with 85% children under-five with a malaria episode treated with antimalarials within 24 hrs; 85% of children sleeping under ITNs; and 85% of pregnant women receiving IPT
- Increase the demand for and use of diarrhea prevention and treatment practices and treatment services, with 85% of children with diarrheal disease episodes receiving ORT and 50% receiving zinc supplementation
- Increase access to potable water and proper sanitation, with 65% of households with children under-five treating water effectively and showing proper point of use (POU)
- Increase the demand for and use of pneumonia detection practices and treatment services, with 80% of children under-five with symptoms of ARI/pneumonia treated by a health professional
- Increase the demand for and use of HIV/STI prevention practices and treatment services by pregnant and postpartum women, with 75% of women getting ANC accepting VCT, and 75% of HIV-positive pregnant women receiving PMTCT

As a comprehensive health education and service delivery program, Nehnwaa is comprised of the following interventions (levels of effort in parentheses): Maternal/Newborn Health (30%); Malaria (20%); Control of Diarrheal Diseases (15%); Pneumonia Case Management (10%); Immunization (10%); and HIV/AIDS (15%). Calculations of the level of effort (LOE) were based on: 1) attributable mortality; 2) preventable mortality at 99% coverage; 3) planned level of coverage; and 4) financial and human resources and time required to attain those planned coverage levels.

Project Implementation

The Baseline KPC Survey for the Nehnwaa Project was completed in January 2009 and interviewed 300 mothers of children under-two from 30 communities in the proposed catchment area in Nimba County. The questionnaire collected information on all of the Rapid CATCH and selected project indicators, covering all of the proposed intervention areas. Specifically, the baseline survey found low levels of health-seeking behavior related to pregnancy, delivery, and childhood illnesses such as diarrhea, acute respiratory infections (ARI), and malaria. In addition, baseline levels of targeted health behaviors were low, including proper handwashing (14.0%), water treatment (13.0%) and storage (11.7%), birth spacing via contraception use (2.0%), and HIV testing during pregnancy (20.3%), to name a few. By the midterm KPC Survey conducted in 2011, many of the Rapid CATCH and project indicators had increased, some of which had already met their targets. Additional results found that some areas of intervention needed improvement. A table summarizing baseline, midterm, and final KPC survey results can be found in **Appendix X**.

Since its inception the Nehnwaa Child Survival Project has incrementally rolled-out into 120 of the 130 targeted communities. Given an underestimate of population size by 2012 in the catchment area, the target population was prematurely reached in 120 communities. In an effort to utilize resources effectively, the project did not continue to scale up to the remaining 10 communities. The Nehnwaa Project catchment area is currently comprised of communities in the Bain, Garr, and Gbein Clans and Ganta Town, and reached 71,186 beneficiaries by the end of the project. Key accomplishments include: 1) experienced field-savvy staff entirely of local Liberians; 2) staff training in Monitoring and Evaluation, adult learning principles methodology, group development, conflict resolution, supervision, the CBIO and Care Group Methodologies, Qualitative Research Methods, Designing for Behavior Change (DBC) Framework, KPC Surveying, Continuous Quality Improvement, and the Liberia MOHSW protocols for IMCI and PMTCT; 3) coordination with stakeholders who include MOHSW-Family Services Division, National AIDS Control Program (NACP), National Malaria Control Program (NMCP), the Nimba County Health Team (NCHT), and USAID Liberia Mission; 4) extensive formative research that included DBC Barrier Analysis; 5) establishment of a partnership conference to develop and implement Nehnwaa exit strategy work plan; and 6) rolling-out of the CBIO Methodology and the six project interventions in 120 communities.

Objectives of the Final KPC Survey

The KPC Survey was conducted in August of 2013. The objectives of the survey were to:

- To collect data on the project's intervention areas to compare to the Baseline survey conducted in 2009 and Midterm survey conducted in 2011;
- To collect final data to be utilized in the final evaluation and contribute to determining the project's impact;
- To provide refresher capacity building to project staff in planning, organizing and implementing KPC Surveys, as well as data entry and cleaning for the M&E staff; and
- To reaffirm community participation and conduct community feedback sessions on the accomplishments of the project.

Methods

Final KPC Questionnaire & Rapid CATCH 2011 Indicators

The Nehnwaa Child Survival Project KPC Survey questionnaire consisted of 97 questions and surveyed mothers of children between the ages 0 – 23 months. The questionnaire was an updated version of the 2011 KPC which had questions taken from the standardized generic questionnaire format originally developed by the PVO Child Survival Support Project (CSSP) and modified and expanded by the Child Survival Technical Support (CSTS). The questionnaire collected information on all of the Rapid CATCH and project indicators. A list of all project indicators can be found in **Appendix X**, with all of the KPC questions covering the following intervention areas:

- Breastfeeding and Child Nutrition
- Childhood Immunization and Supplementation
- Anthropometric
- Sick Child
- Diarrhea Case Management
- Acute Respiratory Infections
- Malaria Management and Prevention
- Water and Sanitation
- Maternal and Newborn Care
- HIV

A draft of the modified questionnaire was circulated throughout the project team for comments and edits, which were incorporated into the final version. The Final KPC questionnaire was similar to the mid-term KPC survey conducted in 2011 and can be found in **Appendix X**.

Sampling Design

Similar to the baseline and mid-term KPC surveys, the 30-cluster sampling design was used for the Final KPC survey. The sample size was calculated with the formula below:

$$n = Z^2(pq)/d^2$$

Where:

n = sample size

Z = statistical certainty chosen (95%) = 1.96

p = estimated prevalence/coverage rate/level to be investigated (0.5)

q = 1-p

d = precision, or margin of error, desired = 0.1.

Given the above values, the calculated sample size (n) needed was:

$$n = (1.96)^2 \times 0.5^2 / 0.1^2$$

$$n = (3.84)(0.25)/(0.01)$$

$$n = 96$$

This survey used the 30-cluster sampling methodology and in order to compensate for the bias which enters the survey from interviewing persons in clusters, rather than as randomly selected individuals, the sample size used should be approximately double the number of that required for a simple random sample. Thus a minimum sample of 210 (i.e. 7 per cluster) participants should be used. In the case of cluster sampling for a KPC survey, a sample size of 300 (10 per cluster) is generally used so as to ensure that sub-samples are large enough to obtain useful management type information. Therefore, the final number of interviews conducted was 300.

Selection of Samples

The 30 clusters or communities for the survey were selected from the list of 120 communities that comprise the catchment area of the Nehnwaa Project. The population of each community was generated from a comprehensive mapping exercise, as a part of the CBIO methodology, held at the time intervention activities began in each community. Referring to the population of each community, the cluster selection process followed a similar process as described in the EPI Coverage Survey Training Manual (WHO, Geneva, 1991 Revised edition), and as summarized below:

Procedure for the Identification of Towns/Villages

1. A list was constructed of all Towns/Villages in the selected districted.
2. The individual population of each town/village was then list along side.
3. The cumulative populations as each town/village was calculated and written in the third column. The final cumulative population is the same as the total population in the county to be surveyed.
4. The Sampling Interval (SI) was determined using the formula:

Sampling Interval = Total population to be surveyed/designated number of towns

Round off to the nearest whole number

5. A random number was selected which was less than or equal to the sampling interval. The random number had the same number of digits as the sampling interval.
6. The 1st town/village selected was the one whose cumulative population equaled or exceeded the random number.

7. The 2nd town/village selected was the one whose cumulative population equaled or exceeded the figure arrived at by the formula:

$$\text{Random Number} + \text{Sampling Interval} =$$

8. In identifying towns/Villages 3-designated number of towns, the following formula was used:

$$\begin{array}{l} \text{Number which identified} \\ \text{Location of the previous} \\ \text{Town/Village} \end{array} + \begin{array}{l} \text{Sampling} \\ \text{Interval} \end{array} =$$

Household Selection

When the survey teams reach their designated towns each day, they selected their starting households and subsequent households as follow:

1. They located a central point (approximate geographic center) in the town.
2. They then spun a pencil/pen to point out or randomly select a direction.
3. They thereafter walked to the periphery of the town in the direction pointed out by the pencil, counting the number of households along the way.
4. They obtained a random number between 1 and the number of households in that line.
5. They sampled the household on that line which corresponds to that random number.
6. The next household to be sampled was the nearest household to the right whose front door was three houses away from the one they just visited.
7. They continued consistently in this way until the required number of households were sampled

Potential selection problems were handled in a consistent manner. If a selected household had more than one eligible mother, the interviewers selected one mother using a random procedure. If a mother had more than one child under the age of two years, the youngest child was the target for the interview. When in the identification of households the team encountered a structure that had more than one household, the same random process was used to select one of them.

Data Collection & Analysis

Training of Survey Staff

A one-day refresher training of all of the Nehnwaa Project staff, including the data collection teams (both supervisors and interviewers), was conducted on August 13, 2013. The supervisors, who also performed interviewing roles, were trained to serve as the frontline guide of the interviewers, as well as to ensure quality control among interviewers. They were orientated on the general objectives of the final KPC survey and its larger contribution to the Final Evaluation, good interview techniques, the sampling process, data quality control, and standardized collection strategies. Given that the staff had conducted many KPC surveys in the past (baseline and midterm for Nehnwaa, as well as mini-KPCs for supplementary projects), experience from their past survey administration was included for discussion. Staff reviewed the selection methods for eligible individuals and households. The training methods utilized included participatory discussions, demonstrations, group work, and practice. There was also a time for questions relating to specific items on the questionnaire.

Twenty interviewers were selected from a pool of Nehnwaa Project staff that have had prior survey experience and were available for the duration of the exercise. Four staff were placed on stand-by for replacement as necessary. Ten of the interviewers were females and 10 interviewers were males, with varied lengths of time as project staff. The breakdown of each interview team as well as communities visited by each can be found in [Appendix X](#).

Data Collection

The interviews were conducted over a three day period, spanning August 14th, 15th, and 16th, 2013. Two teams of six interviewers each and one team of eight interviewers were assembled and assigned clusters on a daily basis. The composition of each team also considered gender balance. Other considerations during the team formation were the inclusion of someone who spoke the local language of Mano and a mix of people from each intervention group on each team. Each team also had a scale to weigh each child of 0-23 months for anthropometrics. Salter® hanging scales were used, which were calibrated prior to each weighing to ensure accuracy. The measurements were taken in order to calculate the child's weight for age and corresponding Z-scores to determine being underweight. Team leaders were appointed who were tasked with working with the rest of the team members to determine eligibility of households, mothers, and children. Upon entering a community, the team met with the local leaders to introduce themselves, explain the purpose of their visit, and seek permission to work in the town. In order to ensure continuous quality improvement, supervisors of each team ensured quality control by completing KPC Quality Control Checklists, as provided by the KPC 2000+ Field Guide. This checklist can be found in [Appendix X](#).

Data Entry and Analysis

Each survey was checked by supervisors before being entered into Microsoft Excel. Data entry was conducted by one Data staff, one M&E officer, and the KPC Lead Coordinator. Using Microsoft Excel, data was entered and coded for positive (if the respondent answered correctly

based on indicator tabulation) or negative (the respondent did not meet indicator tabulation requirements) responses, using a binary yes or no system. The Indicator tabulation plan can be found in [Appendix X](#). The Microsoft Excel tables were then entered in Epi Info 7.1 to be analyzed for frequencies (percentages) of positive responses, as well as any scientific relationships between exposures and outcomes. A 95% confidence interval and a precision of 0.5 were used for each indicator, and 95% confidence limits were calculated for each.

Results and Discussion

General Information on Respondents and Children

Survey respondents included 300 mothers of children who are 0-23 months from 30 communities (See [Appendix X](#) for list of selected communities). The median age of 25 years, ranging from 15 to 49 years of age. The children of the survey respondents were fairly evenly distributed across under-six months, 6 – 11 months, and 12 to 23 months (N = 102, N = 96, and N = 102, respectively). 48.3% of the children were male, and 51.7% were female. Of the thirty communities selected, 18 were from the Ganta town (a peri-urban environment), 12 from the other three clans.

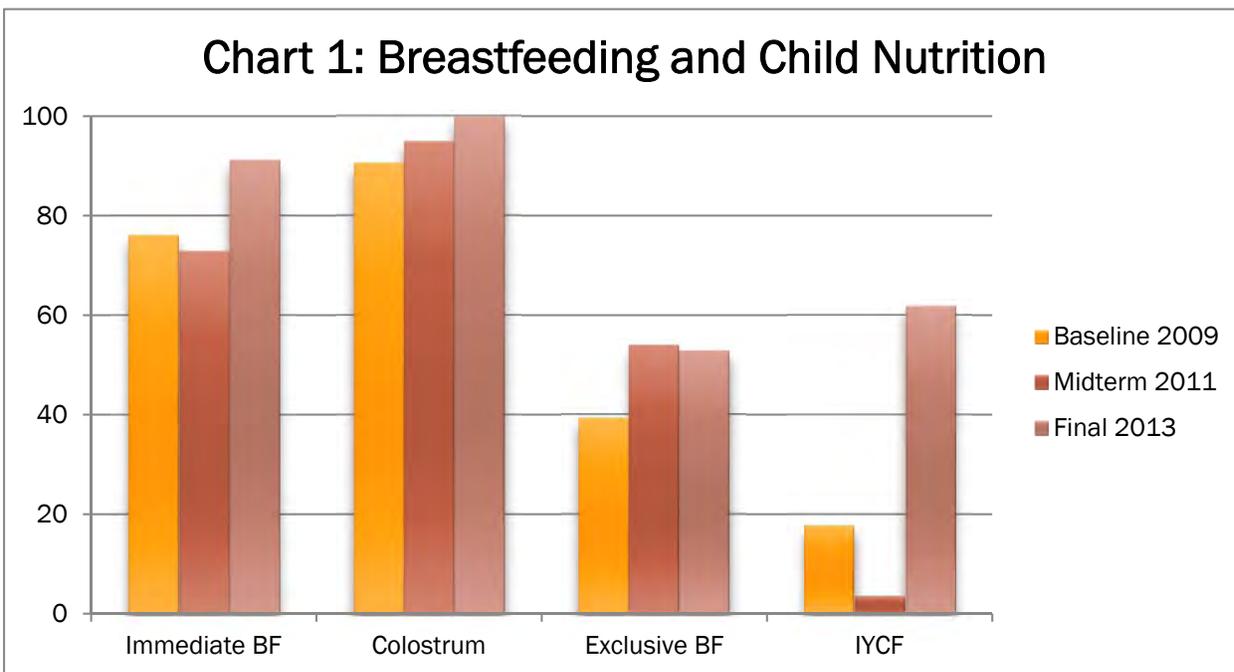
Summary of Findings

Survey results are categorized into the Nehnwaa Project intervention areas: Integrated Management of Childhood Illnesses (including breastfeeding and child nutrition, anthropometry, case management for ARI and malaria, and diarrhea prevention and case management, including water and sanitation indicators), Maternal and Newborn Care (antenatal, partum, and postpartum care), HIV, and Immunizations. Table format of the numerical results per indicator can be found in [Appendix X](#).

a. Integrated Management of Childhood Illnesses

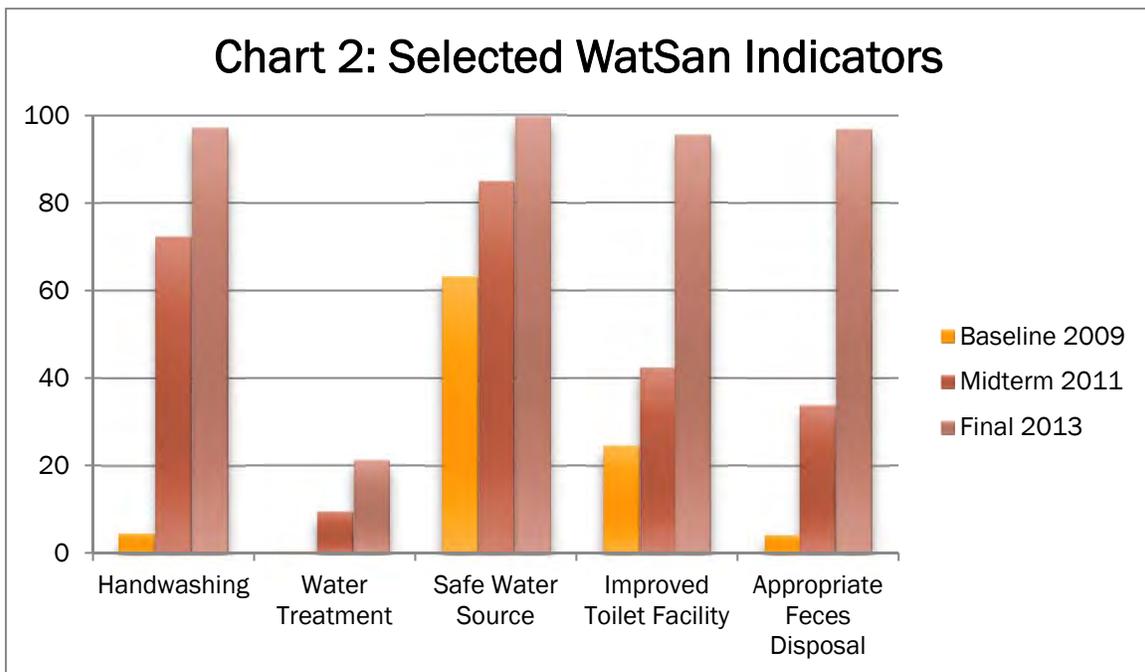
While the Nehnwaa Project did not have a specific nutrition intervention, many of the behavior change communication (BCC) messages directly related to care for newborns or children included education on feeding practices as means to decrease rates of diarrheal disease and improve overall child wellbeing. Namely, the promotion of immediate and exclusive breastfeeding through six months of age and continued complementary feeding after, were direct project indicators. By the end of the project, 91% of children under two were immediately breastfed (95% confidence interval: 87.6% - 94.3%), with 53% of children exclusively breastfed to six months (CI: 42.8% - 62.9%). There are many factors that contribute to why 38% of mothers immediately breastfed but do not continue to exclusively breastfeed to six months; these women may be more likely to work during the day and unable to bring children with them, or there can be physical factors related to the mother's inability to continue. All of the children surveyed were fed colostrum, a mother's first milk, after birth, but this indicator was already high, at 91% at baseline. For children over six months of age, 62% (CI: 54.3% - 69.3%) met the minimum feeding practices, which include diversity of food groups and eating three or more times a day, dependent on whether the child is still breastfed or not. This was a significant improvement over the baseline percentage of 18% despite the fact that Nehnwaa does not

provide food to their communities. Chart 1 summarizes these results. Additionally, as a measure of feeding practices, the KPC surveys collected data on child’s weight-for-age. Children were defined as underweight if their weight-for-age was less than 2 standard deviations lower than the median age, according to the World Health Organization (WHO). By the final KPC, 23.4% were identified as underweight. This is comparable to the last measured national average, again encouraging a focus on nutrition interventions in the future.



In relation to prevention of diarrheal disease, the Nehnwaa Project also had a Water and Sanitation (WatSan) intervention team that provided BCC on proper hygiene and handling of water. With supplementary funds acquired by Curamericas from Ronald McDonald House Charities, the WatSan intervention expanded to the building of wells, hand pumps, and latrines in select communities. The BCC messages coupled with building the capacity of communities to maintain equipment led to a general increase in the practices of handwashing, feces disposal, and safe water treatment and storage. Sixty-three percent (CI: 57.4% - 68.7%) of mothers surveyed live in households with a designated place for handwashing with soap and 83% (CI: 77.9% - 86.9%) reported handwashing at at least two critical times on a regular basis; these figures represent significant increases from the baseline values of 14% and less than 1%, respectively. Similarly, 97% (CI: 94.8% - 98.8%) of mothers reported usually washing their hands with soap at all four critical times (before food preparation, before feeding children, after toileting, and after cleaning a child who has toileted). Over 95% (CI: 92.6% - 97.7%) of mothers surveyed have access to a improve toilet facility, such as a latrine or manual flush toilet, but only 24% (CI: 19.2% - 29.4%) have access to a facility that is accessible (within 30 minutes walking distance) and hygienic (not shared with another household). In Nehnwaa communities, the vast majority of community members use a public toilet facility, based on limited resources for building a private facility. As a result of increased access to facilities, more women are reporting safely disposing their child’s feces (89%, CI: 84.5% - 92%). Even those women with limited access to facilities

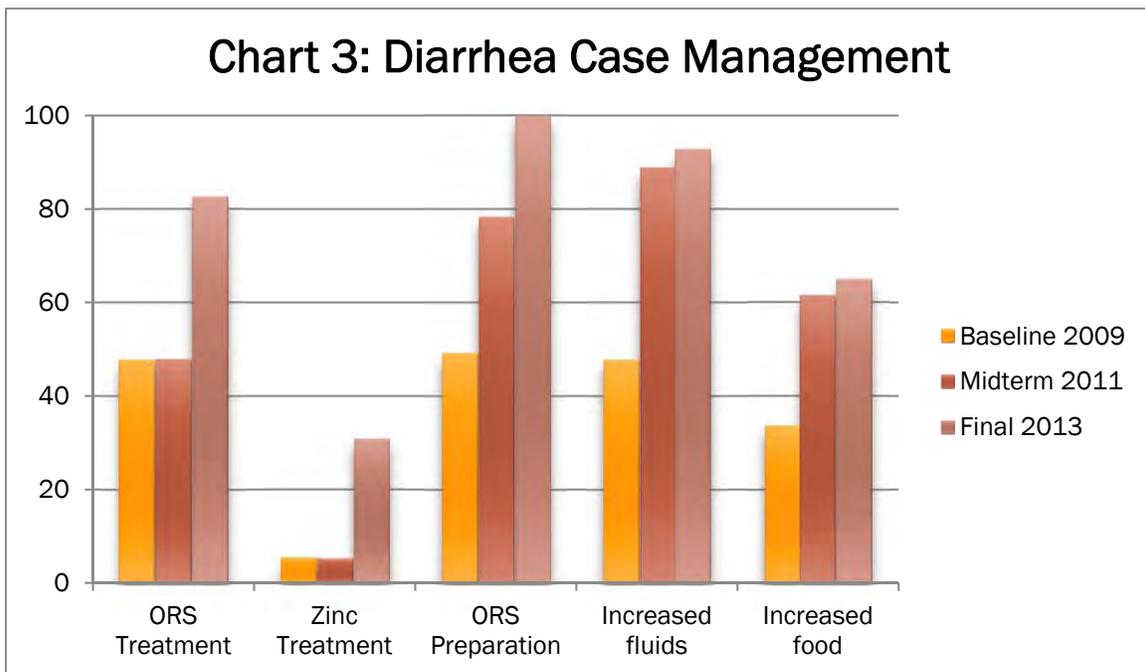
are still practicing appropriate methods of feces disposal, including safe disposal as well as burying of feces, at 97% (CI: 94.4% - 98.6%). Over 99% of mothers surveyed get their drinking water from a safe source, such as a hand pump, covered well, piped water, or a protected spring, and 90% of all drinking water sources reported are accessible and available daily (within 30 minutes walking distance). As a result, only 26% (CI: 21.1% - 31.4%) of mothers reported effective water treatment, most likely due to a perceived protection from illnesses because of safe drinking water sources. All these indicators represent an increase over their respective baseline values, as seen in Chart 2, except for safe feces disposal, which was a report 91% at baseline. There is likely an error in this value, as appropriate feces disposal includes safe disposal, but was only 4.3%.



Interestingly, despite an increase in rates of exclusive breastfeeding and protective WatSan behaviors, the prevalence rate of diarrhea in the surveyed communities did not decrease over the last five years. The baseline diarrhea prevalence rate was 23.7% (reported episode of diarrhea in the two weeks preceding the survey), but should be noted that the survey was conducted in January, at the height of the dry season, where rates of diarrheal disease are generally lower. The midterm diarrhea prevalence rate was xxx% and was conducted in June, at the end of the dry season. The final survey was conducted in August at the height of the rainy season, and diarrhea prevalence was estimated at 28%. Therefore, we unfortunately cannot compare rates over the three time points, but we can infer that there may be other factors at play in addition to feeding, drinking water, and sanitation practices that greatly affect the occurrence of diarrhea.

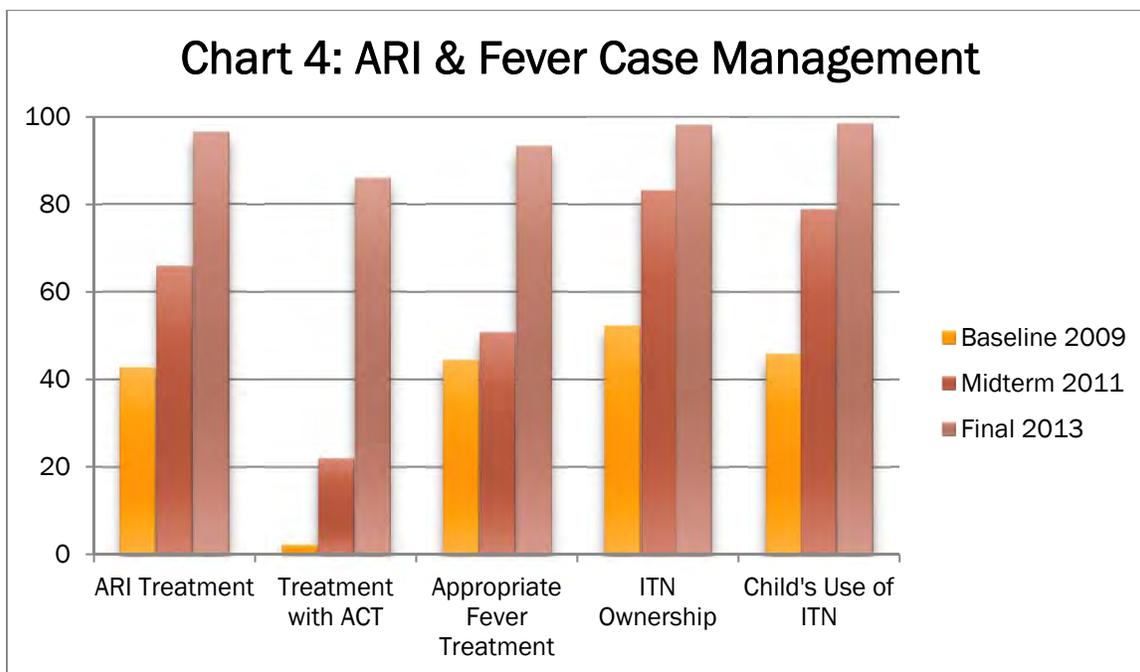
Importantly, case management and treatment of diarrhea has greatly improved over the last five years of the Nehnwa Project. Compared to the baseline and midterm values of 5 – 6% (values not significantly different), 31% (CI: 21.1% - 42.1%) of children with diarrhea were treated with zinc supplements. Similarly, compared to the baseline and midterm values of 48% (values not significantly different), 83% (CI: 72.7% - 90.2%) of children with diarrhea in the last two weeks

prior to the survey received Oral Rehydration Solution (ORS) and/or the recommended home fluids as treatment. While both treatment indicators did not meet their targets, there were significant improvements over time that are notable. For drug- or commodity-based indicators, such as proper treatment, the Nehnwaa Project is not responsible for Liberia's or Nimba County's supply chain; if zinc or ORS are not available in the catchment area, then Nehnwaa's direct impact is limited. Because 100% of mothers surveyed can correctly prepare ORS (as indicated by a correct explanation of the procedure to the interviewer), it is likely that the discrepancy between knowledge and behavior is largely due to availability and access to ORS. In addition to medication, increased fluid and food intake during diarrheal disease improves the child's wellbeing and chances of recovery. Ninety-three percent (CI: 85.3% - 97.4%) of children with diarrhea were offered more fluids while sick, including water and breastmilk. This is a significant increase over the baseline value of 48%. Sixty-five percent (CI: 54.1% - 75.1%) of children were offered the same amount or more food during the illness; this value does not include young children who were not yet eating solid foods. Again, this is a significant improvement over the baseline value of 34%. These results are summarized in Chart 3.



Upon further analysis, our survey results indicate relationships between certain exposures and an outcome of an episode of diarrhea. Foremost, if a child was breastfed in the last 24 hours, they were 90% less likely to have an episode of diarrhea (OR = , CI:). While this is not statistically significant because of the small sample size, it does contribute to programming in this catchment area as well as support previous hypotheses of breastfeeding as a protective factor from diarrhea. Similarly, diarrhea was more prevalent among children ages 12-23 months, at 41%, and children aged 6 to 11 months, at 36%, than among children under 6 months (7.8%). This suggests that because the younger children are more likely to be exclusively breastfed, they may be more protected from diarrheal disease.

In addition to diarrhea prevention and treatment, mothers were surveyed about treatment of ARI and fever. For children with a chest-related cough and difficulty breathing in the two weeks preceding the survey, 97% (CI: 90.4% - 99.3%) were taken to an appropriate health provider for treatment, defined as a doctor, physician’s assistant, nurse, or certified midwife. The final KPC survey also asked mothers about episodes of fever in their children in the last two weeks. It is very common in Liberian communities to assume a fever is automatically malaria and for this reason, Nehnwaa staff encourage taking Rapid Diagnostic Tests (RDTs) at the onset of fever to confirm malaria or refer for other testing or treatment. Of the 129 children with fever in the last two weeks, 86% (CI: 78.9% - 91.5%) were treated with ACTs within 24 hours of onset of the fever, an increase from the baseline value of 2% and midterm value of 22%. More work is needed to educate caregivers on recognizing other malaria symptoms to confirm that the fever is not a sign of another illness. In terms of prevention of malaria, rates of owning insecticide-treated nets (ITNs) and use by children are high; 98.9% of households surveyed own a net, and 79% of children use a net. These results are summarized in Chart 4.



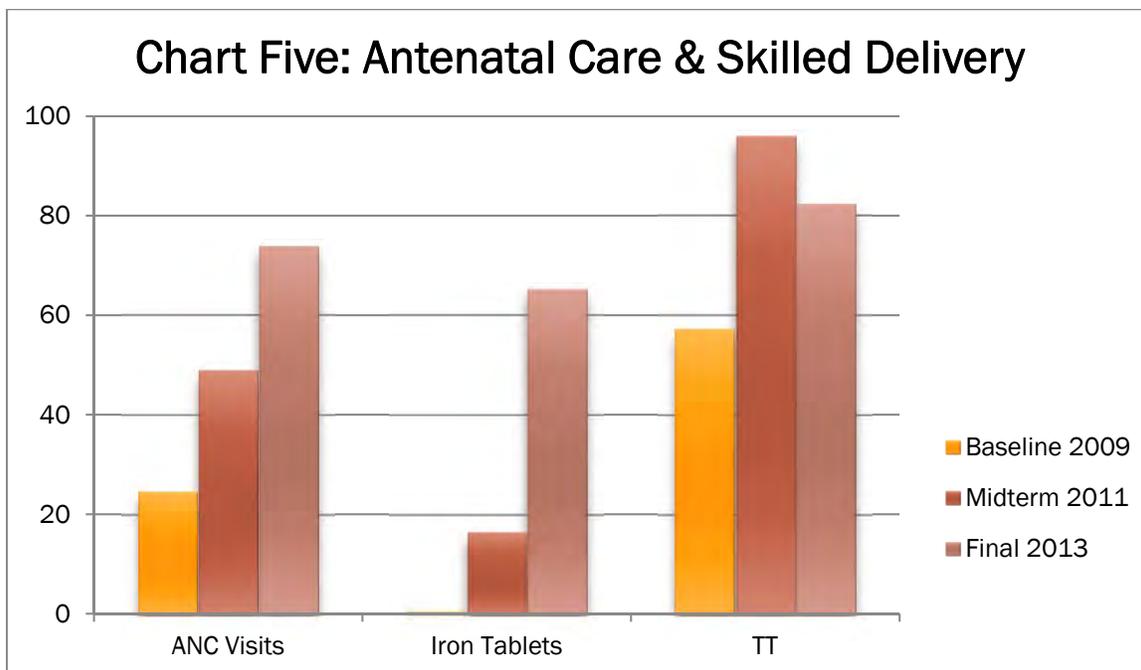
Overall, the Nehnwaa Project found significant improvements in the management of childhood illnesses over the last five years. With its comprehensive approach, Nehnwaa interventions represent a truly integrated management of childhood illnesses, including diarrhea, malaria, and ARI.

b. Maternal and Newborn Care

In an attempt to lower Liberia’s high maternal mortality rates, 30% of Nehnwaa’s LOE is maternal and newborn care (MNC). This intervention includes indicators about birth spacing, antenatal care (ANC), postpartum care (PPC), skilled delivery, and recognition of and response to obstetric emergencies. While family planning was not a direct component of Nehnwaa, the contraception prevalence rate was calculated for the catchment area; by the end of the project,

61% (CI: 55.5% - 66.9%) of women were using a modern method, compared to 2% at the baseline. This is largely due to supplementary funding acquired by Curamericas from USAID and World Learning to train a family planning unit and provide community-based service delivery. After the end of that specific funding, the family planning staff were absorbed as Nehnwaa staff and commodity supply continued with support from UNFPA and the MOH.

A large component of the MNC intervention focused on providing care to the pregnant women in Nehnwaa communities. At the beginning of the project, only 24.7% of pregnant women were attending at least four ANC visits with a skilled provider; by the midterm, this has significantly increased to 49%. At the time of the final survey, 74% of pregnant women had at least four ANC quality visits (CI: 68.6% - 78.9%). A skilled provider is anyone with formal clinical training, particularly a doctor, physician’s assistant, certified midwife, or registered nurse. Because many of the women in Nehnwaa communities experience physical barriers to accessing ANC, they seek healthcare services in their communities from their Traditional Trained Midwives (TTMs). Although TTMs are not skilled providers, they have been trained in many components of ANC, such as birth planning or recognizing danger signs. If this indicator were to include TTMs, the percentage of women receiving four ANC visits may increase. Similarly, because more women are attending ANC, more pregnant women are taking iron tablets (65.3%; CI: 59.6% - 70.7%) and receiving a tetanus toxoid (TT) vaccination (82.4%; CI: 77.6% - 86.6%). There were significant improvements in all of these indicators when compared to the baseline values. The percentage of pregnant women receiving the TT vaccine slightly decreased from the midterm to the final survey and may be due to a lack of available vaccinations to give. Chart 5 shows the improvements in ANC over the last five years.



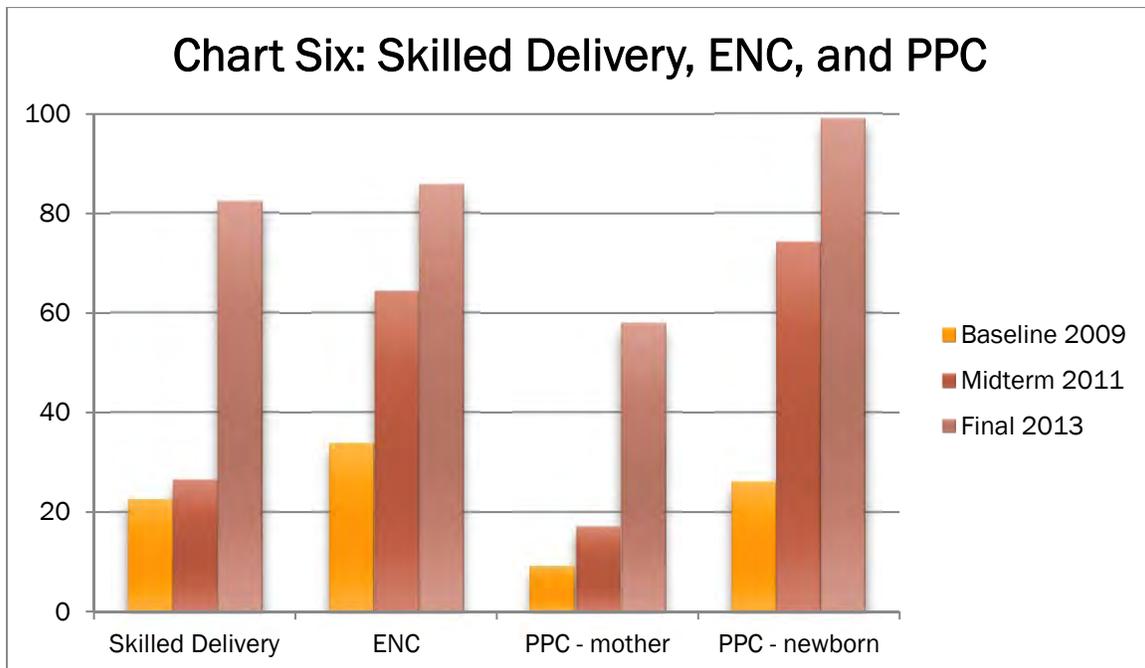
With an increase in health-seeking behavior by pregnant women through ANC visits, education and awareness of the health statuses of themselves and their children also increased. Indicators related to knowledge of dangers signs throughout pregnancy, labor, delivery, and the postpartum

period and into childhood all significantly increased, each exceeding 98%. Table X shows the percentages and confidence intervals for each knowledge indicator related to MNC.

Table X: Comparison of MNC Knowledge Indicators (Final Results, 2013)

Indicator	Percentage	Confidence Interval
Knowledge of Danger Signs during Pregnancy: Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy. (<i>Project Indicator</i>)	98.9%	97.1% - 99.8%
Knowledge of Maternal Danger Signs During Delivery: Percentage of mothers of children 0-23 months who know at least two danger signs during delivery. (<i>Project Indicator</i>)	98.6%	96.6% - 99.6%
Knowledge of Post-partum Danger Signs: Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs. (<i>Project Indicator</i>)	98.3%	96.1% - 99.5%
Knowledge of Neonatal Danger Signs: Percentage of mothers of children age 0-23 who know at least two neonatal danger signs. (<i>Project Indicator</i>)	100%	--
Maternal Knowledge of Child Danger Signs: Percent of mothers of children aged 0-23 months who know at least two signs of childhood illness that indicate the need for treatment. (<i>Project Indicator</i>)	99.7%	98.2% - 99.9%

Most importantly, more pregnant women were giving birth in the presence of a skilled provider, i.e. a doctor, physician's assistant, registered nurse, or certified midwife, than at the baseline (82.5% at final; CI: 77.7% - 86.6%, compared to 22.7% at baseline). If more women are delivering their babies at a health facility, then it is more likely that their newborns will also be receiving essential newborn care (ENC). ENC is a set of practices performed at the birth of a child to ensure survival through the first few days of life and includes clean cord care, thermal protection of the newborn, and immediate and exclusive breastfeeding. Of these practices, clean cord care tends to be the most difficult to complete because it requires a new, unused blade or knife to cut the umbilical cord and prevent infection. In many settings, supplies are limited and blades are often boiled for sterilization and reused. In order for the survey response to be a positive answer for the ENC indicator, the blade had to be brand-new and unused. Even then, 86% of mothers (CI: 81.3% - 89.6%) reported their children receiving all three elements of ENC, compared to 34% of children at baseline. Lastly, timely postpartum care (PPC) for the mother and newborn can lead to a significant reduction in maternal and infant mortality. PPC was very low at baseline and at the midterm for mothers and relatively low for newborns at baseline. By the time of the final survey, 58.1% (CI: 51.9% - 64.02%) of mothers were visited by a health worker within two days of delivery. Importantly, 99.2% of newborns (CI: 97.3% - 99.9%) were checked by a health worker within two days of birth. Chart 6 represents the changes in skilled delivery, ENC, and PCC over the life of the project.

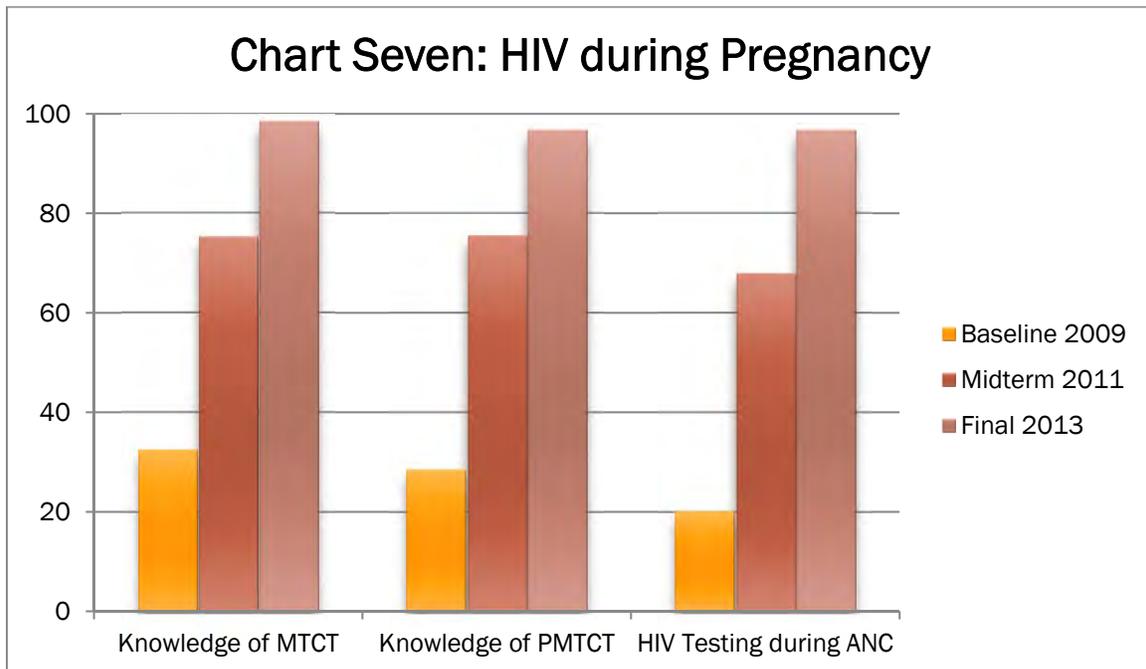


c. HIV/AIDS

While HIV prevalence in Liberia is relatively lower than other sub-Saharan African countries at 1.0%, more women are estimated to have HIV than men (60% v. 40%; UNAIDS). This disparity can put more children at risk of acquiring HIV through mother-to-child transmission (MTCT) during pregnancy, delivery, and/or breastfeeding. In order to reduce the risk of MTCT in its communities, the Nehnwaa Project HIV team tests pregnant women and their partners for HIV, as well as providing awareness and education of prevention and transmission methods to adolescents, WRA, and men. HIV officers also have a supply of condoms they distribute in the community to interested community members. The Nehnwaa Project was Liberia's first community-based HIV-testing program, with continuously high achievements. Pregnant women in Nehnwaa communities who test positive for HIV are also enrolled in PMTCT, or prevention of mother-to-child transmission, where they gain access to counseling and antiretrovirals (ARVs) for their own health and their unborn child's.

Nehnwaa's HIV indicators at the time of the final survey had exceeded all targets. Knowledge among mothers of HIV transmission methods had significantly increased; by the final survey, 98.6% of mothers (CI: 96.5% - 99.6%) knew that HIV can be transmitted from a mother to her child during pregnancy, delivery, and when breastfeeding, compared to 32.7% at baseline. Similarly, 96.9% of mother (CI: 94.1% - 98.6%) knew that there are medications that can be given to reduce the risk of transmission, or knew about PMTCT, compared to 28.7% at the baseline. Most importantly, more pregnant women were offered and given a HIV test and its results during pregnancy than at baseline; 96.9% of mothers had been counseled and tested during pregnancy, compared to 20.3% at baseline. Because HIV status cannot be ethically asked in a KPC survey, the results of each HIV test for each survey respondent are unknown. There is process data however, that measures the number of pregnant women testing positive for HIV and being enrolled in PMTCT services (98% enrollment rate over the life of the project, see

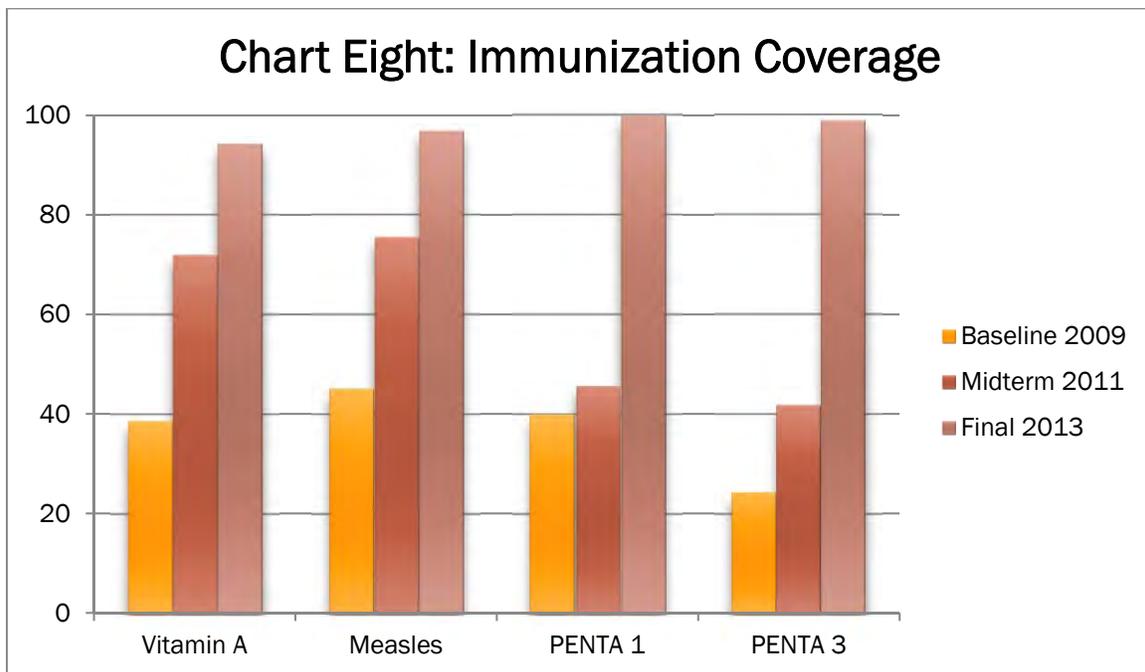
Appendix X for details). These improvements are all significant contributors to keeping HIV prevalence low in Liberia. Chart 7 summarizes these results over time.



d. Expanded Program on Immunizations (EPI)

The Nehnwaa Project’s EPI intervention increases access to disease prevention by bringing a wide variety of vaccinations to communities. While the project indicators only focus on Vitamin A, PENTA 1 and 3, and Measles, Nehnwaa provides vaccinations for BCG (Tuberculosis), Polio, and Yellow Fever, as well. Overall, reported coverage of Vitamin A supplementation, PENTA 1 and 3, and Measles in the survey was exceptionally high. Coverage was measured by the mother’s self-report of vaccination or each vaccine was verified by the child’s Road to Health card. Of the mothers surveyed with children over six months, 94.4% (CI: 90.3% - 97.19%) had received a Vitamin A dose in the six months prior to the survey, compared to only 39% at baseline. Similarly, 97% (CI: 91.48% - 99.4%) of children ages 12-23 months whose mothers were surveyed had received their measles vaccine; this exceeds the target of 75% and is a significant improvement over the baseline value of 45.3%. PENTA coverage rates were also very high at the time of the final survey; 100% of mothers of children 12-23 months surveyed could report or verify with documentation their child had received the PENTA 1 vaccine, compared to 40% at baseline. While it is unlikely that every single child aged 12-23 months in Nehnwaa communities had received a PENTA 1 vaccine, it is likely that the number is high and exceeds the target of 75%. One factor contributing to a high PENTA 1 coverage rate is that within the year prior to the survey, there was a county-wide PENTA vaccination campaign (including other immunizations, as well), which is not attributable to Nehnwaa activities but does positively affect members of Nehnwaa communities. Similarly, the coverage rate of PENTA 3 for families surveyed was 99% (CI: 94.7% - 99.6%). Not only is this an improvement over the baseline value of 24.5% but is also an improvement on decreasing the number of children who receive PENTA

1 but not PENTA 3 (i.e. the gap between PENTA 1 and 3 coverage rates is much lower at the final survey than the baseline).



Limitations

There were many limitations to this survey. For one, only 300 mothers out of over 71,000 beneficiaries were surveyed. Many of the questions asked relied on accurate recall, as well, potentially increasing the level of recall bias. Since Nehnwaa staff members have become very respected over the life of the project, there may also be some bias linked to the respondent's desire to please the interviewer and provide inaccurate responses.

Largely, there is also suggestion of an urban bias; due to the 30-cluster sampling methodology, more communities with larger populations were chosen, many of which were located in or near Ganta Town. Mothers in the communities near Ganta may receive more BCC messaging from billboards and/or radio messages, as well as support from local health facilities, such as Ganta United Methodist Hospital. Other NGOs also work in the area and governmental campaigns for vaccinations or insecticide-treated nets are more frequent in these areas. This limits the validity of those results related to commodities that may be more available in the urban areas.

Conclusion

Information Dissemination

The findings from the Final KPC survey were foremost shared with project staff and management, as well as stakeholders of the implementing partner, GUMH. The findings from the survey were also shared with communities visited for the project's final evaluation, held later in

the month. Additionally, a national stakeholder's meeting will be held to invite partners, external stakeholders, and other interested parties to share the findings of the final KPC, as quantitative data for the final evaluation.

The members of the partnership (NCHT, GUMH, MOHSW, Curamericas Global, Inc, etc) will have access to the document for analyzing trends in data over the life of the project and also to be potentially used for future program designs and implementation. Lastly, the document will also be circulated by Curamericas Global, Inc to USAID Mission in Liberia and USAID-Washington, as an annex of the Final Evaluation Report.

Appendices

KPC Questionnaire

Indicator chart with targets, baseline, final

Indicator, numerator, denominator, result, CI

Tabulation plan

Sample clusters communities

Team assignments

Rapid CATCH Indicators

Maternal and Newborn Care

1. Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child
2. Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid before the birth of the youngest child
3. Percentage of children age 0-23 months whose births were attended by skilled personnel
4. Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth
5. Percentage of mothers of children age 0-23 months who are using a modern contraceptive method

Breastfeeding and Infant and Young Child Feeding

6. Percentage of children age 0-5 months who were exclusively given breastmilk the day prior to the interview
7. Percent of children age 6-23 months fed according to a minimum of appropriate feeding practices

Vitamin A Supplementation

8. Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall

Immunization

9. Percent of children aged 12-23 months who received measles vaccine according to the vaccination card or mother's recall by the time of the survey
10. Percent of children aged 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey
11. Percent of children age 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey

Malaria

12. Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began
13. Percentage of children age 0-23 months who slept under an insecticide-treated bed net the previous night

Control of Diarrhea

14. Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids

Acute Respiratory Infections

15. Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider

Water and Sanitation

16. Percentage of households of children age 0-23 months that treat water effectively

17. Percentage of mothers of children age 0-23 months who live in a household with soap at the place for hand washing

Anthropometrics

18. Percentage of children age 0-23 months who are underweight (-2SD for the median weight for age, according to WHO/NCHS reference population)

Other Indicators

WATSAN

1. Percent of households with an improved source for drinking water
2. Percent of households with an improved source for drinking water within acceptable reach and available daily
3. Percent of households using an improved toilet facility
4. Percent of households using an improved, accessible and hygienic toilet facility
5. Proportion of households where the caretaker of the youngest child 0-23 months reported appropriate handwashing behavior, which is defined as using soap for washing hands during 24 hours recall at 2 critical times or more (after defecation and one of the following 4: after cleaning a young child, before preparing food, before eating, before feeding a child)
6. Percent of households that treat water effectively
7. Percent of households that apply effective water treatment regularly
8. Percent of households storing drinking water that store water safely
9. Proportion of households that disposed of the youngest child's feces safely the last time s/he passed stool
10. Proportion of households that disposed of the youngest child's feces appropriately the last time s/he passed stool

Sick Child

1. Percent of mothers of children aged 0-23 months who know at least two signs of childhood illness that indicate the need for treatment

Malaria

1. Percentage of households of children age 0-23 months that own at least one insecticide-treated bed net
2. Percentage of children age 0-23 month with a febrile episode during the last two weeks who were taken to a appropriate place for treatment
3. Percentage of mothers of children age 0-23 months who took effective antimalarials during the pregnancy with the youngest child
4. Percentage of mothers of children age 0-23 months who reported that they slept under a mosquito nets of the time or most of the time during their most recent pregnancy

Diarrhea

1. Percent of children 0-23 months with diarrhea in the last two weeks who were offered more fluids during the illness
2. Percent of children 0-23 months with diarrhea in the last two weeks who were offered the same amount or more food during the illness
3. Percent of children 0-23 months with diarrhea in the last two weeks who were treated with zinc supplements
4. Percent of mother who can correctly prepare ORS
5. Percent of mothers who usually wash their hands with soap before food preparation, before feeding children, after defecation, and after attending to a child who has defecated

Maternal and Newborn Care

1. Percentage of mothers of children 0-23 months who knew at least two danger signs during pregnancy
2. Percentage of mothers of children age 0-23 months who took iron tablets before the birth of their youngest child
3. Percentage of mothers of children 0-23 months who know at least two danger signs during delivery
4. Percentage of children age 0-23 months who were put to the breast within one hour of delivery
5. Percentage of children age 0-23 months, who were fed colostrum after birth
6. Percentage of children age 0-23 who received all three elements of essential newborn care: thermal protection immediately after birth, clean cord care, and immediate and exclusive breastfeeding
7. Percentage of mothers of children age 0-23 months who knew at least two post-partum danger signs
8. Percentage of children age 0-23 months who received a post-natal visit from an appropriate trained health worker within two days after birth
9. Percentage of mothers of children age 0-23 who know at least two neonatal danger signs

HIV

1. Percentage of mothers of children age 0-23 months who know that HIV can be transmitted from an HIV-positive mother to her unborn child during pregnancy, during delivery, and through breastfeeding
2. Percentage mothers of children age 0-23 months who know that there are special medications that can be given to a pregnant woman infected with HIV to reduce the risk of mother-to-child transmission
3. Percentage of mothers of children 0-23 months who were counseled about HIV during the pregnancy, accepted an offer of testing, and received their test results when they were pregnant with their youngest child

Project Area	Type of CHW	Official Government CHW or Grantee Developed Cadre	Paid or Volunteer	Number Trained Over Life of Project	Focus of Training
Gbein, Bain, Ganta, and Garr Districts	General Community Health Volunteer	Grantee Developed Cadre	Volunteer	120	Malaria, Pneumonia, Nutrition and Exclusive Breastfeeding, Diarrhea (Handwashing, Safe Drinking Water Storage, Simple Water Treatment, WatSan Facilities), HIV, Antenatal Care, Obstetric Emergencies, Immunization Basics, Family Planning (Importance and Commodity Use and Distribution), Referral of Pregnant Women, Care Group Model, Role and Responsibilities of Trained Traditional Midwives; 60 gCHVs received additional training in Community Case Management of Diarrhea, ARI, and malaria with supplemental funding from Ronald McDonald House Charities
Gbein, Bain, Ganta, and Garr Districts	Trained Traditional Midwife	Grantee Developed Cadre	Volunteer	128	Home Based Life- Saving Skills, Proper Handwashing Techniques and Timeline, Transmission Routes of Disease and Personal Hygiene, Roles and Responsibilities, Working with Stakeholders
Gbein, Bain, Ganta, and Garr Districts	Care Group Volunteer	Grantee Developed Cadre	Volunteer	1173	Malaria, Pneumonia, Nutrition and Exclusive Breastfeeding, Diarrhea (Handwashing, Safe Drinking Water Storage, Simple Water Treatment, WatSan Facilities), HIV, Antenatal Care, Obstetric Emergencies, Immunization Basics, Family Planning (Importance and Commodity Use and Distribution), Referral of Pregnant Women, Care Group Model

Gbein, Bain, Ganta, and Garr Districts	Pump Mechanics	Grantee Developed Cadre	Volunteer	88	Maintenance, care, and minor repair of community wells and pumps; recognition and diagnosis of larger repairs if needed, and coordination with Nehnwaa WatSan team for rehabilitation
Gbein, Bain, Ganta, and Garr Districts	WASH Committee members	Grantee Developed Cadre	Volunteer	220	General pump maintenance and repair, proper storage and handling of water, home treatment, managing community assert, sexual exploitation and abuse, roles and responsibilities of WAsH committees members, diseases associated with water, types water sources, diarrhea transmission blocking route

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I. INTRODUCTION

Curamericas Global, Inc. (Curamericas) will hire an independent consultant to conduct final performance evaluation (FE) of the Nehnwaa Child Survival project funded by USAID's Child Survival and Health Grants Program (CSHGP), under the USAID-M-OAA-GH-08-252. Project Cooperative Agreement No: **GHN-A-00-08-00011-00**, FY 2008 Child Survival and Health Grants Program in Nimba County, Liberia. Project period: October 2008 through September 2013. The USAID's CSHGP supports community-oriented projects implemented by U.S. private voluntary organizations (PVOs) and nongovernmental organizations (NGOs) and their local partners. The purpose of this program is to contribute to sustained improvements in child survival and health outcomes by supporting the innovations of PVOs/NGOs and their in-country partners in reaching vulnerable populations. A final project evaluation report is due to USAID on **December 31st, 2013**.

The overarching goal of the project is to reduce child and maternal mortality in Northwest Nimba County, Liberia. The project's goal will be accomplished through implementing a combination of the Census-Based Impact-Oriented (CBIO) methodology and use of peer Mother Educators via Care Groups at the community level to address the six prime causes of child and maternal mortality: neonatal conditions, obstetric complications, malaria, pneumonia, diarrhea, and HIV. The Nehnwaa project aims to achieve its goal through five major strategic objectives:

1. To increase access to the Basic Package of Health Services by a) deploying four mobile Primary Health Care Teams to bring health services into the communities; b) by helping communities devise community transport plans financed by community "financial clubs"; and c) deploying an obstetric emergency response system utilizing cell phones and renewable energy cell-phone chargers;
2. To increase equity with the Census-Based Impact-Oriented Methodology, which utilizes Care Groups, community mapping, census, and participatory surveillance of vital events and health services with Community Registers to ensure those most in need are reached;
3. To increase demand for health behaviors and services with multi-media multi-messenger BCC via Care Groups and utilizing the BEHAVE framework;
4. To ensure quality with the systematic application of continuous quality improvement practices; and
5. To ensure sustainability by developing community social capital and human resources that include 130 Community Health Volunteers, 130 Trained Traditional Midwives, and 1300 Care Group Volunteers.

The Project's Technical Intervention Level of Effort: Maternal/Newborn Care -30%; Malaria – 20%; Control of Diarrheal Disease – 15%; Pneumonia Case Management – 10%; HIV -15%; Immunization – 10%.

These Terms of Reference contract an external Consultant, to conduct a Final Evaluation of the Nehnwaa Child Survival project. The Consultant will serve as the Lead Evaluator in the Final Evaluation, and will serve as the lead author and editor of the project's Final Evaluation Report.

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II. BACKGROUND

Liberia’s civil war devastated its civil society, infrastructure, and health care system, leaving appalling child and maternal mortality and morbidity rates in its wake. Crisis-level shortages of health professionals, destroyed and looted clinics, and a transportation infrastructure in ruins have deprived most of the population to access to quality health care of any kind, especially Liberia’s Basic Package of Health Services (BPHS). The project intends to accomplish a 60% reduction in the U5 mortality rate over baseline by EOP by addressing the principle causes - obstetric complications, neonatal conditions, malaria, pneumonia, diarrheal disease, measles, and HIV.

Curamericas Global’s Census-Based, Impact-Oriented (CBIO) Methodology is an innovative way to form the basis for achieving both equity and mortality impact through attainment of high intervention coverage of those most at risk. Equitable community-based health projects require three ingredients: 1) evidence-based interventions responding to the local epidemiology; 2) a replicable scalable service delivery platform achieving maximum intervention coverage at affordable cost; and 3) a monitoring and evaluation system that ensures continuous quality improvement, actionable data for timely decision-making, proof that those most in need are being served – i.e., that equity is being achieved. The Nehnwaa Project utilizes a unique combination of the CBIO Methodology and World Relief’s Standard Care Group Model. Both methodologies are best practices and have been proven to effectively scale-up in multiple contexts.

Program location: The catchment area to be served is located in northwest Nimba County, in north-central Liberia, and comprises the Bain, Garr, and Gbein Clans, and the town of Ganta.

III. PROJECT POPULATION

Beneficiaries*	Total
Total population	137,595
Total neonates	N/A
Infants 0-11 months	4,803
Children <5 years	28,124
Women of reproductive age (15-49 years)	39,472
Total beneficiaries	71,186
Expected pregnancies	N/A
Community Health Volunteers (CHV’s); disaggregated by sex	Female: 22 Male:98
Health facilities (hospital to sub health post)	N/A
Community-based structures, e.g. Village Development Committees (VDCs)	120

*Source: Project Census Data (2013)

IV. PARTNERS

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The prime opportunity for partnering was with Ganta United Methodist Hospital (GUMH). Prior to the 1989-2003 civil war, GUMH operated a primary health care program that reached around 40 communities of its catchment area. The civil war ended this program. An attempt to restore the program ended abruptly in 2003, when most of Ganta, including GUMH, was looted and burned. GUMH is a private, non-profit, faith-based referral hospital in Sanniquelleh-Mahn District of Nimba County, serving a catchment area of approximately 200,000 Liberians. GUMH is the only Liberian NGO operating a health facility in the proposed project area. Because it lies on the border with Guinea and very near Côte d'Ivoire, it serves as well as an almost equally large catchment in those two countries (typically 25-30% of its patients are from those countries). It receives referrals from all the clinics, health centers, and smaller hospitals in its large catchment. In 2007 it recorded 20,662 outpatient visits, and 4,030 in-patient admissions, including 761 deliveries, among which 471 were obstetric complications.

GUMH provides general surgery; eye surgery at its Eye Center; emergency services (including emergency obstetric care); out-patient and in-patient services, including ANC and well-baby clinics; a comprehensive HIV program (including VCT, ART, PMTCT, and CD4 count testing), and EPI (vaccination) services. GUMH also operates a 50-student on-site nursing school, whose nursing students are trained during clinical rounds at GUMH. Its community primary health care program offers immunizations, health education on the prevention and treatment of disease; distribution of ITNs; training of Community Health Volunteers, Trained Traditional Midwives, and HIV peer educators; and a Water-Sanitation project for wells, pumps, and latrines. The GUMH dispensary doubles as a supply point for The Global Fund (GFATM) ARV drug and ITN distribution in partnership with the National AIDS Control Program (NACP) and for the PMI-Liberia in partnership with the National Malaria Control Program (NMCP) for ACT, ITNs, and SP/Fansidar. GUMH also operates a leprosy/TB clinic on the outskirts of Ganta (known locally as "Rehab Town" because it includes housing for former patients who learn wood-carving and other trades to support themselves once cured).

The MOHSW is represented in the project area by the Nimba County Health Team (NCHT), based in Sanniquellie Town (just outside the proposed project area), and led by the Nimba County Health Officer (CHO). In the project service area the NCHT relies completely on several international NGOs to operate its health facilities. Of the 8 functional clinics in the project area, 3 are NCHT clinics operated by Equip (Hope Clinic in Ganta), IRC (Ganta Community Clinic in Ganta), and Africare (Tiayee Clinic in Duo Tiayee). Three small Liberian for-profit fee-charging clinics are also located in Ganta (Newman, Agape, and Powerhouse) and a private non-profit clinic is also in Ganta, run by Africare (KL Foundation Clinic). Just outside the project catchment, in Sannequellie Town, is the MOHSW GW Harley Hospital, operated by IRC, and which houses the NCHT. Though technically a hospital, GW Harley is functionally a Health Center, i.e., large clinic, and refers most patients needing hospitalization to GUMH. Though outside the project service area, GW Harley serves the adjacent areas of the Gbein Clans.

V. KEY ACTIVITIES

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Major project activities include:

- Train and deploy health workers, including four Primary Health Care Teams (each with a *Certified Midwife/Maternal-Newborn Health Officer, Nurse/IMCI Officer, Wat-San Officer, HIV/STI Officer, Community Support Officer, EPI Officer, and 2 Vaccinators*); 130 Trained Traditional Midwives; 130 Community Health Workers; and empower 1300 Care Group Volunteers
- Establish a Health Information System (HIS) linking the communities with GUMH and GUMH with the MOHSW
- Establish an emergency communication/transportation network via cell phones and radios with solar/hand-crank chargers and all-terrain vehicles
- Install wells and latrines in communities and towns (with matching resources)
- Develop and implement a set of Behavior Change Communication (BCC) tools related to the project's goals and objectives and Primary Health Care intervention teams, namely: HIV/AIDS, Integrated Management of Childhood Illnesses, Water and Sanitation, Maternal and Newborn Health, and Immunizations

VI. PURPOSE OF THE FINAL EVALUATION

The purpose of USAID's CSHGP is to contribute to advancing the health system strengthening goals of Ministries of Health toward achieving sustained improvements in child survival and health outcomes, particularly among vulnerable populations, by supporting the innovative, integrated community oriented programming of PVOs/NGOs and their in-country partners. CSHGP cooperative agreements offer unique opportunities to demonstrate the links between specific delivery strategies and measured outcomes. The Final Evaluation is intended as a performance evaluation, but should be broadly accessible to various audiences including Ministries of Health, and findings will contribute evidence relevant to global initiatives such as the Global Health Initiative and Feed the Future.¹ It is important that the final evaluator consider the audiences listed below, when conducting the evaluation and writing the report.

The Final Evaluation provides an opportunity for all project stakeholders to take stock of accomplishments to date and to listen to the beneficiaries at all levels, including mothers and caregivers, other community members and opinion leaders, health workers, health system administrators, local partners, other organizations, and donors. The Final Evaluation Report will be used by the following audiences as a source of evidence to help inform decisions about future program designs and policies:

- In-country partners at national, regional, and local levels (Ministry of Health [MOH] and other relevant ministries, district health team, local organizations, communities in project areas, etc.)
- USAID (CSHGP, Global Health Bureau, USAID Missions), other CSHGP grantees
- The international global health community, as the Final Evaluations Reports will be posted for public use on <http://www.mchipngo.net> and the USAID Development Experience Clearinghouse on <https://dec.usaid.gov>.

¹ For more information on these two initiatives, link to <http://www.usaid.gov/ghi> and <http://www.feedthefuture.gov>.

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Specifically, the Final Evaluation will summarize accomplishments of the Nehnwaa Child Survival Project after five years of implementation. By incorporating feedback from project field staff and beneficiaries, including mothers and caregivers, other community members and opinion leaders, health workers, health system administrators, and local partners, the Final Evaluation will influence future program and policy decisions at the local and national levels.

VII. METHODOLOGY

The evaluation methodology consists of a mixed methods approach using both quantitative and qualitative data. The approach comprises both a desk review of secondary data sources as well as the collection of qualitative data to complement existing data. The written design of the evaluation must be further defined and specified by the final evaluator (e.g. number of key informant interviews, focus groups discussions, observations, and locations) and must be shared with project stakeholders and implementing partners for comment before the evaluation commences; Curamericas Global will facilitate this sharing and feedback.

Secondary data:

The final evaluator will review project reports (e.g. DIP, ARs, MTE, KPC baseline and final survey and any monitoring reports which will be submitted to the final evaluator upon signature of contract) to assess the quality of quantitative and qualitative data and make assessments of project results in relation to the project design and targets set. The final evaluator should also review key USG/USAID strategic documents at the global and national levels relevant to the content of project. All relevant policy and strategy documents at the national level (e.g. MOH policies and strategies) are also critical and should be used and referenced.

Qualitative data:

In-depth qualitative interviews or focus group discussions may be conducted with stakeholders, including project staff, MOH, local NGOs and CBOs, district health teams, community- and facility-based health workers, community members, community leaders and mothers (exit interviews). If possible, the assessment will also include observations of activities supported by the project. This will involve site visits to one or more implementation areas. It is recommended that the final evaluator randomly select communities to visit from a list provided by Curamericas Global. However, purposive sampling may be warranted in addition to explore certain areas in more depth to investigate particular results (high or low performance, or unexpected results).

Limitations:

The evaluation report must include a discussion of the methodological limitations of the evaluation.

Additional guidance on reporting format is provided in the CSHGP Guidelines for Final Evaluations, specifically in the Final Evaluation Report Template included therein.

VIII. EVALUATION QUESTIONS

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The final evaluator and the evaluation team will use existing data collected or compiled during the life of the project, as well as additional data collected during the evaluation to answer the following questions:

1. To what extent did the Nehnwaa Child Survival Project accomplish and/or contribute to the following goals and objectives, as stated in the DIP?
 - Increasing access to the Basic Package of Health Services specifically through mobile primary health care teams, emergency transport plans, and an obstetric emergency response system;
 - Increasing equity with the Census-Based Impact-Oriented Methodology, which utilizes community mapping, census, and participatory surveillance of vital events and health services with Community Registers to ensure those most in need are reached;
 - Increasing demand for health behaviors and services with multi-media multi-messenger BCC via Care Groups made of Peer Mother Educators
2. Did the project's proposed innovations decrease barriers to accessing health services?
 - What effect did the unique combination of the Care Groups Model with the Census-Based, Impact-Oriented (CBIO) methodology have on equity of health service provision in the catchment area?
 - What impact did the introduction of an obstetric emergency response system using cell phones have on increasing access to emergency health care? How did the emergency response system contribute to a reduction in maternal mortality in the catchment area?
 - How did the disease toll of diarrhea decrease via zinc supplementation, use of ORS, building and refurbishing of community latrines, and peer BCC education promoting handwashing, clean water storage, and proper feces disposal?
 - How were results achieved? What role did complementary projects play in enabling high coverage? Specifically refer to project strategies and approaches and construct a logic model describing inputs, process/activities, outputs and outcomes. Describe the extent to which the project was implemented as planned, any changes to the planned implementation and why those changes were made.
3. How did the project further the goals of the MOHSW in its rebuilding of the Liberian health system? Particularly:
 - What impact did the project's innovations and key outcomes have on policy changes within the Liberian health system?
 - What impact did the training of Trained Traditional Midwives (TTMs), promotion of home-based life-saving skills, and ANC/PPC service provision have on rebuilding the Liberian health system?

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4. What were the key strategies and factors, including management issues, that contributed to what worked or did not work?

- What were the contextual factors such as socioeconomic factors, gender, demographic factors, environmental characteristics, baseline health conditions, health services characteristics, etc. that affected implementation and outcomes?
- What capacities were built, and how?

5. Which elements of the project have been or are likely to be sustained or expanded (through institutionalization, policies, etc.)?

- What role did key beneficiaries and agents of change have on sustainability of the project, including general Community Health Volunteers, Trained Traditional Midwives, and Care Group Volunteers?
- Analyze the elements of scaling up and types of scaling up that have occurred or could likely occur (dissemination and advocacy, organizational process, costs and/resource mobilization, monitoring and evaluation using the ExpandNet resource for reference)
- Analyze the costs and resources associated with implementation relevant for replication or expansion as well as estimated cost per beneficiary (using MBB, LIST Cost Benefit Analysis: A Primer for Community Health Workers or other tools).

These questions above are required for framing the evaluation but should be tailored to the specific project context and to address the needs of in-country government and USAID stakeholders, by Curamericas Global and/or USAID when the Evaluation Methodology is shared for comment.

IX. FINAL EVALUATOR CHARACTERISTICS AND EXPECTED TIMELINE

The consultant will serve as the evaluation team leader and is welcome to propose additional evaluation team members to round out the evaluation team's skill set in order to ensure adequate representation of evaluation, technical, geographic, cultural and language skills. Team members, their affiliations, and disclosure of conflicts of interest must be listed in an annex to the evaluation report. The consultant will coordinate closely with the Curamericas Global team, including HQ staff, Liberia Head Office staff, and Nehnwaa Child Survival Project staff, regarding tool finalization, evaluation methodology, timeline, and draft report finalization.

Requirements:

The consultant must be approved by USAID CSHGP and should meet the following minimum requirements:

- Proven expertise and leadership in:
 - integrated community oriented reproductive, maternal, newborn and child health projects
 - conduct of evaluations (baseline, endline) using mixed methods
- Experience with design, collection, and analysis using applied research methods in a program implementation context

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- Familiarity with public health system in Liberia
- Demonstrated ability to communicate with and lead a team of stakeholders, staff and national experts in participatory evaluation
- Familiarity with USAID programming
- Skill in cost analysis methods for program assessments
- Excellent analytical and writing skills (English)
- Signed statement explaining any conflict of interest²

Key Tasks of the Evaluation Team Leader:

- Review project documents and resources to understand the project.
- Refine the evaluation objectives and key questions based on the CSHGP guidelines in coordination with Curamericas Global team and its partners.
- Develop the field evaluation schedule and assessment tools.
- Train enumerators and team members on objective and process of the evaluation including evaluation tools,
- Lead the team to complete the collection, analysis and synthesis of supplemental information regarding the program performance.
- Interpret both quantitative and qualitative results and draw conclusions, lessons learned and recommendations regarding project outcome.
- Lead an in-country debriefing meeting with key stakeholders, with a PowerPoint slideshow deliverable, no longer than 20 slides (with USAID Washington participation remotely, as able).
- Prepare draft report in line with the CSHGP guidelines and submit to CSHGP and Curamericas simultaneously on or before September 1.
- Prepare and submit the final report, which is due at the U.S. Agency for International Development (USAID) Child Survival and Health Grants Program (CSHGP) (GH/HIDN/NUT) on or before 90 days after the end of the project.

Timeline: The Final Evaluation Report first draft should be completed and submitted to USAID by October 31, 2013. The Final Evaluation Report final draft should be completed and submitted to USAID by November 31, 2013. The Final Evaluator will be given a three month timeframe beginning August 1, 2013, with at least ten working days at the project site for a total level of effort of no more than 30 days.

X. FINAL EVALUATOR'S REPORT

The Final Evaluator's Report should follow the outline in USAID CSHGP's FE Guidance which will be provided to the final evaluator by Curamericas Global. A draft and final report, written by the final evaluator, must be submitted directly to the CSHGP. Draft and Final reports should be submitted according to the submission instructions as indicated in the CSHGP FE Guidance that Curamericas Global will provide to the External Evaluator.

² CSHGP Grantees are required to hire an external evaluator for the final evaluation. That fiduciary relationship creates a conflict of interest which is minimized by the CSHGP requirement of submission of a draft evaluation report directly to the CSHGP.

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XI. BUDGET

The final evaluator will be given a three month timeframe beginning August 1, 2013, with ten working days at the project site for a total level of effort of no more than 30 days. Curamericas Global will reimburse the contractor upon presentation of valid itemized receipts for the following items:

- International round trip flight
- Travel Insurance
- Vaccines and Medications related to travel for the consultancy
- Visa processing fee and postage to acquire Visa
- Transportation to and from final evaluator home airport prior to international flight
- Meals and Incidentals in Monrovia
- Incidentals in Ganta
- Local communication costs

Curamericas Global will arrange the following accommodations and pay directly for the following costs incurred:

- Access to local cell phone and a modem for internet services
- Room in Monrovia
- Room and Board in Ganta (project site)
- Local transportation

S/he will be provided an office space while in the capital city and at the project site.

XII. DELIVERABLES

Before beginning the evaluation, the final evaluator should:

- Be conversant with all key evaluation questions;
- Begin to review and analyze project documents;
- Participate in planning meetings via teleconference or Skype with:
 - Evaluation team members to organize specific activities, such as meetings with key stakeholders to discuss and agree on the objectives of the evaluation, information needed, targeted respondents and data collection methods;
 - Key PVO/NGO and partner staff to explain the purpose of the evaluation.
- Complete Field evaluation schedule and assessment tools;
- Train assembled field team as needed.

During the evaluation, the final evaluator should:

- Visit the study site(s) with the evaluation team to observe project activities to better understand the context and interview beneficiaries;
- Conduct data analyses;
- Collect additional data to fill gaps identified during document reviews through site visits, key informants interviews, and/or focus group discussions to understand the project implementation process and its outcomes;

By the conclusion of the consultancy period, October 31st, 2013, the consultant is expected to submit the following:

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- Lead an in-country debriefing meeting with key stakeholders in-country (and remote participation by USAID/Washington) with a PowerPoint deliverable no longer than 20 slides for distribution which includes preliminary findings, conclusions, lessons learned and recommendations.
- Identified opportunities for Curamericas Global to disseminate findings.
- Prepare draft report in line with the CSHGP guidelines and submit to CSHGP and Curamericas Global simultaneously on or **before September 1**.
- Prepare and submit the final report, which is due at the U.S. Agency for International Development (USAID) Child Survival and Health Grants Program (CSHGP) (GH/HIDN/NUT) on or before 90 days after the end of the project.

ANNEX IX: Evaluation Methods, Sources and Limitations

Evaluation Question	Method used	Data Sources	Sample Sizes	Limitations
<p><i>To what extent did the Nehmwaa Child Survival Project accomplish and/or contribute to the project goals and objectives, as stated in the DIP?</i></p>	<p>Document Review KPC surveys</p>	<p>KPC data Available data sources (DHS, MIS) Project monitoring data</p>	<p>300 mothers of children under 2 All registered WRA and Children < 5</p>	<p>A few questionable baseline KPC numbers (-2 WFA ~60%). Registers not always consistently completed Challenges in population estimates (resolved by census) Attribution to project limited due to efforts of (some) programs in the same area.</p>
<ul style="list-style-type: none"> <i>Increasing access to the Basic Package of Health Services specifically through mobile primary health care teams, emergency transport plans, and an obstetric emergency response system;</i> 	<p>Focus group discussions (FGDs) KII Interviews Document Reviews Staff interviews</p>	<p>Field Visit Reports KII Reports</p>	<p>120 Communities</p>	<p>Project inputs into BPHS limited to community and community-Health System interface. GUMH only facility with capacity inputs from project.</p>
<ul style="list-style-type: none"> <i>Increasing equity with the Census-Based Impact-Oriented Methodology, which utilizes community mapping, census, and participatory surveillance of vital events and health services with Community Registers to ensure those most in need are reached;</i> 	<p>Project Data Review Project Reports FGDs with gCHVs, project staff</p>	<p>Project MIS KPC and FP survey data FGD</p>	<p>Project Beneficiary Population</p>	<p>Adult male behavior not usually included in CSP data systems, so inputs limited to qualitative sources.</p>

<ul style="list-style-type: none"> <i>Increasing demand for health behaviors and services with multi-media multi-messenger BCC via Care Groups made of Peer Mother Educators</i> 	FGD Project Reports	Questionnaires for mothers, TTMs, gCHVs, CHC/CDC, Chiefs, CGVs	12 communities in 3 Clans representing limited access to health services	Some communities could not be selected due to poor roads due to the rainy season
1. <i>Did the project's proposed innovations decrease barriers to accessing health services?</i>	FGDs Barrier Analysis Project Reports	Barrier Analysis and other formative research KII and FGD reports	Mothers, men, gCHVs, TTM and CGV FGDs in 12 communities in 3 Clans	Multiple barriers were identified at baseline and early years of project. Difficult to determine precisely those that yielded the results, but feedback at community and service delivery levels were consistent.
<ul style="list-style-type: none"> <i>What effect did the unique combination of the Care Groups Model with the Census-Based, Impact-Oriented (CBIO) methodology have on equity of health service provision in the catchment area?</i> 	FGDs Project Documents KII	Field Visit reports, KII reports DIP Review	Field Visits to 12 communities Document review of HMIS data	According to latest work by the Care Group Forward WG, Nehnwaa is not a "pure" CG model, but considered a "Cascade" group. Interconnected project methods yielded the results and attribution to unique contribution of CGVs not possible.

<ul style="list-style-type: none"> • <i>What impact did the introduction of an obstetric emergency response system using cell phones have on increasing access to emergency health care? How did the emergency response system contribute to a reduction in maternal mortality in the catchment area?</i> 	Project Reports FGDs and KII Staff Interviews	Project Data Staff Reports Field Visit Reports	120 communities plus all WRA beneficiaries	Verbal autopsy reports as a component of CBIO was not successful. Lesson learned was need for skilled oversight and management of this component throughout the project. FGD and KII findings a perception of reduced maternal mortality, but could not be quantified. Perceptions of decreased MM triangulated with significant increases in CPR and skilled delivery. Communities said system put in place by project made it possible. In addition, skilled delivery was available in all HF, only GUMH was directly connected to Nehnwaa project.
<ul style="list-style-type: none"> • <i>How did peer education and service provision for diarrheal disease provided by Nehnwaa (i.e. zinc and ORS use,</i> 	KPC FGDs	KPC Survey FGDs	300 mothers in KPC	Results from behavior change alone likely

<p><i>handwashing, well and latrine building, etc.) decrease barriers to seeking health services?</i></p>	<p>KII Staff Interviews Document Review</p>	<p>Project MIS</p>	<p>Community Registers</p>	<p>due to multiple inter-related factors. Full impact can be best appreciated when comparison is possible when the 2013 DHS results become available.</p>
<p><i>How were results achieved? What role did complementary projects play in enabling high coverage?</i></p>	<p>Project Strategy Review Project Document Review Staff Interviews Workplans</p>	<p>DIP Review Midterm Evaluation Report Staff Interviews Annual Reports</p>		
<p><i>Describe the extent to which the project was implemented as planned, any changes to the planned implementation and why those changes were made.</i></p>	<p>Document Review Staff Interviews</p>	<p>Project DIP Annual Report KII Flex Fund Report EPI-FP Report Midterm Evaluation Report Formative Research Reports Staff Interviews</p>	<p>n/a</p>	<p>Project HQ management changed during project. Backstop for most of the project left 3 months before FE and not available for interview. M&E Staff left and explanation for changes in CBIO methodology, esp. lack of verbal autopsy reports was not</p>

				available.
2. <i>How did the project further the goals of the MOHSW in its rebuilding of the Liberian health system? Particularly:</i>				
<ul style="list-style-type: none"> <i>What impact did the project's innovations and key outcomes have on policy changes within the Liberian health system?</i> 	MOHSW policy review KII Staff Interviews	MOHSW policies CHT KII USAID and MOHSW reports	n/a	Nimba County Health Team (CHT) did not attend debrief in spite of invitation to participate. KII indicate capacity/motivation for partnership with NGOs for policy and community health implementation still needs further development. Policy change was not a major focus of the project.
<ul style="list-style-type: none"> <i>What impact did the training of Trained Traditional Midwives (TTMs), promotion of home-based life-saving skills, and ANC/PPC service provision have on rebuilding the Liberian health system?</i> 	Document Review FGD KII	Project DIP Annual Reports Workplans FGD and KII from fieldwork	120 Communities	Role of Nehnwaa was to increase access to services provided by the RBHS (now EBHS) implemented by MOHSW. Implementation limited to community health services.

<p><i>4. What were the key strategies and factors, including management issues, that contributed to what worked or did not work?</i></p>	<p>Document Review KII Staff Interviews</p>	<p>DIP Annual Report Project Reports</p>	<p>n/a</p>	<p>Management assessment could not include HQ staff and GUMH staff that had left the project. Curamericas Country Director was out of country and did not participate in FE debrief.</p>
<p><i>What were the contextual factors such as socioeconomic factors, gender, demographic factors, environmental characteristics, baseline health conditions, health services characteristics, etc. that affected implementation and outcomes?</i></p>	<p>Formative Research Reports FGDs KII</p>	<p>Barrier Analysis Flex Fund FP Report Field Visit FGD findings KII 2007 DHS 2010 and 2010 MIS</p>	<p>N/A</p>	<p>Only available DHS data was from 2007—before the project started. 2013 DHS results had not yet been released.</p>

Evaluation Question	Methods	Data source	Sample Size	Limitation
<i>Which elements of the project have been or are likely to be sustained or expanded (through institutionalization, policies, etc.)?</i>				
<i>What role did key beneficiaries and agents of change have on sustainability of the project, including general Community Health Volunteers, Trained Traditional Midwives, and Care Group Volunteers?</i>	FGDs KII	Field visit reports KII	CHVs groups, TTM and gCHVs in 12 project communities	Analysis based on self-report of <i>intention to sustain</i> and <i>perceived ability to sustain</i> activities after the project ends. Only CGVs were introduced by the project. Some activities are dependent on continued availability of commodities.
<i>Analyze the elements of scaling up and types of scaling up that have occurred or could likely occur</i>	Participatory analysis of quantitative and qualitative FE findings KII Document Review	KII with CHT, GUMH and Curamericas managers, Plenary analysis with evaluation team, Project Debrief	n/a	Scale up was not a focus of the Nehnwaa New Grant. Analysis is limited to <i>potential</i> for scale-up only. Limited responsiveness for collaboration during the project and non-participation of the CHT in 2 project debriefs (in spite of invitation).

				Exceptions to this were found in areas of FP commodities and (good) collaboration results in the Wat/San programs between the CHT and the project.
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Annex X: Evaluation Qualitative Tools

Pregnant Women Qualitative Tool

Clan

Date

Community

Interviewers

Hello, we are members of the evaluation team for the Nehnwaa Child Survival Project. We are here to ask baby mothers a few questions to help to know the impact of the Nehnwaa Project since it started 5 years ago and to plan for the future.

Does every woman here have a child 0 -23 months of age? (If someone does not, they should leave the group)

Please feel free to answer us. If you would not like to participate, please feel free to leave the discussion. You do not have to answer any questions if you do not want to answer. Your answers will be kept confidential. Do you want to take part? (ask for a show of hands if they agree. If anyone does not raise their hand, ask if they want to participate. If no, then they should leave the group.

Why do you think many pregnant women are going for more ANC visits than when the Nehnwaa project started (in 2008)?

Why do you think most women think it is important to go for ANC visits?

Why do most women think most women are taking FeSO₄ (iron) tables? Why do you think they think it is important?

Why do you think most women think it is important for TT to be given to a pregnant woman?

Why do you think it is important for pregnant women to know at least some danger signs in pregnancy? Why do you think more women know these danger signs now than when the Nehnwaa project began?

Why do you think many more women are going to the health facility for skilled delivery? Why do you think most women think that this is important? How do you feel about delivering your baby at a health facility?

Why do you think that many more women are going for more ANC visits now than when the Nehnwaa project began?

What do you think are the reasons that the TTM should carry you to the clinic/hospital for delivery? Why do you think they should visit you within 2 days to check you after delivery?

Why do you think more big belly are preparing before delivery? What should they do? Have you started to prepare for your delivery? If yes, what have you started?

Why do you think it is important for you and your baby to be checked within a few hours of delivery?

Do you think more women know the importance of knowing the danger signs in their new baby? If yes, how do they know this?

Has anybody come to your house to talk to you about your health and the health of your baby? If yes, who visited you? What did they talk to you about?

Do you get information about your pregnancy and your baby's health other than from Nehnwaa? If yes, how and where did you get it?

Is there anything else you would like to tell us about the work Nehnwaa has done in this community regarding the health of mothers and children?

Thank you!

Questionnaire for CHC/CDC members

Clan	Community	
Team	Interviewers	Date

Introduction

Hello. I am _____ and I am a member of the Nehnwaa Project evaluation team. We are here today to ask you a few questions about your knowledge about the project and to learn what you know about the impact of project activities have had on the health of mothers and children in your community.

How long have you been on the CHC/CDC of this community?

Have you seen any change in the health and nutrition of mothers and children in this village since the Nehnwaa child survival project that started in 2008?
If yes, can you list what they are?

What do you know about the activities of the Nehnwaa Child Survival project? If yes, can you tell me/us what they are?

Do you know about the gCHV's and/or Care Group volunteers in your community? Can you tell us what they do?

Will your community be able to encourage the gCHV and Care Group Volunteers to continue their work after the project is over in 2014? If yes, how? Does your community have any plans to support them to do their work now that the project is over?

Is there anything else you would like to tell us about the work of the Nehnwaa child survival project here in your community?

Questionnaire for Mothers of Children less than 2 years of Age

Clan	Date
Community	Interviewers

Hello, we are members of the evaluation team for the Nehnwaa Child Survival Project. We are here to ask baby mothers a few questions to help to know the impact of the Nehnwaa Project since it started 5 years ago and to plan for the future.

Does every woman here have a child 0 -23 months of age? (If someone does not, they should leave the group)

Please feel free to answer us. If you would not like to participate, please feel free to leave the discussion. You do not have to answer any questions if you do not want to answer. Your answers will be kept confidential. Do you want to take part? (ask for a show of hands if they agree. If anyone does not raise their hand, ask if they want to participate. If no, then they should leave the group.

1. Since the beginning of the Nehnwaa project (in 2008) have you seen any changes in the health of mothers and children under 5 years of age? If yes, what were they?
2. Why do most mothers of this community carried their children for vaccination?
How was this possible?
3. Why do you think most mothers of children 0 -23 months) of this community carried their children to be treated for Diarrhea, Malaria and ARI?
Where do they usually go first?
How do you see and know that your child (0-23 months) is in danger?

Where do you usually carry your children for treatment when they are in such a condition?

Why do you go there for treatment?

4. Why is it that most mothers are carrying on good hygiene practices in this community, such as feces disposal, hand washing and water storage?

Why do you think that some children under 2 years are continue to get diarrhea, even though most women are practicing improved hygiene and sanitation and improved water sources?

5. Why do you think that most WRA/Mothers are now spacing their children using with modern contraceptives?
6. Why do you think that most women begin breastfeeding their baby within one hour after delivery?

Why do you think that many mothers who beginning exclusively breastfeeding their babies do not continue EBF until the child is 6 months old? When mothers stop EBF, why do you think they stop? At what age does this usually happen?

Why do you think that many more mothers are feeding their children with better feeding practices (after age 6 months) than when the Nehnwaa project started (in 2008)? What changes in the way children 6 – 23 months of age are fed have you observed?

7. Do people come to visit you in your house to talk about health of mothers and children? If yes, who comes to visit you? How often do they come? What are the topics that they discuss with you?

Questionnaire for Trained Traditional Midwives (TTM)

Clan _____ Date _____

Community _____ Interviewers _____

Have you noticed any changes with regard to the health of mothers and small children since the Nehnwaa Project began working here in 2008? If yes, would you say what they are?

How long have you been a TTM?

What kind of training have you received? (From Nehnwaa, from other NGOs or government programs)

What services do you perform as a TTM?

About how many pregnancies to you assist in one year?

Do you collect any information in your work? If yes, what kind of information? Who do you give it to?

What encourages you to do your work?

Will you continue to do this work after the Nehnwaa project ends? If yes, why will you do this?

Is there anything else you would like to tell us about the Nehnwaa project or about the health of mothers and children in your community?

Thank you!

Questionnaire for Trained Traditional Midwives

Clan _____ Date _____

Community _____ Interviewers _____

Have you noticed any changes with regard to the health of mothers and small children since the Nehnwaa Project began working here in 2008? If yes, would you say what they are?

How long have you been a TTM?

What kind of training have you received? (From Nehnwaa, from other NGOs or government programs)

What services do you perform as a TTM?

About how many pregnancies to you assist in one year?

Do you collect any information in your work? If yes, what kind of information? Who do you give it to?

What encourages you to do your work?

Will you continue to do this work after the Nehnwaa project ends? If yes, why will you do this?

Is there anything else you would like to tell us about the Nehnwaa project or about the health of mothers and children in your community?

Thank you!

Questionnaire for Village Chiefs

Clan	Community
Team	Interviewers
Date	

Introduction

Hello. I am _____ and I am a member of the Nehnwaa Project evaluation team. We are here today to ask you a few questions about your knowledge about the project and to learn what you know about the impact of project activities have had on the health of mothers and children in your community.

How long have you been the Chief of this community?

Have you seen any change in the health and nutrition of mothers and children in this village since the Nehnwaa child survival project that started in 2008?

If yes, can you list what they are?

What do you know about the activities of the Nehnwaa Child Survival project? If yes, can you tell me/us what they are?

Do you know about the gCHV's and/or Care Group volunteers in your community? Can you tell us what they do?

Will your community be able to encourage the gCHV and Care Group Volunteers to continue their work after the project is over in 2014? If yes, how?

Is there anything else you would like to tell us about the work of the child survival project here in your community?

XI. Sources of Information

Core Group, Save the Children, MCHIP, 2nd edition, CCM Essentials: Guide for Program Managers, Washington, DC 2012

Curamericas Global, CCM of Childhood Illness in Nimba County, proposal to Ronald McDonald Foundation, August 2011.

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Liberia Demographic and Health Survey (LDHS) 2007

Liberia Demographic and Health Survey (LDHS) 2013, Preliminary Findings December 2013

President's Malaria Initiative Malaria Indicator Surveys (MIS), 2009 and 2011.

President's Malaria Initiative (PMI) Malaria Operational Reports (MOP)

President's Malaria Initiative (PMI), Roll Back Malaria (RBM) and MCHIP: Malaria in Pregnancy: A Lifesaving Strategy

Sharan, M. et al, Family Planning Trends in Sub-Saharan Africa: Progress, Prospects and Lessons Learned, World Bank 2010.

Sidibe, B, et al. Study of a Sustainable Community Based Health Program Methodology: Census Based Impact Oriented, Curamericas Global, 2011

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United States Government, Liberia Global Health Initiative (GHI) Strategy 2011

USAID, Child Survival and Health Grants Program (CSHGP) Final Evaluation Guidelines, 2013

World Health Organization, Reproductive Health and Research, Department of Maternal, Newborn, Child and Adolescent Health, WHO Policy Brief for the Implementation of Intermittent Presumptive Treatment of Malaria in Pregnancy using Sulfadoxine-Pyrimethamine (IPTp-SP), 11 April 2013.

World Health Organization, ExpandNet, Nine Steps for developing a Scale Up Strategy, 2010.

ANNEX XII. DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Jean Meyer Capps
Title	External Evaluation Consultant
Organization	Jean Capps Associates Consulting
Evaluation Position	Team Leader
Evaluation Award Number (Contract or other instrument)	n/a
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	USAID-M-OAA-GH-08-252. Project Cooperative Agreement No: GHN-A-00-08-00011-00 , FY 2008 Child Survival and Health Grants Program in Nimba County, Liberia
I have real or potential conflicts of interest to disclose.	No
<p>If yes answered above, I disclose the following facts:</p> <p>Real or potential conflicts of interest may include, but are not limited to the following:</p> <ol style="list-style-type: none"> 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the 	

4. *Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated*
5. *Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated*
6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation*

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature <i>Jean Capps</i>	Jean Capps
Date	December 18, 2013

ANNEX XIII. STATEMENT OF DIFFERENCES

Overall, Curamericas Global supports the findings and recommendations included in this final evaluation report. Despite changes to personnel months before the evaluation began, Curamericas made every attempt to answer questions of project history thoroughly and referred to external individuals when asked. There are only minor key points that Curamericas wishes to clarify at this time:

1. The evaluation suggested that seeking support from local United States government authorities and agencies in Liberia (i.e. the Embassy) would have benefited Curamericas Global during project operation. As an organization, Curamericas is relatively new to operations in Africa, particularly those occurring outside of the in-country partner, Ganta United Methodist Hospital (GUMH). Despite this, however, the Nehnwaa Child Survival Project allowed for Curamericas to have a large national presence in Liberia, which led to implementation of five additional successful projects, valued at over \$500,000. During the initial stages of Nehnwaa, the USAID Mission was very helpful in providing feedback and advice; during the project year two of the project, staff turnover occurred and subsequently repeated attempts for support and guidance in response to challenges throughout the middle and near the end of the project went without response. For example, when attempting to address the initial challenges related to opening a country office in Liberia, many attempts were made to seek support and guidance from the USAID Mission and were ignored or denied.

2. The evaluation also suggests that the project design and management did not promote sustainability. From the onset of the project, and throughout each project year, numerous attempts were made to engage implementing partner GUMH to design and implement a more robust and thorough exit strategy. As explained in the originally approved Detailed Implementation Plan, close coordination with the Liberian Annual Conference (LAC) of the United Methodist Church, could have provided more oversight for the implementing partner, particularly in planning for an exit strategy or scaled-down plan. However, despite many attempts to collaborate with GUMH and the LAC, leadership challenges within and between the LAC and GUMH prevented an exit strategy from developing. Overall, the LAC and GUMH were completely disengaged during attempts for sustainability planning.

3. Curamericas believes that the analysis of the management of the award grantee and sub-partners was completed taking into account timelines that do not portray the management of the project in full. The analysis of Curamericas management is extremely limited to the final months of the project. While personnel changes at Curamericas within the last quarter of the project prevented discussion of the entirety of the project, as such turnover limited institutional memory, the entire length of the project should have been taken into account in the analysis. In an effort to mitigate the issue of lacking institutional memory, one of the previous project backstops, the only one asked for comment, fully cooperated with requests to provide information and support to the evaluation. This limited timeline for analysis of Curamericas management is coupled with

details of GUMH operations and implementation, which is discussed over the entire five-year span thus providing a misrepresentative comparison.

Annex XIV: Evaluation Team Members, Roles and Titles

Team Member	Organization	Position	Comments
<i>Team One</i>			
Nancy Warren	Curamericas Global	HQ Backstop	Team Leader
Dorothy Payetee	Nehnwaa	CSS Supervisor	Team Member
Marcus Sackie	Nehnwaa	EPI Officer	Team Member
Yei Dahn	Nehnwaa	MNH Officer	Team Member
James Nhaway	Nehnwaa	CSS Officer	Team Member
Ephram Yangean	Care Foundation Clinic (via Africare)	Clinic Staff	External participant
<i>Team Two</i>			
David Vulu	GUMH	Assistant Administrator	Team Leader for September 2 nd
Dennis Weh	GUMH	M&E Officer	Team Leader for September 3 rd and 4 th
Prince Gblee	Nehnwaa	WatSan Officer	Team Member
Lorena Guapaye	Nehnwaa	Acting IMCI Supervisor	Team Member
Rachel Gbangan	Nehnwaa	HIV Officer	Team Member
David Kpanquoi	Nehnwaa	CSS Officer	Team Member
Kou Zelarbah	GUMH	Hospital Administration	External participant
<i>Team Three</i>			
Allen Zomonway	Nehnwaa	Project Manager	Team Leader
Brenda Freeman	Nehnwaa	CSS Officer	Team Member
Emmanuel Nyah	Nehnwaa	Acting HIV Supervisor	Team Member
Oliver Saylor	Nehnwaa	EPI Officer	Team Member
Olive Teah	Nehnwaa	HIV Officer	Team Member
Yassah Tokpa	GCC Clinic	Clinic Staf	External participant
<i>Team Four</i>			
Kozay Kpainlay	Nehnwaa	EPI Supervisor	Team Leader
Oretha Dolo	Nehnwaa	IMCI Officer	Team Member
Gary Dolosie	Nehnwaa	CSS Officer	Participated September 2 nd and 3 rd day
Hannah Nyumah	Nehnwaa	MNH Supervisor	Team Member
Alphonso Nuah	Nehnwaa	IMCI Officer	Team Member
Joseph Czegar	EQUIP	Health Logistician	External participant
Jean Capps	Consultant	Final Evaluator	External

Annex Stakeholder Presentation

ANNEX XVII. STAKEHOLDER DEBRIEF POWERPOINT PRESENTATION



Curamericas Global
WHERE STRONGER HEALTH

USAID
FROM THE AMERICAN PEOPLE

GUMH

Nehnwaa Child Survival Project

Preliminary Final Evaluation Findings
National
Stakeholder's Meeting
Monrovia

September 10, 2013

Background of Project

- USAID centrally funded (Washington) CSHGP grant in New Partner Category
- October 1, 2008 – September 30, 2013
- Purpose is to reduce infant, child and maternal mortality and morbidity
- Improve coverage of interventions proven to accomplish this
- Interventions: Maternal/newborn health, Immunizations, IMCI (includes diarrhea, pneumonia, malaria and child feeding), HIV, Water/Sanitation BCC
- GUMH major implementer with capacity building, technical assistance and financial support from Curamericas and County Health Team

- 
- Additional short-term funding for Family Planning, Water/Sanitation and Community Case Management (CCM) pilot from other sources. CCM ends Feb 2014.
 - Coverage in almost all CS and MNH interventions very low at beginning of project
 - Access to sustainable and quality health services and household and community preventive behaviors very low in initial KPC survey measurements

Major Project Strategies

- 
- Increase access to basic health services; strengthen links with HF
 - to BPHS through 4 mobile PHC teams delivering service at community level to 120 communities in three Clans (Garr, Bein and Gbein) in Nimba Country.
 - Included both Ganta Hospital catchment area communities and non-GUMH communities
 - Establishing community financed transport plans financed through "Life Saving Clubs" and providing cell phones for emergency OB care

Project Strategies

- **Increase Demand**
 - Multi-media and Multi-messenger Behavior Change Communication targeting both genders; this required starting with increasing awareness and providing capacity building
 - Strengthening community structures (gCHVs, TTMs, CDC/CHC). Most already existed, but needed new skills
 - Extending reach through volunteers (Care Groups, Water Committees, etc)
 - Establishing FP services through GUMH and CB services
 - Radio messages

Strategies

- **Increase Equity**
 - Using Census-Based Impact-Oriented Methodology
(Community mapping, census, participatory surveillance of vital events through Community Registers to make sure all are reached.)
- **Ensure sustainability**
 - Developing social capital and human resources
 - gCHVs
 - Trained Traditional Midwives (TTMs)
 - Adapted Care Group Volunteers (CGVs)
 - Linked activities with existing community political structure (CHC, Town Chiefs)

Qualitative: FGDs and KII in Community



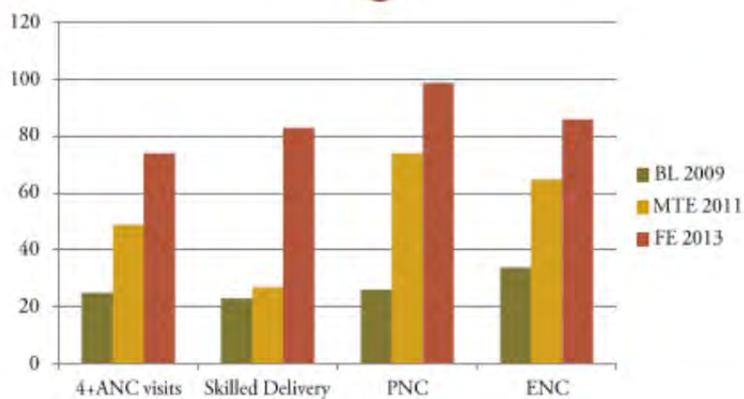
Dissemination of findings

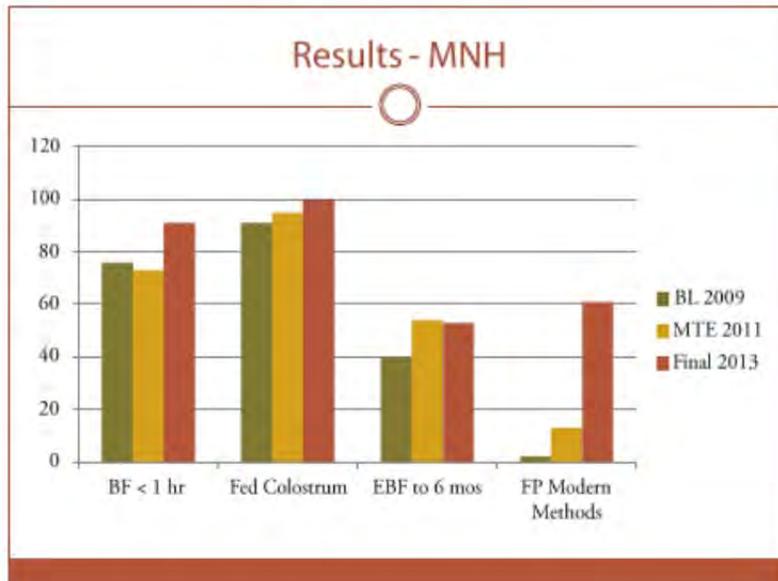
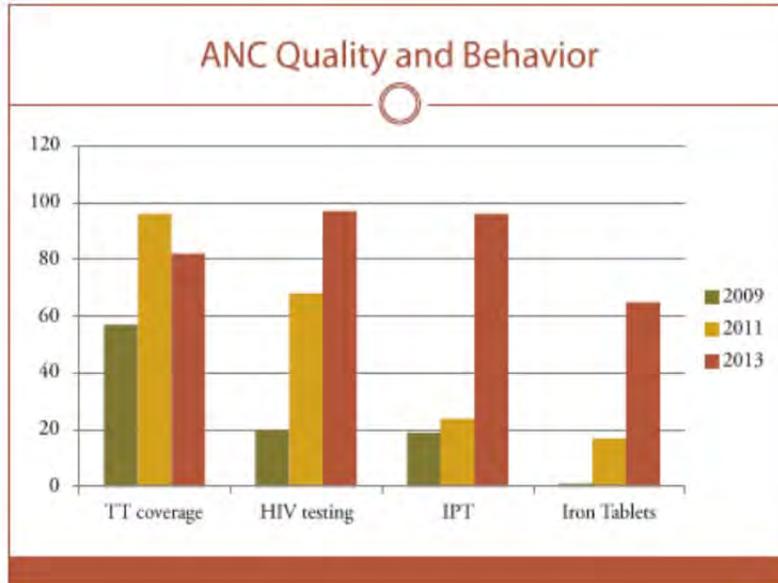
- Stakeholder's Meetings in Ganta and Monrovia
- Report (to be written) and submitted to USAID
- USAID includes project findings and reports in CSHGP database and website
- Curamericas will share within their communication channels and within their organization
- Potential use in requests for and design of future programs (Curamericas and GUMH and other national partners)

Measuring Progress towards Results

- KPC surveys conducted at baseline (2009), midterm (2011) and final (August 2013)
- Additional quantitative survey of WRA for FP in 2011 and 2012
- Respondents for Nahnwaa KPC survey were 300 mothers of children less than 2 years of age
- Measured percentage of mothers reporting certain key behaviors proven in research to contribute to mortality and morbidity reduction
- Confirmed findings with follow-up community FGDs

Nahnwaa CSP Survey Results MNH

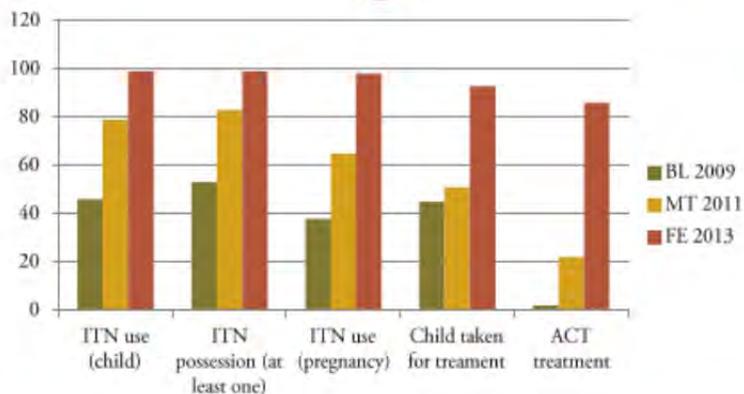




Maternal Care Results

- ANC and PNC results are combined facility (not Nahnwaa) and outreach by project. Skilled delivery was totally HF and demonstrates services were available, acceptable and affordable.
- Lesson learned: When skilled delivery takes place, multiple coverage indicators increase, similarly when all ANC services are available coverage in multiple indicators increases (IPT, iron tablets, TT, HIV testing). CB programming increases demand and improves access through BCC even when not providing direct services.

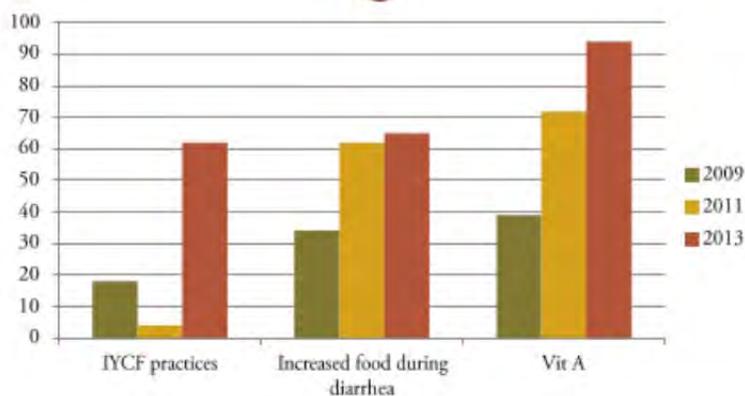
Malaria

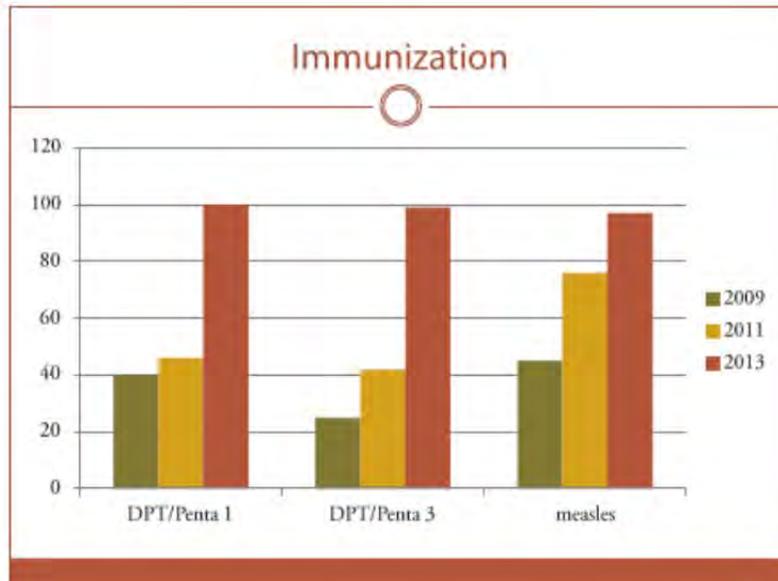


Malaria

- In BL and MT, net use lagged behind possession. By FE they were very closely matched.
- Mass distribution of nets (by PLAN and partners) in 2012 increased net possession (at least one in HH) in project communities to almost 100%
- Community leaders said decreased amount HH income needed for malaria treatment (and available for other things) encouraged them to use nets in spite of previous barriers
- Most malaria indicators meet or exceed national targets, but supply for RDT and ACTs for CCM are needed
- MIP, a once neglected RBM component, has increased significantly in (IPT and ITN use)

Results - Nutrition





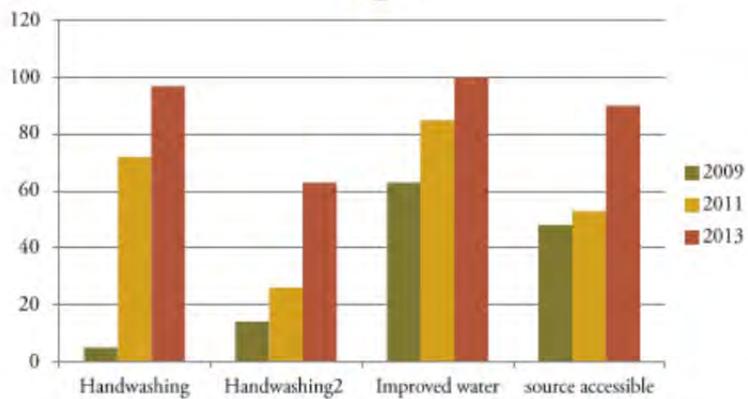
HSS contributions

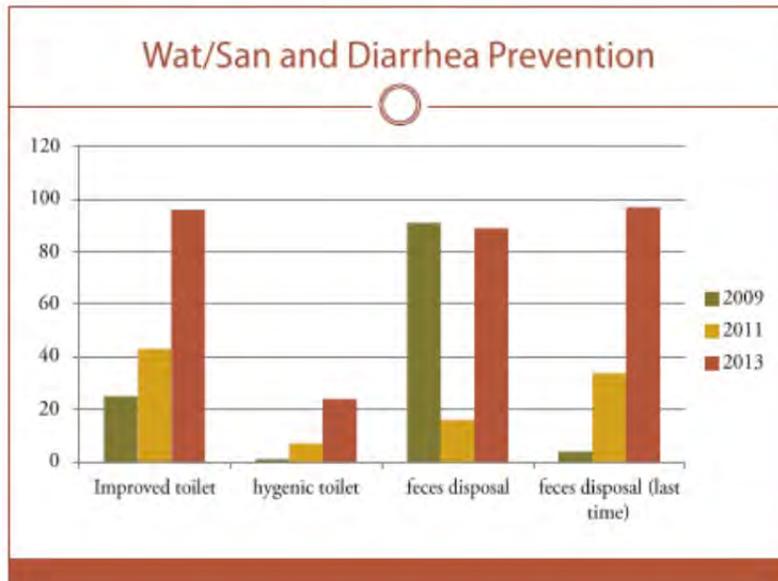
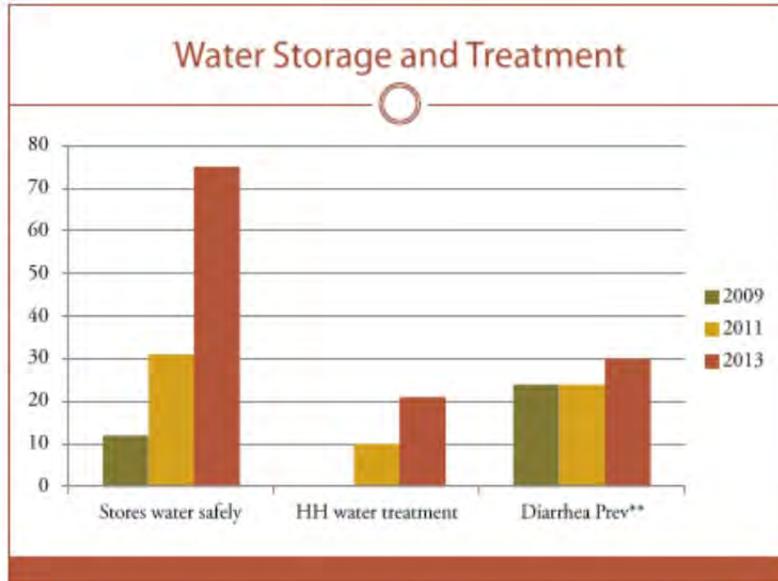
- Supportive MOHSW policies encourage increased coverage. Ex: Opening a vial for one child, or providing single-dose Penta decreases “missed-opportunities” and drop-outs to full coverage.
- Lack of stockouts of key commodities and staff at HF were certainly factors in increased coverage in all commodity-based interventions. Could be indicative of positive EPHS performance, but not measured in this evaluation.

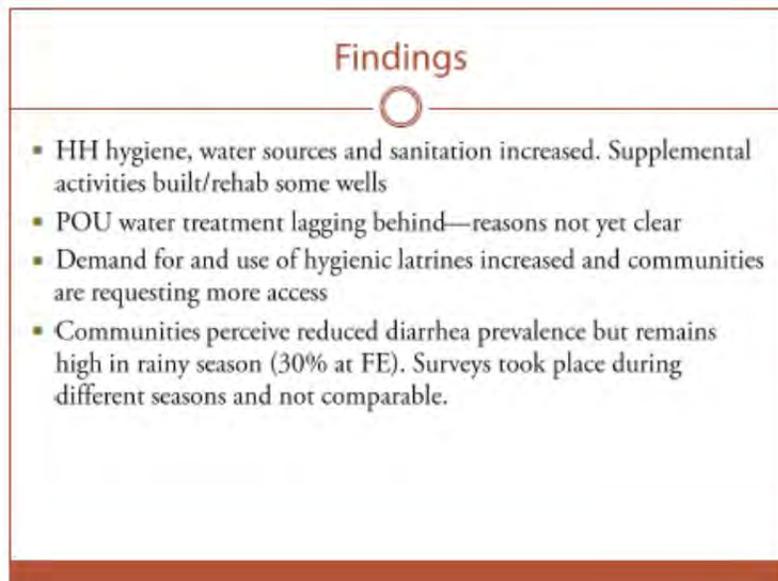
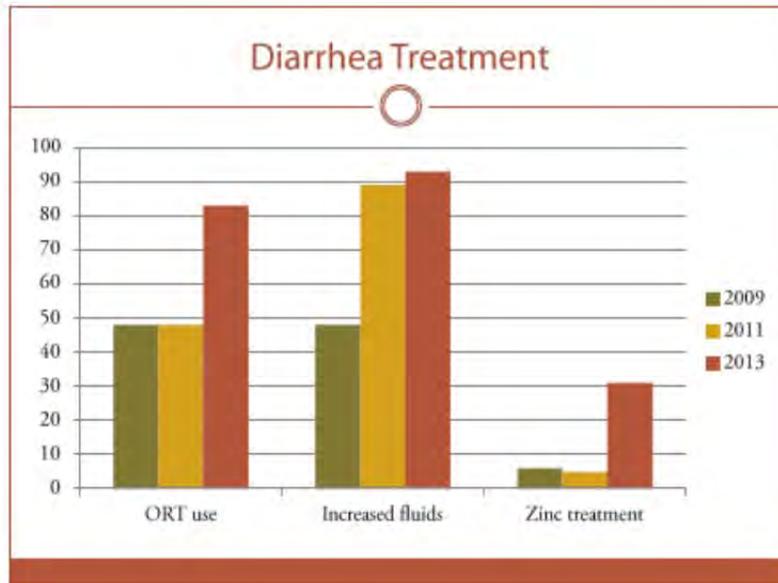
Combination of HS and CB services increases coverage

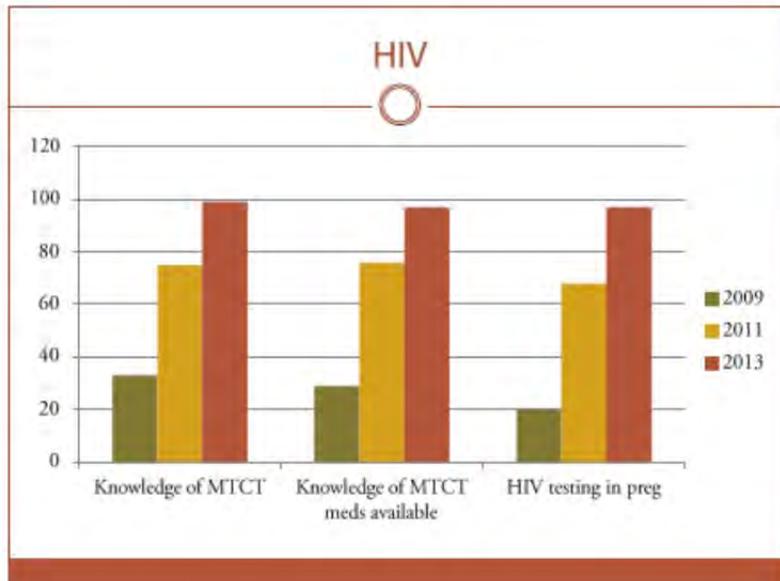
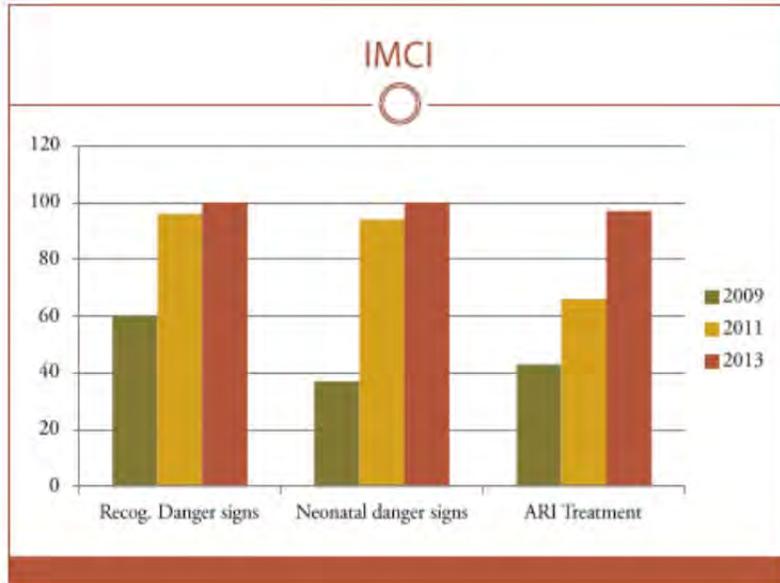


Wat/San and Diarrhea Prevention







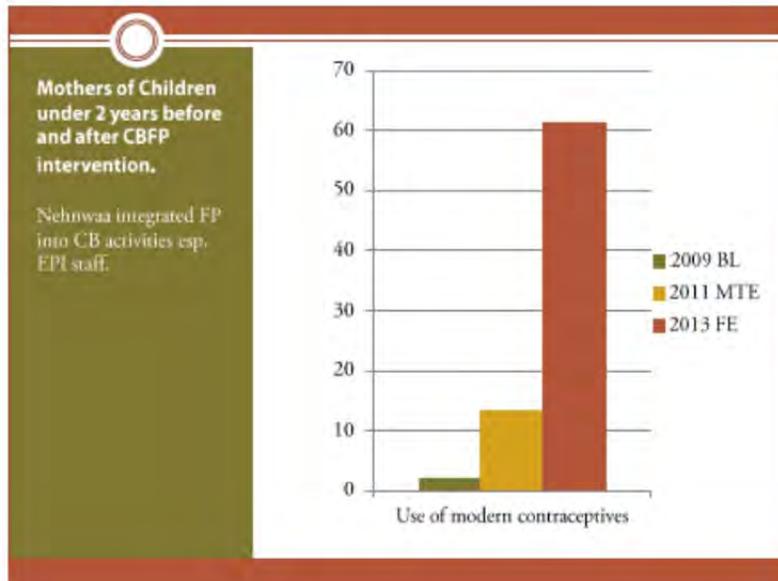
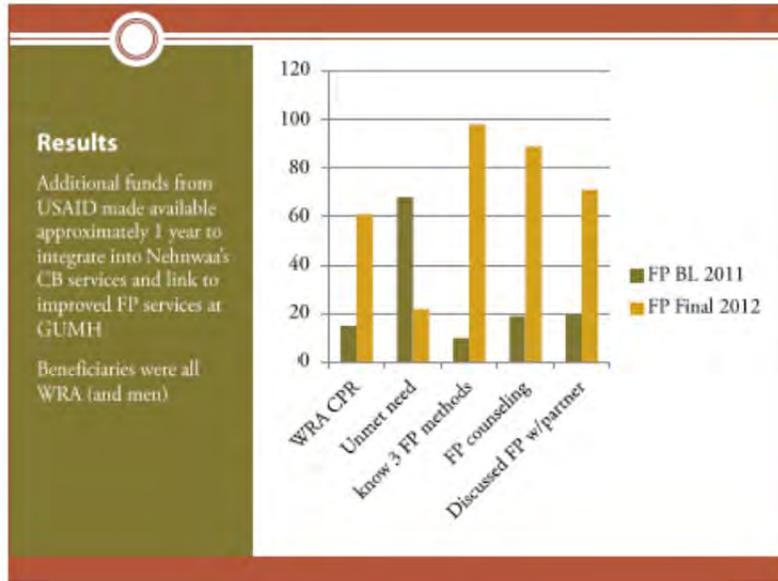


Additional Findings

- Target beneficiary population reached
- All villages have trained TTM, gCHVs, and Care Groups as well as CDC/CHC
- Community volunteers trained by other NGOs are included in activities where possible
- Missed opportunities to coordinate some activities (e.g. ITN distribution) with Nehnwaa
- As of FE, many HF still “supported” by INGOs (e.g. Africare and IRC) but how long this support will continue or the implications is not clear
- CHT support of commodities to GUMH has made many direct services possible. GUMH remains a close CHT implementing partner and could continue to contribute to achieving national targets (but not without additional support)

Family Planning

- Formative Research about FP was conducted by Nehnwaa in October 2010 and found:
 - 1) Beneficiaries of the NCSP lacked knowledge on types of FP methods and on the benefits;
 - 2) Cultural mores contributed to poor acceptability of FP usage;
 - 3) Misconceptions of the side effects of FP, including method permanency, were limiting usage;
 - 4) Men must be included in discussions on FP as their opinion is critical to actual usage of FP method and compliance of this usage.



Sustaining FP achievements

- Coverage of modern methods increased to over 60% during and was sustained for over 1 year after additional funding ended.
- Project integrated FP with EPI in community for last year of program plus maintained FP clinic at GUMH
- Demand remains high among men and women
- GUMH lacks funds to continue FP services at current (and growing level of demand)
- In FE FGDs, currently pregnant women expressed intention to seek FP services, including permanent methods

Community financing for health care

- Life Saving Clubs acceptable and community says they will sustain them. Includes governance and accountability
- Emergency transport and birth plans have empowered communities to prepare for safe delivery and cope with emergencies in mothers and children
- Behavior Change and prevention (including increased hygiene, ITN use and FP uptake) have decreased HH health costs and increased HH income available for other things (e.g. education, food, clothing)

Sustainability

- BCC and CM done by project will almost certainly result in retained improvements in behaviors
- Continued high coverage in areas linked to health services will require reinforcing linkages with existing health services
- Life Savings Clubs provide means for addressing health needs at local level
- Awareness of health prevention and actions will probably not decrease

Lessons Learned

- Effectiveness of CB Strategy confirmed. Also highly acceptable in entire community
- Involve men from the beginning
- Have a specific exit strategy (with timetable) from the beginning
- Review resource needs and reality frequently during the project
- Mobile teams are effective, but labor and resource intensive; donor resources are insufficient for universal coverage Cost-effective strategies are needed for scale-up

Lessons Learned

- More “urban-like” communities (like Ganta) have special challenges for coverage due to mother’s employment, access to health facilities, etc. EBF, for example is harder to increase there than in rural areas.
- Closer collaboration between GOL and NGO programs is needed; all NGOs and NGO programs are not alike. Local partners in place for the long run lack the same means that short-term emergency NGOs have. But they have a longer term perspective for sustainable improvements.

Conclusions

- Nehnwaa Project met, and in many cases exceeded project targets. More to be done in diarrhea prevention including POU water treatment.
- Health system, including government and private did their part
- BCC has changed culture from country medicine to acceptance of effective prevention and treatment
- Behaviors are likely to be maintained; where drugs or services are required linkages with health facilities will need reinforcement.

- 
- There is a strong need for continued and scaled-up family planning support in the project area.
 - Communities have high demand for improved sanitation and are requesting partnerships to improve the number of good latrines
 - Almost all elements of the project link with GOL MOHSW national objectives and can help Nimba Country meet their targets.

Recommendations

- 
- GUMH to communicate project's end to communities that are not already aware. Follow up with health facilities and CHT with additional one on one debriefs about relevant components of the project, especially how results were achieved.
 - GUMH and Curamericas will debrief national stakeholders and offer partnership for additional programs
 - Scaling up in Nimba county requires close coordination of all partners. Clan chiefs and other local officials may be able to encourage this coordination.
 - Project structure and CM can be basis for CD beyond health. This will require sharing information with other development programs through non-health channels.

- Retain project data and reports for easy retrieval for future (hopefully) partnership opportunities
- Continue to meet programs at the national and county level to show how your increased capacity in multiple levels (maternal and child health, malaria, HIV, family planning, nutrition, wat/san) can contribute to progress towards national targets.
- Remain involved in partners meeting with USAID Liberia in order to stay engaged in these sectors in Liberia.

Thank you!



ANNEX XVIII. PROJECT DATA FORM

Child Survival and Health Grants Program Project Summary

Sept-30-2013

**Curamericas
(Liberia)**

General Project Information

Cooperative Agreement Number: GHN-A-00-08-00011-00
**CURAMERICAS Headquarters
Technical Backstop:** Nancy Warren
**CURAMERICAS Headquarters
Technical Backstop Backup:**
Field Program Manager: Allen Zomonway
Midterm Evaluator: Otieno George
Final Evaluator: Jean Capps
Headquarter Financial Contact:
Project Dates: 10/1/2008 - 9/30/2013 (FY2008)
Project Type: New Partner
USAID Mission Contact: Randolph Augustin
Project Web Site:

Field Program Manager

Name: Allen Zomonway
Address:

Liberia
Phone:
Fax:
E-mail: allenphc@yahoo.com
Skype Name:

Alternate Field Contact

Name: James Ballah (Interim Country Director)
Address: 21st Street and Tubman Blvd
Sinkor
Monrovia Liberia
Phone: 0880438952
Fax:

E-mail: jballah@gmail.com

Skype Name:

Grant Funding Information

USAID Funding: \$1,249,610

PVO Match: \$515,743

General Project Description

Curamericas, a 2008 New Partner category grantee, is implementing the *Nehnwaa Child Survival Project* (NCSP) in northwest Nimba County in north-central Liberia. The project goal is to reduce neonatal, infant, child, and maternal mortality by addressing their principle causes with an intervention package targeting maternal and newborn health, malaria, pneumonia, diarrheal disease, and HIV.

The delivery strategy features: (1) community empowerment and health education using the Census-Based Impact-Oriented (CBIO) methodology; (2) training and deployment of mobile primary health care teams, community health workers, trained traditional midwives, and care group volunteers; (3) a communication network and obstetric emergency response system; (4) high-saturation behavior change communication (BCC); and (5) close collaboration and communication with the Nimba County Health Team to ensure project integration with the Liberia's National Health Plan.

Project Location

Latitude: 6.84

Longitude: -8.66

Project Location Types:

(None Selected)

Levels of Intervention:

(None Selected)

Province(s):

North Central Region

District(s):

Nimba County

Sub-District(s):

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Operations Research Information

There is no Operations Research (OR) component for this Project.

Partners

Ganta United Methodist Hospital (Subgrantee)

\$843,640

Strategies

Social and Behavioral Change Strategies:

Community Mobilization
Group interventions
Interpersonal Communication
Social Marketing

Mass media and small media

Health Services Access Strategies: Emergency Transport Planning/Financing
Addressing social barriers (i.e. gender, socio-cultural, etc)
Implementation in a geographic area that the government has identified as poor and underserved

Strategies for Enabling Environment: Building capacity of communities/CBOs to advocate to leaders for health

Tools/Methodologies: BEHAVE Framework
LQAS
Participatory Rapid/Rural Appraisal

Capacity Building

Local Partners: Local Non-Government Organization (NGO)
Health Facility Staff
Other CBOs
TBAs
Faith-Based Organizations (FBOs)

Interventions & Components

Childhood Injury	IMCI Integration	CHW Training HF Training
Control of Diarrheal Diseases (15%) - Water/Sanitation - Hand Washing - ORS/Home Fluids - Feeding/Breastfeeding - Care Seeking - Case Management/Counseling - POU Treatment of water - Zinc	IMCI Integration	CHW Training HF Training
HIV/AIDS (15%) - Behavior Change Strategy - Access/Use of Condoms - STI Treatment with Antenatal Visit - ABC - PMTCT - Nutrition - ARVs - HIV Testing		CHW Training HF Training
Immunizations (10%) - Polio - Classic 6 Vaccines - Vitamin A - Surveillance - Mobilization - Community Registers	IMCI Integration	CHW Training HF Training
Infant & Young Child Feeding	IMCI Integration	CHW Training HF Training

<p>Malaria (20%)</p> <ul style="list-style-type: none"> - Access to providers and drugs - ITN (Bednets) - Care Seeking, Recog., Compliance - IPT - ACT - Environmental Control 	IMCI Integration	CHW Training HF Training
<p>Maternal & Newborn Care (30%)</p> <ul style="list-style-type: none"> - Emergency Obstetric Care - Neonatal Tetanus - Recognition of Danger signs - Newborn Care - Post partum Care - Child Spacing - Integation. with Iron & Folic Acid - Normal Delivery Care - Birth Plans - STI Treat. with Antenat. Visit - Home Based LSS - Control of post-partum bleeding - PMTCT of HIV - Emergency Transport 	IMCI Integration	CHW Training HF Training
<p>Pneumonia Case Management (10%)</p> <ul style="list-style-type: none"> - Access to Providers Antibiotics - Recognition of Pneumonia Danger Signs - Zinc - Community Case Management with Antibiotics (Implementation) 	IMCI Integration	CHW Training HF Training
<p>Tuberculosis</p>	IMCI Integration	CHW Training HF Training
<p>Vitamin A and Micronutrients</p>	IMCI Integration	CHW Training HF Training

Operational Plan Indicators

Number of People Trained in Maternal/Newborn Health			
Gender	Year	Target	Actual
Female	2010	230	
Female	2010		778
Male	2010		89
Male	2010	15	
Female	2011	380	
Female	2011		269
Male	2011		72
Male	2011	40	
Female	2012	380	
Female	2012		775

Male	2012		30
Male	2012	40	
Female	2013	775	
Female	2013		169
Male	2013		13
Male	2013	30	

Number of People Trained in Child Health & Nutrition

Gender	Year	Target	Actual
Female	2010	220	
Female	2010		778
Male	2010		89
Male	2010	21	
Female	2011	380	
Female	2011		278
Male	2011		83
Male	2011	40	
Female	2012	380	
Female	2012		813
Male	2012		83
Male	2012	40	
Female	2013	775	
Female	2013		169
Male	2013		13
Male	2013	30	

Number of People Trained in Malaria Treatment or Prevention

Gender	Year	Target	Actual
Female	2010		778
Female	2010	215	
Male	2010		89
Male	2010	18	
Female	2011		269
Female	2011	380	
Male	2011		72
Male	2011	40	

Female	2012		775
Female	2012	380	
Male	2012		30
Male	2012	40	
Female	2013		169
Female	2013	775	
Male	2013		13
Male	2013	30	

Locations & Sub-Areas

Total Population: 137,595

Target Beneficiaries

Liberia - Curamericas - FY2008

Children 0-59 months	28,124
Women 15-49 years	39,472
Beneficiaries Total	67,596

Rapid Catch Indicators: DIP Submission

Sample Type: 30 Cluster				
Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid vaccinations before the birth of their youngest child	172	300	57.3%	7.9
Percentage of children age 0-23 months whose births were attended by skilled personnel	68	300	22.7%	6.7
Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours	41	104	39.4%	13.3
Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or	76	196	38.8%	9.6

mother's recall				
Percentage of children age 12-23 months who received a measles vaccination	48	106	45.3%	13.4
Percentage of children age 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey	43	106	40.6%	13.2
Percentage of children age 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey	26	106	24.5%	11.6
Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began	2	83	2.4%	4.7
Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids	34	71	47.9%	16.4
Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	24	56	42.9%	18.3
Percentage of households of children age 0-23 months that treat water effectively	39	300	13.0%	5.4
Percentage of mothers of children age 0-23 months who live in households with soap at the place for hand washing	42	300	14.0%	5.6
Percentage of children age 0-23 months who slept under an insecticide-treated bednet (in malaria risk areas, where bednet use is effective) the previous night	138	300	46.0%	8.0
Percentage of children 0-23 months who are underweight (-2 SD for the median weight for age, according to the WHO/NCHS reference population)	201	300	67.0%	7.5
Percentage of infants and young children age 6-23 months fed according to a minimum of appropriate feeding	35	196	17.9%	7.6

practices				
Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child	300	1000	30.0%	4.0
Percentage of mothers of children age 0-23 months who are using a modern contraceptive method	0	0	0.0%	0.0
Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth	0	0	0.0%	0.0

Rapid Catch Indicators: Mid-term

Sample Type: 30 Cluster				
Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid vaccinations before the birth of their youngest child	289	301	96.0%	3.1
Percentage of children age 0-23 months whose births were attended by skilled personnel	80	301	26.6%	7.1
Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours	60	111	54.1%	13.1
Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	137	190	72.1%	9.0
Percentage of children age 12-23 months who received a measles vaccination	81	107	75.7%	11.5
Percentage of children age 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey	49	107	45.8%	13.4
Percentage of children age 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey	45	107	42.1%	13.2
Percentage of children age 0-23 months	23	104	22.1%	11.3

with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began				
Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids	35	73	47.9%	16.2
Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	39	59	66.1%	17.1
Percentage of households of children age 0-23 months that treat water effectively	93	301	30.9%	7.4
Percentage of mothers of children age 0-23 months who live in households with soap at the place for hand washing	78	301	25.9%	7.0
Percentage of children age 0-23 months who slept under an insecticide-treated bednet (in malaria risk areas, where bednet use is effective) the previous night	237	301	78.7%	6.5
Percentage of children 0-23 months who are underweight (-2 SD for the median weight for age, according to the WHO/NCHS reference population)	26	301	8.6%	4.5
Percentage of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices	7	130	5.4%	5.5
Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child	147	301	48.8%	8.0
Percentage of mothers of children age 0-23 months who are using a modern contraceptive method	40	301	13.3%	5.4
Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth	224	301	74.4%	7.0

Rapid Catch Indicators: Final Evaluation

Sample Type: 30 Cluster				
Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid vaccinations before the birth of their youngest child	244	296	82.4%	6.1
Percentage of children age 0-23 months whose births were attended by skilled personnel	245	297	82.5%	6.1
Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours	54	102	52.9%	13.7
Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	181	198	91.4%	5.5
Percentage of children age 12-23 months who received a measles vaccination	97	100	97.0%	4.7
Percentage of children age 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey	102	102	100.0%	0.0
Percentage of children age 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey	101	102	99.0%	2.7
Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began	111	129	86.0%	8.5
Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids	67	81	82.7%	11.6
Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	85	88	96.6%	5.4

Percentage of households of children age 0-23 months that treat water effectively	77	296	26.0%	7.1
Percentage of mothers of children age 0-23 months who live in households with soap at the place for hand washing	187	296	63.2%	7.8
Percentage of children age 0-23 months who slept under an insecticide-treated bednet (in malaria risk areas, where bednet use is effective) the previous night	295	299	98.7%	1.8
Percentage of children 0-23 months who are underweight (-2 SD for the median weight for age, according to the WHO/NCHS reference population)	65	278	23.4%	7.0
Percentage of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices	106	171	62.0%	10.3
Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child	219	296	74.0%	7.1
Percentage of mothers of children age 0-23 months who are using a modern contraceptive method	181	295	61.4%	7.9
Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth	262	264	99.2%	1.5

Rapid Catch Indicator Comments

Current Contraceptive Use Among Mothers of Young Children- Description: Percentage of mothers of children age 0-23 months who are using a modern contraceptive method

Comment: After the supplemental funding for a community-based family planning project ended in July 2012, the contraception prevalence rate was 61%. At this point in time, family planning services were integrated into EPI service provision; without further additional resources, the CPR was maintained at 61% over the last year of the project.

Treatment of Fever in Malarious Zone- Description: Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began

Comment: Upon receipt of supplemental funding in February 2012, 60 gCHVs (representing 60 communities in two of the four project clans) were trained in Community Case Management of Childhood Illnesses (diarrhea, ARI/pneumonia, and malaria), including diagnosis, treatment, and referral. This may

have influenced the improvement of this indicator, but not biased it, as the two clans in it which this training has occurred is a small percentage of the overall sampled area.

ORT Use- Description: Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids

Comment: Upon receipt of supplemental funding in February 2012, 60 gCHVs (representing 60 communities in two of the four project clans) were trained in Community Case Management of Childhood Illnesses (diarrhea, ARI/pneumonia, and malaria), including diagnosis, treatment, and referral. This may have influenced the improvement of this indicator, but not biased it, as the two clans in it which this training has occurred is a small percentage of the overall sampled area.

Appropriate Care-Seeking for Pneumonia: Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider.

Comment: Upon receipt of supplemental funding in February 2012, 60 gCHVs (representing 60 communities in two of the four project clans) were trained in Community Case Management of Childhood Illnesses (diarrhea, ARI/pneumonia, and malaria), including diagnosis, treatment, and referral. This may have influenced the improvement of this indicator, but not biased it, as the two clans in it which this training has occurred is a small percentage of the overall sampled area.

Annex XIX: SUMMARY OF INDICATOR SCORES AND COMMENTS GUMH SELF-ASSESSMENT

Indic. #	Sust. Frame. #	Sub-Component	Name of Indicator	Baseline Score	Indicator Score	Comments – Note priority areas needing attention. Also note if there was a lack of consensus among staff on the score.
1	4.1.1	Governance and Legal Structure	Legal Recognition	90	100	Full legal status
2	4.1.2		Governing Committee or Board	100	100	Regular meetings (at least quarterly) with useful decisions made for the organization. All meetings have occurred in last year.
3	4.1.3		Constitution / Bylaws	70	100	Written constitution always used and followed by all representatives of the community and organization
4	4.1.4		Mission and values	70	100	Have agreed-upon clear mission statement and values
5	4.2.1	Organizational Leadership	Leaders' Accountability and Transparency	90	100	Administration committee meets quarterly – provides input and involved in decision-making
6	4.2.2		Consultation and participatory decision-making	90	100	A formal process for consultation and/or a formal delegation process is always followed
7	4.2.3		Leadership Development	70	100	Periodic elections for leadership
8	4.3.1	Human Resources	Staff / volunteer organization	90	100	Everyone is aware of their formal written job description and their role in the organization. Everyone knows to whom they report and who reports to them
9	4.3.2		Staff performance evaluation	70	100	Staff/volunteers are evaluated at least annually.
10	4.3.3		Staff and volunteer development	30	100	There are regular meetings (at least monthly), training and team-building activities to keep staff and volunteers motivated.
11	4.3.4		Office and equipment	50	100	The organization has sufficient office and equipment and an adequate plan for maintenance and replacement.
12	4.4.1	Management Systems & Practices	Strategic planning	70	100	There is an up-to-date strategic plan with explicit mission, vision and tactical plan.
13	4.4.2		Activity development and planning	90	100	Annual plans are always developed and agreed with community members, volunteers, staff, and board
14	4.4.3		Project supervision	90	85	Supervision and supervisory report occur as planned almost all the time (>90%).
15	4.5.1	Financial Management	Financial accounts	80	100	Balances and statements are prepared quarterly. At the end of the year, they are presented to external stakeholders for approval
16	4.5.2		Bank account	100	100	A record of all payments (cashbook) is kept and compared with all bank statements. There has been an audit in the last two years.
17	4.5.3		Recordkeeping	100	100	All receipts/invoices and other supporting documents are filed for three years and are regularly reviewed by an authorized person
18	4.5.4		Budgets and cash flow planning	30	100	Every month budgets are compared to money already spent and planned cash flow, to make sure there will be enough cash to keep the organization running

19	4.5.5		Financial reporting	90	100	Reports are always submitted on time and always meet all donor requirements. This has been audited within the last two years with no major findings.
Indic. #	Sust. Frame. #	Sub-Component	Name of Indicator	Baseline Score	Indicator Score	Comments – Note priority areas needing attention. Also note if there was a lack of consensus among staff on the score
20	4.6.1	Technical Capacity	Beneficiary targeting	70	100	Organization has systems for identifying vulnerable groups and always these while always also engaging them to assist in designing work according to their needs
21	4.6.2		Technical area knowledge and skills	70	100	There is always a systematic process for selection and initial training. GUMH has made significant improvements in hiring and training of qualified staff in the last few years.
22	4.6.3		Training and updating knowledge	70	85	Training needs of all staff members assessed and addressed on a regular basis. Most staff feel satisfied with skill levels and training but there are still some gaps. Challenge is lack of local training resources and availability of staff for training – more training of back-up staff to allow freeing up of staff for training.
23	4.6.4		Behavior change communication	70	100	Have adapted own materials based on a systematic needs assessment process as well as a process to ensure their effectiveness by pre-testing or involving targeted groups in the production process
24	4.7.1		M&E / Organizational Learning	Data collection	90	90
25	4.7.2	Data analysis and information dissemination		90	90	Information gathered but not always acted on. Need to have better action response to data.
26	4.7.3	Project evaluation		70	100	Projects/activities are always evaluated, whether required by a donor or not. This is facilitated by an outside evaluator whenever possible.
27	4.7.4	M&E data inform decisions		70	100	Admin quarterly meetings look at quarterly data to make decisions
28	4.7.5	Quality Improvement System		40	100	Quality Improvement/Assurance is institutionalized in the organization's general operation. There are process and outcome indicators selected and measured and used to inform the organization of its key operational issues and effectiveness of its initiatives.
29	4.8.1	Equity & Empowerment		Participation of women in organizational leadership	90	100
30	4.8.2		Gender in staffing	50	100	Equal participation at all levels of organization.
31	4.8.3		Gender in programming	70	100	Good focus – esp Nehnwaa; always analyzing how gender vulnerability affects access to services and responding with appropriate strategies
32	4.8.4		Involvement and empowerment of	50	100	Vulnerable people are fully involved throughout the organization.

Indic. #	Sust. Frame. #	Sub-Component	Name of Indicator	Baseline Score	Indicator Score	Comments – Note priority areas needing attention. Also note if there was a lack of consensus among staff on the score
			beneficiaries			
33	4.9.1	Organizational Performance	Client satisfaction	20	100	There is a regular system for measuring client satisfaction in place. Results are discussed at least annually.
34	4.9.2		Staff satisfaction	30	100	There is a system in place for determining staff/volunteer satisfaction. The information is usually that there is satisfaction. When there is not, action is always taken to improve.
35	4.9.3		Technical program performance	70	100	Evaluations of projects done by outside evaluators in the last two years have determined that the technical performance of the organization's projects is usually excellent. When problems have been identified, the recommendations have been discussed and acted upon.
36	4.10.1	Resource Mobilization	Resource mobilization planning	70	85	A formal cost and financing analysis has been done. This is consulted and progress is formally assessed in terms of cost containment and progress in organizational income from a variety of sources (e.g. donors, local fundraising, and possibly cost recovery). There are still gaps in terms of the analysis, results, or decisions based on those results.
37	4.10.2		Proposal development capacity (for external financing)	70	70	Need to improve grant-writing skills – bigger proposals (e.g. USAID); No staff grant writer – done collectively; Funding has been received for at least one successful proposal in the last three years written and developed within the organization
38	4.10.3		Local resource mobilization	50	85	There is a plan for local fundraising. Targets are set. Activities are regular. There has been assessment of progress toward targets but this is not always done.
39	4.10.4		Cost recovery (only if applicable)	70	100	There is a cost recovery plan with targets that take into account the needs of the organization and the clients' ability to pay. This plan is consulted regularly (at least twice a year), results discussed, and actions are taken if financial targets are not met or if it is felt to be causing difficulties for clients.
40	4.11.1	Networking	Relations with other non-governmental implementers	70	100	Attend NCHT monthly coordination meetings – coordinate resources; When planning projects there is always internal discussion as well as consultation with others to ensure no duplication and activities are often done jointly with other organizations.
41	4.11.2		Relations with government entities	90	100	Organization has regular (at least twice a year) meetings with relevant government agency. Have detailed knowledge of their plans and policies.
42	4.11.3		Relations with technical agencies	90	100	Organization has ongoing relationship or partnership with at least one technical agency for needed technical assistance.
43	4.11.4		Relations with potential donors	90	100	Organization has prioritized current/potential donors and has regular contact with them. There is knowledge of these donors' plans. Organization also open to and on the lookout for any new donors.

44	4.12.1	Institutionalization of Key Competencies	Institutionalization of key health area in mission	70	100	The relevant health area is considered a core competency of the organization. This health issue is always discussed at Board meetings.
45	4.12.2		Institutionalization of technical-managerial structure	90	100	There is an efficient and effective organizational structure for the relevant health work, with an adequate department, supervisors, implementing staff/volunteers, and administrative support
46	4.12.3		Seek adequate financial resources for health activities	10	100	There is a structured plan to seek additional financing and resources to expand work in the relevant health area.